Hanna Kalla

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ABSTRACT

This research stems from a desire to better understand the role of internal communications in the setting of the multinational corporation (MNC). More specifically, links between internal communications, social capital, knowledge sharing, and certain aspects of diversity are explored in order to more fully comprehend the potential influence of internal communications for the functioning of the MNC. This will be accomplished by looking at previous literature, developing a theoretical framework, and analysing empirical data obtained from a leading telecoms multinational corporation that serves as the case company in this study.

This Doctoral Dissertation is divided into two parts. Part I explores the theoretical foundations; Part II explores the phenomenon through three essays, which are based on empirical data formed of qualitative thematic interviews (n = 12) and quantitative questionnaire survey data (n = 749).

In Part I, the role of internal communications is examined from a multidisciplinary and multilevel perspective, which is where a current research gap exists. This multidisciplinary and multilevel perspective to internal communications is here termed *integrated internal communications*. On the one hand, a multidisciplinary perspective here refers to the incorporation of different communication internal disciplines (i.e., organisational, corporate, management, and business communication) and also the inclusion of communication external disciplines (e.g., management and international business). On the other hand, a multilevel perspective refers to the incorporation of all formal and informal communication taking place internally at all levels of an organisation. The overall research question this study aims to answer is: *"What is the nature and role of integrated internal communications in the MNC?"*

In Part II, the three essays examine the theoretical issues through empirical data. Essay 1 examines, through qualitative interviews, how integrated internal communications manifests itself in the MNC. The contribution of this essay is to give more theoretical insight and empirical evidence of integrated internal communications as a multidisciplinary and multilevel phenomenon. Essay 2 addresses the relationships that exist between integrated internal communications, social capital, and knowledge sharing by using regression analysis on the questionnaire survey data. The findings show that communication intensity positively influences both, hence giving support to the view that communication plays a strategic role in the MNC. Essay 3 approaches the phenomenon of integrated internal communications by assessing the impact of diversity on different communication patterns via applying analysis of variance (ANOVA) on the questionnaire survey data. This essay highlights the role of the multi-contextual nature of the MNC, and illustrates that diversity may influence intra-workgroup communication patterns differently when compared with those of the inter-workgroup.

Overall, the theoretical and empirical findings of this study contribute to an enhanced understanding of the multi-faceted phenomenon of internal communications in the MNC context through an integrated internal communications framework.

Keywords: Internal communications, integrated, MNC, social capital, knowledge sharing, diversity.

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PART I

1. INTRODUCTION

This research stems from a desire to better understand the role of internal communications in the setting of the multinational corporation (MNC). More specifically, links between internal communications, social capital, knowledge sharing, and certain aspects of diversity are explored in order to more fully comprehend the potential influence of internal communications for the functioning of the MNC. This will be accomplished by looking at previous literature, developing a theoretical framework, and analysing qualitative and quantitative empirical data obtained from a leading telecoms multinational corporation that serves as the case company in this study. This chapter therefore gives a brief introduction to the research project undertaken in this Doctoral Dissertation. The goal of the first chapter is to outline the research phenomenon and research gap, to present the research questions, and to discuss the assumptions and limitations in order to give the reader a clear understanding of the scope of the research undertaken in this study.

1.1. Background

Multinational corporations (MNCs) function in an environment characterised by different geographical regions as well as different national and functional cultures in terms of the workforce, operations, markets, and customers (Bartlett & Ghoshal, 1989; Doz, Santos & Williamson, 2001; Nohria & Ghoshal, 1997; Westney, 2001). Therefore, knowledge is scattered across various organisational units and routines (Grant, 1996; Kogut & Zander, 1993; Spender, 1996), which results in knowledge sharing becoming a major task of the differentiated MNC (Bartlett & Ghoshal, 1989;

Nohria & Ghoshal, 1997). Consequently, by its very nature of dispersed assets and resources as well as global roles and responsibilities, the MNC creates internal interdependencies. Such interdependencies or linkages highlight the increasingly important role played by internal communications in most MNCs (Allen, 1984; Barner-Rasmussen & Björkman, 2005; Ghoshal & Bartlett, 1988; Ghoshal, Korine & Szulanski, 1994; Gupta & Govindarajan, 1991, 2000; Tucker, Meyer & Westerman, 1996).

There is increasing evidence that companies with effective communications strategies tend to be successful, while others often fall short of the optimal performance (Argenti & Forman, 2002; Clampitt & Downs, 1993; Tourish, 1997; Tourish & Hargie, 2004a). However, simultaneously an imbalance exists between the perceived importance of communications and the actual attention and resources given toward it (Argenti & Forman, 2002; Oliver, 1997; Tourish & Hargie, 2004b). For example, Oliver (1997) draws our attention to the fact that communication is rarely recognised as a primary competence required by employees. Therefore, there is a paradox because although increasing awareness concerning the importance of communications to organisations is present, that knowledge appears to have seldom translated into practice.

One of the challenges related to the paradox discussed above is that our view of internal communications is often too limited. Communications research is conducted in communication departments within universities and practiced by the communication officers in corporations; however, it does not mean that other academic departments do not touch upon the subject or that non-communication professionals would not communicate within organisations. Knowing how to communicate is important but it is

equally important to understand why. Therefore, to benefit from existing research fully, it is necessary to look beyond the traditional resources and turn our attention also to management and international business research in order to understand the 'why' part more fully.

This Dissertation hence proceeds to examine the role of internal communications from a multidisciplinary and multilevel perspective, which is where a current research gap exits. This multidisciplinary and multilevel perspective to internal communications is here termed *integrated internal communications*. On the one hand, a multidisciplinary perspective here refers to the incorporation of different communication internal disciplines (i.e., organisational, corporate, management, and business communication) and also the inclusion of communication external disciplines (e.g., management and international business)[1]. It is the hope of this research that such a view will help us to better understand why communication is important and what it can accomplish. On the other hand, a multilevel perspective refers to the incorporation of all formal and informal communication taking place internally at all levels of an organisation. The phenomenon of integrated internal communications is explored in greater detail in Chapter 2.

Furthermore, while much of today's business activities take place in multinational corporations, internal communications research with a specific focus on the MNC context is limited (Charles & Marschan-Piekkari, 2002; Du-Babcock & Babcock, 1996; Marschan, 1996; Tucker et al., 1996). Therefore, in order to better understand the role of internal communications for the functioning of the MNC, it is here studied in relation

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[1] The purpose is not to give an exhaustive review, but rather to cover the relevant contributions of these literatures, as necessary.

to social capital, knowledge sharing, and diversity. The reason for including these phenomena is that the MNC is seen as a differentiated network characterised by knowledge sharing[2] among different units composed of diverse groups of employees (Bartlett & Ghoshal, 1989; Nohria & Ghoshal, 1997). Furthermore, social capital[3] has been shown to enhance internal knowledge sharing (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998), which is fundamental for competitive advantage (Grant, 1996; Kogut & Zander, 1993; Spender, 1996). Although neither social capital nor knowledge sharing could exist without communication, the links between communication and the two phenomena have not been explored in great enough detail (Barner-Rasmussen & Björkman, 2005; Burgess, 2005; Contractor & Monge, 2002; Hazleton & Kennan, 2000; Heaton & Taylor, 2002; Monge & Contractor, 2001, 2003; Tucker & al., 1996; Zorn & Taylor, 2004). This Dissertation hopes to address this research gap, and specific links between the phenomena will be discussed in Chapter 2.

1.2. Research Gap

The communication disciplines or domains involved in the study of internal communications are rather fragmented. However, four main domains of communication can be identified to meet at the intersection between communication and organisational life; they are organisational, corporate, management, and business communication (Miller, 1996). These are now examined in order to understand how each contributes to the study of integrated internal communications. While the relevant research carried out in the four domains of communication will be discussed separately

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[2] Knowledge sharing is here taken to include all formal and informal business-related knowledge exchanges (Barner-Rasmussen, 2003; Mäkelä, 2006)
[3] Broadly speaking, social capital refers to assets embedded in a network of relationships (Adler & Kwon, 2002; Nahapiet & Ghoshal, 1998).

here, it should be stated that no clear-cut boundaries exist between them (Eisenberg, 1996; Reardon, 1996; Rogers, 2001). Therefore, although internal communications research is here divided between the four communication domains, it is not argued that these four domains are exhaustive, or that they are mutually exclusive categories. Following a review of the four communication domains, relevant research from management and international business literatures is included.

Organisational Communication   Organisational communication can be seen as somewhat of an umbrella term, given its wide focus on all communication related issues that involve organisations. It has focused on the study of issues ranging from verbal and nonverbal communication, communication skills, and the effectiveness of communication in organizations to the study of the communication context and the symbolic nature of communication (e.g., Eisenberg & Goodall, 2004; Miller, 2003; Tourish & Hargie, 2004b).   This domain contributes to internal communications by giving it a context (Miller, 2003; Mumby & Stohl, 1996), which may in part be explained by organisational communication being equally strongly positioned in the fields of organisational studies and communication studies (Jablin, Putnam, Roberts & Porter, 1987; Tourish & Hargie, 2004b).   Of all the communication domains, this domain is perhaps the one that adopts the most similar view of internal communications when compared with the definition of integrated internal communications.   However, despite the fact that organisational communication recognises the inclusion all internal communication activities, it infrequently studies them simultaneously in an integrated way.

Corporate Communication   Corporate communication consists of all the various internal and external organisational communication functions (Argenti, 1996, 2003; Goodman, 2000; Oliver, 1997); and the role of internal communications within that mix is simply a part of the overall public relations function (Oliver, 1997). The approach to internal communications adopted in this domain, therefore, has mostly emphasised formal communication performed by communication professionals or senior managers. When research has specifically focused on internal communications, it has largely tended to assess the role of internal communications in change management (Daly, Teague & Kitchen, 2003; Hargie & Tourish, 1996; Kitchen & Daly, 2002; Proctor & Doukakis, 2003) as well as examining management communication and auditing (Quinn & Hargie, 2004; Robson & Tourish, 2005). Consequently, the communications may be targeted at all employees, but employees tend to be viewed as recipients rather than active communicators.

Management Communication   Management communication is a natural extension to corporate communication, given the emphasis of both on managers. According to Smeltzer (1996), the unifying goal of management communication is to increase the effectiveness of managers. Research in this area has traditionally tended to focus on the development of such skills as business letter writing, oral presentations, use of graphic aids, and listening (e.g., Bell & Smith, 1999; Hattersley & McJannet, 1997; Smeltzer, 1996). While this research has greatly contributed to the communication skills of managers, it has perhaps overlooked some of the less skill-driven areas of communication. Furthermore, when approaching integrated internal communications, management communication focuses only on one of the organisational stakeholders.

Business Communication   Reinsch (1996) labels business communication a practical-science because he believes that both knowing-why and knowing-how elements should be and are present in business communication.   However, similarly to management communication, business communication tends to often adopt a focus on specific skills like letter writing over more theoretically focused issues (see, e.g. Ober, 2003; Quible, Johnson & Mott, 1996; Bovée & Thill, 2000).   Internal communications specifically is seldom the focus of research in this domain, instead the spotlight is more often on the efficient usage of different communication channels and the assessment of various methodological research approaches.   Therefore, business communication contributes to internal communications via its general focus on the communication process. Furthermore, the few studies that have examined internal communications within the MNC context can be found in the domain of business communication (Charles & Marschan-Piekkari, 2002; Du-Babcock & Babcock, 1996; Tucker et al., 1996).

Management and International Business Research   Most research within these fields does not focus solely on internal communications, but studies that do, give new insights about the role of internal communications in the MNC (Barner-Rasmussen & Björkman, 2005; Ghoshal et al., 1994; Marschan, 1996).   However social capital, knowledge sharing, and diversity phenomena have been widely discussed, hence contributing greatly to this study.   Previous research has extensively discussed the knowledge-based view of the firm, and consequently the vital role of knowledge sharing for competitive advantage (Grant, 1996; Kogut & Zander, 1993; Spender, 1996). Furthermore, an increasing amount of research about how social capital and social networks are linked to knowledge sharing exists (e.g. Borgatti & Cross, 2003; Cross, Parker, Prusak & Borgatti, 2001; Hansen, 1999, 2002; Nahapiet & Ghoshal, 1998; Tsai

& Ghoshal, 1998). While such research has explored various aspects of knowledge and social capital, very little research has examined the role of communication in relation to either of the two phenomena (cf. Barner-Rasmussen, 2003; Barner-Rasmussen & Björkman, 2005; Ghoshal et al., 1994; Gupta & Govindarajan, 1991, 2000; Mäkelä, 2006). When communication is discussed in this research field, it is usually termed interaction (e.g., Mäkelä, 2006; Nahapiet & Ghoshal, 1998). Therefore, an application of these social capital and knowledge sharing theories to the field of communication would be beneficial, and vice versa. Similarly, various aspects of diversity have been debated (e.g., Cummings, 2004; Milliken & Martins, 1996; Williams & O'Reilly, 1998), but the role of communication within those studies has been limited (Ancona & Caldwell, 1992; Smith et al., 1994). Hence, a multidisciplinary view would be valuable for future studies.

To summarise and synthesise, the study of internal communications has been fragmented and the focus has usually been on a specific group or content, rather than an integrated internal communications approach incorporating all employees of an organisation. Furthermore, internal communications has not been studied in great enough detail in the specific context of the multinational corporation; hence its role in relation to social capital, knowledge sharing, and diversity needs to be explored further. Although some communications research has linked internal communications with these phenomena, it has mostly been theoretical; hence empirical research is needed. At the same time, social capital, knowledge sharing, and diversity have been extensively studied in the management and international business literatures. However, within these contexts, the role of communication has been under-explored. Therefore, the contribution of this Dissertation is to adopt a multidisciplinary and multilevel approach

to internal communications and assess the links to social capital, knowledge sharing, and diversity in order to portray the nature and role of integrated internal communications in the relatively little studied MNC context.

1.3. Research Questions

Set against the background provided above, the aim of this Doctoral Dissertation is to explore the nature and role of integrated internal communications within the multinational corporation. Consequently, the main, overarching research question that this study aims to answer is formulated in the following manner:

> *What is the nature and role of integrated internal communications in*
> *the MNC?*

This overall research question is then divided into three more specific sub-questions that this study addresses through three separate essays, each based on empirical data. The first sub-question attempts to further our understanding of internal communications in terms of seeing what new elements can be identified when an integrated internal communications view is adopted. The second sub-question, then, delves a little deeper with the goal of establishing the linkages between integrated internal communications, social capital, and knowledge sharing. Finally, after positioning integrated internal communications and outlining the links between the main constructs of interest, a closer look at one particular aspect of the MNC context, namely diversity, was deemed important. Therefore, the third sub-question explores the relationship between diversity

and integrated internal communications. These three research questions are verbalised as follows:

1. *How does integrated internal communications manifest itself in the MNC?*

2. *How does integrated internal communications relate to social capital and knowledge sharing in the MNC?*

3. *How does integrated internal communications relate to diversity in the MNC?*

This Dissertation addresses these questions by first reviewing previous research in the area, based on which an integrated internal communications framework is developed; then each of the three research questions is addressed in separate essays. First, Essay 1 explores the nature of integrated internal communications through qualitative interview data. Second, Essay 2 examines how integrated internal communications influences social capital and knowledge sharing, using quantitative data. Third, Essay 3 explores how integrated internal communications is influenced by diversity by analysing quantitative data. The research logic is thus condensed into the diagram presented in Figure 1.

Research phenomenon	Focus area	Research question	Approach
	Nature of integrated internal communications	How does integrated internal communications manifest itself in the MNC?	Essay 1 Qualitative data
Integrated internal communications in the MNC		How does integrated internal communications relate to social capital and knowledge sharing in the MNC?	Essay 2 Quantitative data
	Role of integrated internal communications	How does integrated internal communications relate to diversity in the MNC?	Essay 3 Quantitative data

Figure 1. Research Logic

1.4. Assumptions and Limitations of the Study

When reading this Doctoral Dissertation, certain assumptions and limitations must be kept in mind. First, the context of this study is a differentiated MNC network (e.g., Nohria & Ghoshal, 1997), which is composed of specialised subsidiary units or "distributed resources" that are linked through local, headquarters-subsidiary, and subsidiary-subsidiary linkages. Therefore, the geographically scattered and multi-contextual nature of the MNC creates internal interdependencies, which highlight the increasingly important role played by internal communications (e.g., Ghoshal, Korine & Szulanski, 1994). The fact that this study focuses on a single multinational corporation may be seen as a limitation. However, the ability to gain access to the relatively sensitive nature of the collected information is rare, and hence the insight from this global market leader in terms of their internal communication patterns is very valuable

for enhancing our understanding of integrated internal communications. Although the focus of this study is the multinational corporation, and hence the results may not be directly applied to other types of organisations, it is my firm belief that the issues raised in this study are equally relevant for all complex organisations.

Second, this study examines only internal communications within the MNC context. Internal communications here includes all forms of communications that take place inside an organisation. Such communications may take place at the level of a dyad, team, unit or the whole organisation, and they may be formal or informal as well as planned or unplanned. All external communications, i.e. communications with stakeholders and business partners who are not members of the organisation, are excluded from the scope of this study; although it is recognised that such communication activities are important and may also influence internal communication (e.g., Manev & Stevenson, 2001).

Third, while this study includes all internal communication activities, managers have been identified as the focal group due to their key role in enabling and blocking communication and knowledge flows (Clampitt, DeKoch & Cashman, 2000; Nonaka & Takeuchi, 1995; Tourish & Hargie, 2000). Hence, this study captures the communication patterns between managers and their team members in six different business groups, focusing on the operations of those six business groups in six different countries. However, within the case company many of these mid-level and senior managers are working in research & development (R&D), and hence have a strong functional competence on top of their managerial duties.

Fourth, two of the three essays are based on the empirical data from a questionnaire survey, and hence something must be said about the limitations of survey data. The use of single respondents means that the data was essentially based on perceptual data. Several steps were taken to ensure that the respondents provided reliable answers to the questionnaire in order to minimise potential bias in the data (DeVellis, 2003; Fowler, 2002), as discussed in the methodological section in more detail (Chapter 3). While many of the key constructs required the use of perceptual measures, mainly because objective proxies do not exist, this is a common challenge when concepts are derived from emerging theories (see e.g. Spender & Grant, 1996 for a discussion on knowledge). To address this issue, previously used measures were adopted wherever possible.

Fifth, in terms of the way different concepts have been operationalised, certain limitations here too must be kept in mind. Integrated internal communications is argued to be a multifaceted phenomenon occurring at multiple levels of the organisation in various forms. While it would be wonderful to be able to study internal communications at all those different levels and in different formats, adopting such an approach is beyond the scope of this Doctoral Dissertation; hence the frequency of communication has been used as a primary measure in the quantitative part of the study (as discussed in the methodological section in Chapter 3). Another concept worth mentioning is diversity. While it is recognised that culture is an important part of any organisation, intercultural issues are not specifically discussed in this Dissertation; instead diversity is approached via three forms of diversity deemed critical for the MNC, namely functional, geographic, nationality diversities.

1.5. Structure of the Study

This Dissertation is divided into two parts: Part I addresses various theoretical and methodological issues, and Part II presents the three essays. More specifically, Part I is composed of six chapters, which are now described in more detail. This introductory Chapter 1 has established the scope and purpose of the study. Chapter 2 presents an overview of previous research with a focus on internal communications, social capital, knowledge sharing, and diversity; the end result is an integrated internal communications framework. Chapter 3 outlines the qualitative and quantitative research approaches and describes the empirical study. Chapter 4 presents summaries of the three essays with their key contributions. Chapter 5 summarises the research findings and discusses them in relation to theory and practice. Chapter 6 concludes Part I of the Dissertation by stating the overall contributions and implications of this study.

Part II is composed of the three full-length essays that are the main contribution of this Dissertation. Essay 1 focuses on examining how integrated internal communications manifests itself in the MNC. Essay 2 addresses the relationships that exist between integrated internal communications, social capital, and knowledge sharing. Essay 3 approaches the phenomenon of integrated internal communications by assessing the impact of diversity on different communication patterns. The next chapter reviews these key phenomena in more detail and presents relevant research findings.

2. LITERATURE REVIEW

This chapter concentrates on reviewing previous literature, in order to define and position the four phenomena that this Dissertation is particularly interested in, i.e. internal communications, social capital, knowledge sharing, and diversity. Given that each phenomenon is complex and multi-faceted, the goal here is to only carry out a brief review. This review aims to define the phenomena, explore different approached to the phenomena, examine the phenomena in the MNC context, and finally highlight any links that exist between internal communications and the other phenomena. Following this review, the topic of integrated internal communications is examined in more detail, and an integrated internal communications framework is developed.

2.1. Internal Communications

Schein (1988, p. 12) contends that "all organizational problems are fundamentally problems involving human interactions and processes. No matter what technical, financial, or other matters may be involved, there will always be humans involved in the design and implementation of such other processes. A thorough understanding of human processes and the ability to improve such processes are therefore fundamental to any organizational improvement." Hence, the issue of good communication is critical as a human and a strategic issue. More specifically, effective communication is linked to better knowledge sharing (Burgess, 2005; Ghoshal & Bartlett, 1988; Ghoshal et al., 1994; Heaton & Taylor, 2002; Monge & Contractor, 2003; Tucker et al., 1996), which in turn is a critical component of competitive advantage (Argote & Ingram, 2000; Doz et al., 2001; Grant, 1996; Kogut & Zander, 1993; Spender, 1996).

2.1.1. Defining Internal Communications

Given that the environment for business has become increasingly complex and competitive, there is greater pressure on employees and greater need for internal communications. However, the nature and role of communications are seldom the focus of research or discussion because they are taken to be self-explanatory (e.g., Fiske, 1990; Tourish & Hargie, 2004b). In fact, the role of communication within organisations is far from clear, and the large array of academic terms in usage has made it difficult to establish 'common cognitive ground' (Nonaka & Takeuchi, 1995, p. 14).

Communication can be defined in many ways, but here it is interpreted according to Fiske (1990) as interaction through messages (for a more in depth discussion on this, see Essay 1 in Part II of this Dissertation). Depending on whether one's background is in the domain of business, corporate, management or organisational communication, the definitions for internal communications also vary accordingly. For example, within the domain of business communication, Bovée & Thill (2000, p. 7) define internal communications simply as "the exchange of information and ideas within an organization." However, Argenti (2003) contends from the corporate communications perspective that internal communications is about creating an atmosphere of respect for all employees, and that communication should ideally come directly from one manager to the next. He further suggests that such personal managerial communication is no longer feasible as companies have grown larger and more complex; hence the increasing need for the formal internal communications function.

Whilst these examples give some flavour for the way internal communications has been defined, they cannot necessarily be taken to be fully representative of those particular domains. This point is illustrated in the following two examples, which highlight the fact that definitions may vary greatly even within a specific domain. On the one hand, Miller (2003, p. 1) states that organisational communication "involves understanding how the context of the organization influences communication processes and how the symbolic nature of communication differentiates it from other forms of organizational behaviour." On the other hand, Tourish & Hargie (2004b, p. 10) view organisational communication as "how people ascribe meanings to messages, verbal and nonverbal communication, communication skills, the effectiveness of communication in organizations, and how meanings are distorted or changed while people exchange messages, in both formal and informal networks."

Consequently, the motivations for and approaches to the study of internal communications are often determined by the epistemological position grounded in certain domain or discipline of thinking. Therefore, the definitions presented above highlight the challenges associated with the study of internal communications. Furthermore, although Tourish & Hargie's (2004b) definition is broader than most, it still requires further clarification. That definition of organisational communication includes all the various internal audiences and the communication of those audiences at all levels; however, such communication acts and activities are not usually studied from an integrated perspective (Clampitt et al., 2000), which is one of the goals of this study.

2.1.2. Different Approaches to Internal Communications

The study of internal communications can be approached in terms of a theoretical approach (with a focus on knowledge from one of the communication domains) or a process approach (with a focus on a specific element of the communication process). As discussed in Chapter 1, four domains[4] of communication can be argued to particularly contribute to the study of internal communications. These domains are organisational, corporate, management, and business communication (Miller, 2003). Although it is recognised that the focus of each domain is slightly different, it is here argued that more could be gained from finding synergies rather than differences between these fields (Eisenberg, 1996; Reardon, 1996; Rogers, 2001), especially when studying internal communications.

To understand how each of the four communication domains contributes to the study of internal communications, their main focuses in terms of internal communications are now briefly presented (for a more detailed discussion, see Essay 1 in Part II of this Dissertation). Business communication addresses the communication skills of all employees (e.g., Bovée & Thill, 2000), management communication focuses on the development of the managers' communication skills and capabilities (e.g., Smeltzer, 1996), corporate communication focuses on the formal corporate communication function (e.g., Argenti, 1996), and organisational communication provides a context by emphasising more philosophically and theoretically oriented issues (e.g., Miller, 2003; Mumby & Stohl, 1996). However, at the same time each may be argued to display

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[4] Instead of referring to disciplines, domains of communication are discussed because there are many different ways to define an academic discipline, and the focus of this study is not to participate in the debate over which of these four domains constitute as disciplines (for that discussion, see e.g. Argenti, 1996; Mumby & Stohl, 1996; Reinsch, 1996; Shelby, 1996; Smeltzer, 1996).

features of both practical and theoretical knowledge, have certain aspects focusing on dyads and other aspects focusing on larger groups, and also include functions of both internal and external communications (e.g. Argenti, 1996; Mumby & Stohl, 1996; Reinsch, 1996; Shelby, 1993, 1996; Smeltzer, 1996). Therefore, it is argued that while each of the four communication domains contributes greatly to the study of communication, none of them individually address all the necessary aspects of internal communications.

Another way to approach internal communications is to examine specific elements of the communication process, instead of a specific theoretical approach. In order to outline the areas that have received most attention in communications research, the elements of the communication process must be briefly outlined. Shannon & Weaver's (1949) model of communication included the elements of information source, transmitter, signal, noise source, received signal, receiver and destination. The model has been modified since then by others and the different components go by many names. For example, we can identify the communicators (sender and receiver), message, channel, transmission (encoding and decoding), noise, feedback, and context (e.g., Krone, Jablin & Putnam, 1987; Tourish & Hargie, 2004b). The reason for mentioning these components is to illustrate how internal communications research has tended to have one of those components as its central research focus, although all of them are usually implicitly present.[5]

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[5] See Krone & al.'s (1987, p. 33) excellent table where they list mechanistic, psychological, interpretive-symbolic, and systems-interaction approaches and describe what the research foci of each is in terms of the before mentioned components of communication. Alternatively, Tourish & Hargie (2004b, p. 10) list seven main traditions in communication research: rhetorical, semiotic, phenomenological, cybernetic, sociopsychological, sociocultural, and critical.

When approaching internal communications with a focus on one of these components or elements, it is possible to focus either on practical or theoretical knowledge. Both practical knowledge (know-how) and theoretical or formal knowledge (know-what) are important since they determine the organisational competitive advantage (Reinsch, 1996; Zorn & Taylor, 2004). Practical knowledge focuses usually on communication skills, ranging from writing business e-mails and reports to using graphs and visual aids in oral presentations (Bell & Smith, 1999; Bovée & Thill, 2000; Hattersley & McJannet, 1997; Quible et al., 1996, Smeltzer, 1996). The focus may therefore be simultaneously on several or even all of the components, but particular attention is usually focused on the effective transmission of messages. In terms of more theoretical knowledge, some examples of areas that have received increasing attention are electronic communication channels (Argenti, 2003; O'Kane, Hargie & Tourish, 2004; Roy & Roy, 2002); the context in terms of work and communication climates (Clampitt & Williams, 2004; Falcione, Sussman & Herden, 1987) or organisational networks (Monge & Contractor, 2001, 2003; Monge & Eisenberg, 1987); and feedback via upward communication (Tourish & Hargie, 2004c).

Consequently, in terms of the focus of this study on social capital, it is worth mentioning one of these communication elements in particular, i.e. the context. Knowledge can be seen to reside in network, and the emergent communication networks approach is an area that has received increasing attention in recent years (Contractor & Monge, 2002; Monge & Contractor, 2001, 2003; Monge & Eisenberg, 1987). This is a very interesting area of research as it looks at networks in terms of the groups or clusters that make up the networks, the individuals who link the clusters together, and the people who are not highly involved in the network. Monge &

Eisenberg (1987) specify that the way members are grouped at the individual level is by the number and density of linkages and the number of networks one is involved in; at the clique level members are grouped by some chosen criterion of cohesion, e.g. frequency or intensity of communication; and at the network level the analysis focuses on describing the features of the network as a whole. The topic of networks will be discussed in more detail in Section 2.2., however before that it is relevant to take a quick look at how internal communications has been studied in the context of the multinational corporation.

2.1.3. Internal Communications in the MNC Context

The issue of internal communications in the multinational corporation can be viewed either from the perspective of communications research or management and international business research. While most communication studies tend to address organisations generally, rather than specifying the MNC form, most of the issues examined in the previous section also apply to the MNC context. However, despite the fact that those theories can be applied to the multinational corporation, it would be important and enlightening to examine whether internal communications in the MNC takes a different form to communication in other organisations; especially given the importance of multinationals in the businesses environment. It is interesting, however, to note that research in this area is rather limited, as will be seen next.

Internal communications, at the article title level in academic communication journals, has been mentioned in relation to change management programmes (Daly et al., 2003; Kitchen & Daly, 2002; Proctor & Doukakis; 2003), management communication and

organisational effectiveness (Robson & Tourish, 2005; Tourish, 1997), communication audits (Hargie, Tourish & Wilson, 2002; Quinn & Hargie, 2004), innovation (Hargie & Tourish, 1996), job satisfaction (Appelbaum et al., 2004), and strategic alliances (Lloyd & Varey, 2003). However, internal communications research which specifically focuses on the MNC context is almost non-existent (cf. Charles & Marschan-Piekkari, 2002; Du-Babcock & Babcock, 1996; Tucker et al., 1996). Charles & Marschan-Piekkari (2002) examine the role of language in horizontal communication, and Du-Babcock & Babcock (1996) explore expatriate-local communication patterns. While these studies are informative, the research by Tucker et al. (1996) is perhaps the most relevant because it builds a framework for strategic competitive advantage based on communication and knowledge sharing. Therefore, although it is recognised that many studies in the field of communication may have included multinational corporations (even if they are not specifically mentioned), it is surprising that a greater number of communication research studies has not focused specifically on the MNC context.

Consequently, it would perhaps be fair to say that the most visible direct link between internal communications and the MNC is in the area of management and international business research (Allen, 1984; Barner-Rasmussen & Björkman, 2005; Ghoshal & Bartlett, 1988; Ghoshal et al., 1994; Gupta & Govindarajan, 1991, 2000; Marschan, 1996). Allen's (1984) seminal work made a significant contribution by examining communication flows in R&D organisations systematically over a long time period. Following that, the relationship between organisational structure and internal communications was studied (Marschan, 1996), a link between the intensity of internal communications and knowledge sharing was illustrated (Ghoshal & Bartlett, 1988; Ghoshal et al., 1994), and factors enabling such internal communications (Barner-

Rasmussen & Björkman, 2005) as well as knowledge flows (Gupta & Govindarajan, 1991, 2000) were explored. One explanation for the interest of management and international business research on internal communications is their general interest in all aspects of the MNC, including communication. However, given that the primary interest of scholars working in this area is not communication, this is where communication research could greatly contribute. Therefore, while we know much about communication in organisations, we need to gain further understanding about how communication in multinationals may differ from other organisational settings. One way to do this is to examine the role of social capital in the MNC, and build internal communications research on that knowledge.

2.2. Social Capital

Employees do not work in isolation in multinational corporations; instead they often rely on the interpersonal networks that exist between employees and managers to provide the most efficient communication channels (Borgatti & Cross, 2003; Cross et al., 2001). Furthermore, people are continually forging, maintaining and terminating the different communication linkages they have (Monge & Eisenberg, 1987). Therefore, the study of social capital, broadly referring to assets embedded in relationships, is critical in order to more fully understand internal communications.

2.2.1. Defining Social Capital

The term social capital was first used in the early 1900s (Engeström, 2001); but gained wider popularity after Bourdieu's (1986) theoretical study distinguishing between

economic, cultural, and social capital. While the origins of social capital are in sociology, it has now been studied in a variety of fields (Adler & Kwon, 2002). Furthermore, significant overlap exists in the social capital and social network research traditions.[6] Although the social networks approach is a separate research tradition, many of the ideas presented complement the social capital approach, hence relevant research from the social networks tradition is borrowed.

Social capital is a complex phenomenon and the term itself is applied in many ways, ranging from explaining the phenomenon to examining its causes and consequences (Adler & Kwon, 2002; Engeström, 2001). Perhaps one of the fundamental steps in defining social capital is determined by whether it is being viewed as a private or public good (Adler & Kwon, 2002; Engeström, 2001; Kostova & Roth, 2003; Leana & van Buren, 1999). The private or individual good view of social capital argues that it primarily benefits the individual in possession of it (Burt, 1992; Coleman, 1998). On the other hand, the public or collective view of social capital advocates group benefits built on trust, reciprocity, and social norms (Fukuyama, 1995; Putnam, 1993). At the same time, many acknowledge that social capital can also be a public and a private good at the same time (Burt, 1997; Kostova & Roth, 2003; Leana & van Buren, 1999; Nahapiet & Ghoshal, 1998; Putnam, 2000; Woolcock, 1998).

Most notably, Kostova & Roth (2003) examine boundary-spanners and their role in enabling or blocking the transfer of their private social capital to public social capital. Whether these boundary-spanning individuals choose to share their private social capital

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[6] Kilduff & Tsai (2003) see social network research as focusing on the issues of embeddedness, social capital, structural holes, and centrality; Adler & Kwon (2002) include social networks under the umbrella term of social capital; and Burt (1997) views social capital theory as its own entity. For a more detailed discussion on the links between social capital and social networks research, see Mäkelä (2006).

with their team members is argued to depend on opportunity, motivation, and ability (Adler & Kwon, 2002; Kostova & Roth, 2003). This work primarily adopts the private good view by studying social capital of individual mangers, but also supports the public good view by suggesting that the combined private social capital of different managers indirectly benefits their teams and the organisations as a whole.

The work by Nahapiet & Ghoshal (1998) and Tsai & Ghoshal (1998) has been instrumental in creating a social capital model which can be applied to the multinational corporation. Hence, social capital is defined here in accordance with Nahapiet & Ghoshal (1998, p. 243) as "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network."

2.2.2. Different Approaches to Social Capital

Social capital can be studied in interpersonal, interunit or interorganisational networks (Brass et al., 2004). Furthermore, within the chosen context a further division can be made between bonding and bridging relationships (Adler & Kwon, 2002; Engeström, 2001; Putnam, 2000; Woolcock & Narayan, 2000). Bonding relationships or strong ties refer to cohesive and frequently occurring ties that exist among individuals belonging to a group (Granovetter, 1973; Hansen, 1999)[7]. As discussed in Essay 2 (in Part II of this Dissertation), in the MNC context this may refer to a team working in a specific functional discipline or a task group consisting of people from different backgrounds.

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[7] The terms of strong ties and bonding relationships, and later weak ties and bridging relationships, are closely related and hence used somewhat interchangeably in this description. See Burt (2000) and Gabbay & Leenders (2001) for a more thorough discussion on the nuances that exist between them.

More specifically, bonding relationships are often characterised by structural closure and usually display high levels of generalised reciprocity and trust (Coleman, 1998). The advantage of bonding relationships is that they promote shared norms, trust, and cooperation, which in turn motivate knowledge sharing (Coleman, 1988; Granovetter, 1985; Reagans & McEvily, 2003). However, excessive group closure may negatively affect group social capital and effectiveness (Oh, Chung & Labianca, 2004).

Bridging relationships or weak ties, on the other hand, refer to those relationships which bridge an information gap, for example the interaction between members of different teams or functions, consisting of more distant and infrequent relationships (Granovetter, 1973; Hansen, 1999). More specifically, the theoretical foundations of bridging relationships lie in the work of Granovetter (1973) and Burt (1992, 1997, 2000). Granovetter talks about 'the strength of weak ties', referring to people who are loosely linked to several communities and who often facilitate knowledge flows. Burt takes it a step further by addressing the bridging of structural holes, arguing that social networks characterised by bridging relationships increase information diffusion. Bridging relationships are important for multinational corporations because it is extremely difficult to spread vital information between units without links existing between them (Szulanski, 1996). Therefore, bridging relationships, consisting of interunit links, provide channels through which information and knowledge can flow (Hansen, 1999; Tsai, 2001).

It can therefore be argued that it is important to have both bonding and bridging ties because they are useful in different situations (Burt, 2000; Hansen, Podolny & Pfeffer, 2001; Newell, Tansley & Huang, 2004; Woolcock & Narayan, 2000). Furthermore,

while social capital has many positive attributes, it can also have negative and harmful effects. Quibria (2003) states that social capital often opens up opportunities for network members, but since those networks are usually based on ethnicity, religion, language, and profession, they can also build barriers to entry for those who are outsiders. This, then, implies that the existing network and the characteristics of that network become important for one's ability to acquire and share knowledge. A case in point is Brown & Duguid's (1998, p. 97) argument that "isolated communities can get stuck in ruts, turning core competencies into core rigidities. When they do, they need external stimuli to propel them forward." Communities that have very strong internal ties usually preclude external ties, making it difficult to diffuse knowledge. Hansen (1999, p.108) summarises the problem by stating that "tight coupling may constrain the inflow of new knowledge and inhibit the search for new knowledge outside the established channels." Consequently, given their different but important roles, this study incorporates both bonding and bridging relationships, as illustrated in Figure 2 below.
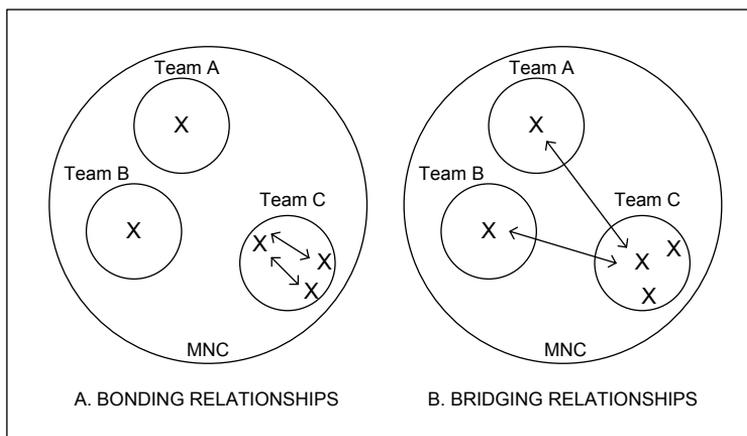
Figure 2. Bonding and Bridging Relationships (from the Point of View of Team C)

2.2.3. Social Capital in the MNC Context

Social capital research with a focus on corporations is very recent (Gabbay & Leenders, 2001a; Kostova & Roth, 2003; Leana & van Buren, 1999; Nahapiet & Ghoshal, 1998; Newell et al., 2004; Oh et al., 2004; Tsai & Ghoshal, 1998). Gabbay & Leenders (2001b) assess social capital from the organisational level perspective, with a focus on the interaction between social structure and social capital/liability. Leana & van Buren (1999) explore the impact of employment practices on organisational social capital, while Oh et al. (2004) focus on group level social capital and group effectiveness. Importantly for this study, others have examined the role of social capital for knowledge integration and sharing (Nahapiet & Ghoshal, 1998; Newell et al., 2004; Tsai & Ghoshal, 1998). Furthermore, Kostova & Roth (2003) make an additional contribution by showing how the social capital of boundary-spanners can be shared with the team in order to create unit level social capital.

Nahapiet & Ghoshal (1998) were among the first to present a model applicable to the MNC context (discussed in detail in Essay 2, in Part II of this Dissertation). In their model, they outline three dimensions of social capital, i.e. structural, cognitive, and relational dimensions. First, the structural dimension refers to the overall linkages between people and units, incorporating both whom you can reach and how you reach them (Burt, 1992, 1997; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). Hence, the structural dimension essentially includes linkages between people, with communication embedded in those linkages. Second, the relational dimension describes the relational embeddedness of the relationships, referring to relationships developed through a history of interactions (Granovetter, 1973, 1985). Nahapiet & Ghoshal (1998) include

such factors for this dimension as trust and trustworthiness, norms and sanctions, obligations and expectations, and identity and identification. Third, the cognitive dimension refers to shared systems of meaning among actors, and can be examined in terms of a shared vision or common language/code (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). It should be noted, that although the relational dimension has a long research tradition behind it (e.g., Coleman, 1988; Granovetter, 1985), the cognitive dimension was first introduced by Nahapiet & Ghoshal (1998); the two dimensions have also been combined into one dimension in previous empirical research (Yli-Renko, 1999).

2.2.4. Social Capital and Internal Communications

The study by Ghoshal et al. (1994) explores internal communication in relation to networking, showing that lateral networking enhances communication. Similarly, social and communication networks have received increasing attention in the field of communication (Contractor & Monge, 2002; Eisenberg & Goodall, 2004; Hong & Engeström, 2004; Monge & Contractor, 2001, 2003; Monge & Eisenberg, 1987), and some research has also explored network ties and boundary spanners (Johnson & Chang, 2000; Manev & Stevenson, 2001). However, despite all this communications research, social capital as a specific research phenomenon has received surprisingly little attention (Hazleton & Kennan, 2000; Monge & Contractor, 2003). Monge & Contractor (2003) review social capital research in the context of communication networks and Hazleton & Kennan (2002) assess how communication lays the foundations for social capital in a theoretical setting. Therefore, no empirical research

studying the relationship between communication and social capital was identified in the field of communication.

Although communication is rarely discussed explicitly in relation to social capital, previous research has contended that social interaction enhances social capital (e.g., Bourdieu, 1986; Kostova & Roth, 2003). This type of social interaction could often be equated with communication, but given that much of this research has been presented in the field of international business, the term social interaction may have been thought more appropriate. Furthermore, social interaction is commonly placed within the domain of social capital, and more specifically, within the structural dimension (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). Therefore, in order to bridge the gaps between different research areas, it is argued that the role of communication within the structural dimension of social capital has been under-explored, and that social capital research has not been sufficiently applied to communication studies.

2.3. Knowledge Sharing

This research builds on the knowledge-based theory of the firm, according to which knowledge is scattered across organisational units and routines (Grant, 1996; Kogut & Zander, 1993; Spender, 1996). Hence, knowledge sharing is seen as a major task of the differentiated MNC (Bartlett & Ghoshal, 1989; Nohria & Ghoshal, 1997). The reason knowledge sharing forms such an important part of this research is that several notable scholars (Argote & Ingram, 2000; Doz et al., 2001; Grant, 1996; Kogut & Zander, 1993; Spender, 1996) have concluded that the ability to effectively share knowledge internally is fundamental for maintaining a competitive advantage.

2.3.1. Defining Knowledge Sharing

Knowledge related issues are attracting increasing interest in many research fields, and debate over the definition and constitution of knowledge is on-going (Amin & Cohendet, 2004; Choo & Bontis, 2002; Tsoukas & Vladimirou, 2001). Similarly to the discussion on whether social capital is a public or private good, there are scholars defending the collective view of knowledge (Lave & Wenger, 1991) over the individual view of knowledge (Polanyi, 1966; Tsoukas & Vladimirou, 2001). This study follows Tsoukas & Vladimirou (2001, p. 979), who define knowledge as "the individual ability to draw distinctions within a collective domain of action, based on an appreciation of context or theory, or both". This definition emphasises the role of the individual in the creation and sharing of knowledge, while recognising that knowledge is always created within particular contexts. Furthermore, interpersonal knowledge sharing is understood as the formal and informal business-related knowledge exchanges in ongoing interaction between MNC managers (Barner-Rasmussen, 2003; Mäkelä, 2006).

Knowledge is not of a homogeneous nature, and among the distinctions made between different forms of knowledge, explicit and tacit are the most often identified ones (Nonaka & Takeuchi, 1995; Polanyi, 1966). Explicit knowledge is defined as knowledge that can be spelled out or formalised, whereas tacit knowledge is associated with skills and know-how (Nonaka & Takeuchi, 1995; Polanyi, 1966). Furthermore, Scharmer (2000) believes that tacit knowledge can be divided between embodied tacit knowledge and not-yet-embodied tacit knowledge. Similarly, Zorn & Taylor (2004, p. 110) point out that the tacit-explicit distinction "fails to account for knowledge that is embedded in the interaction of workers as they do their work." Consequently, although

the definitions for and distinctions between explicit and tacit knowledge are not entirely without debate, this study acknowledges that both types of knowledge exist and that there is a need to share such knowledge in order for organisations to function effectively (for a more in-depth discussion, see Essay 2 in Part II of this Dissertation). Consequently, to understand these issues better, knowledge sharing as a phenomenon needs to be explored.

2.3.2. Different Approaches to Knowledge Sharing

There are several knowledge related concepts, including knowledge sharing, knowledge creation, knowledge management, knowledge transfer, and knowledge utilisation (see Choo & Bontis 2002 for more details). Sometimes these terms get used interchangeably and other times they carry a very specific meaning. Therefore, it is necessary to state that in this Dissertation the choice of using the term knowledge sharing is conscious and deliberate. However, given that the terms knowledge sharing and knowledge transfer are interrelated, literature from both research streams will be included. Mäkelä (2006) summarises the difference between the two terms by stating that knowledge transfer usually refers to organized activity between subsidiaries, whereas knowledge sharing occurs naturally in interpersonal interaction and may or may not be planned or even intentional. Mäkelä (2006, p. 20) further contends that knowledge sharing "takes place constantly during the course of the everyday work of MNC managers; within formal and informal face-to-face meetings, over the telephone or via e-mail, as well as in informal encounters such as popping into someone's office or chatting at the coffee machine." Consequently, to tap into these types of knowledge sharing activities, an

integrated internal communications perspective is necessary, since such communication is seen to include all internal communications.

While much of the previous work has focused on studying knowledge sharing at the unit level (Hansen, 1999, 2002; Nahapiet & Ghoshal, 1998; Reagans & McEvily, 2003; Tsai, 2001; Tsai & Ghoshal, 1998), it has recently been acknowledged that interpersonal knowledge exchanges are an important part of the overall internal knowledge flows within the MNC (Foss & Pedersen, 2004; Mäkelä, 2006). Furthermore, much of the initial research on knowledge transfer and knowledge sharing has tended to emphasise technical solutions, hence the focus of many organisations on the development of technology-based knowledge management systems. These systems have enhanced the transfer of explicit knowledge, but have largely ignored tacit knowledge and the important role played by interpersonal knowledge networks. Therefore, although knowledge management systems perform an important task, social processes complement them in a critical way (Brown & Duguid, 1998; Flanagin, 2002; Hayes & Walsham, 2003; Walsham, 2002; Zorn & Taylor, 2004). Tsoukas (2003, p. 426) gives support to this view by arguing that "[n]ew knowledge comes about not when the tacit becomes explicit, but when our skilled performance – our praxis – is punctuated in new ways through social interaction."

2.3.3. Knowledge Sharing in the MNC Context

Much of the research discussed thus far has been embedded in the MNC context, which can be explained by the fact that knowledge sharing is seen as a major task of the differentiated MNC (Bartlett & Ghoshal, 1989; Nohria & Ghoshal, 1997). However,

Cross & Prusak (2003, p. 468) suggest that "knowledge does not simply flow through an organization but is bartered, blocked, exchanged, and modified." Therefore, most areas relating to the knowledge sharing process have received attention, and as the work of Gupta & Govindarajan (2000) illustrates, that process is largely defined by the different elements of the communication model[8]. Gupta & Govindarajan (2000) list five key areas: (a) value of the source unit's knowledge stock, (b) motivational disposition of the source unit, (c) existence and richness of transmission channels, (d) motivational disposition of the target unit, and (e) absorptive capacity of the target unit. Mäkelä (2006) presents an excellent review of these and other properties of knowledge, and a specific discussion of knowledge sharing at different levels in the MNC.

In terms of the structure of the MNC, relationships tend to be more complex and a high information processing capacity is needed. Hence, Gupta & Govindarajan (1991) show that higher information processing capacity is created by more intense communication patterns. Furthermore, Ghoshal & Bartlett (1988) contend that internal communication is a key source for the MNC's ability to create, adopt, and diffuse knowledge and innovations. Another way to look at it is that boundary-spanners have a critical role in the coordination, integration, and exchange of resources within the geographically dispersed subunits of the MNC (Kostova & Roth, 2003). Such boundary-spanning, intermediating functions are often performed by managers, who coordinate activities between different business units and geographical locations.

Finally, as also argued in Essay 2 (in Part II of this Dissertation), several studies contend that interaction between two members of an organisation increases the level of

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[8] Section 2.1.2. titled 'Different approaches to internal communications' listed elements including communicators (sender and receiver), message, channel, transmission (encoding and decoding), noise, feedback, and context (e.g., Krone et al., 1987; Tourish & Hargie, 2004b).

knowledge sharing between them (Hansen, 1999, 2002; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998).   This can therefore be argued to suggest that more intense communication patterns increase knowledge sharing (Reagans & McEvily, 2003). Hence, an interest in studying the relationship between tie strength (weak vs. strong) and knowledge type (explicit vs. tacit) in the multinationals appears natural (e.g., Hansen, 1999, 2002; Levin & Cross, 2004; Reagans & McEvily, 2003).   For example, Hansen (1999) established that weak ties were more efficient for the search and transfer of codified knowledge, whereas complex knowledge would often require strong ties. However, Borgatti & Cross (2003) show that information seeking can also be a function of knowing what the other person knows, valuing what the person knows, and being able to gain timely access to the person's thinking.   Hence, to determine the role of communication for knowledge sharing, we need to examine how the two have been combined in previous research.

2.3.4. Knowledge Sharing and Internal Communications

Communication is not usually discussed explicitly in connection with knowledge sharing outside the field of communication (cf. Barner-Rasmussen, 2003; Barner-Rasmussen & Björkman, 2005; Ghoshal & Bartlett, 1988; Ghoshal et al., 1994; Gupta & Govindarajan, 1991, 2000), and at the same time we may ask, "What is knowledge sharing essentially but effective communication?"   This point is supported by views raised in the collection of essays presented in Management Communication Quarterly's Forum on "Knowledge Management and/as Organizational Communication" (MCQ, 2002, 16(2)).   More specifically, Zorn & May (2002, p. 238) state that "[o]ur motivation for initiating this Forum is the belief that KM is fundamentally an organizational

communication process, one to which communication scholarship can make a valuable contribution. […]   Furthermore, the issues that KM practitioners struggle with are largely communication issues, such as how to organize the generation, sharing, understanding and use of knowledge."   One important issue that is raised is the argument that knowledge resides in human beings and is embedded in practice (Burgess, 2005; Heaton & Taylor, 2002; Tucker et al., 1996; Walsham, 2002; Zorn & Taylor, 2004).

More specifically, Walsham (2002, p. 267) argues that "knowledge resides in human beings, not in computer systems, and communication is a complex process of human sense-reading and sense-giving, not the simple "transfer" of knowledge from one person to another."   Heaton & Taylor (2002) contend that knowledge resides in communities and reflects the practices of those communities with specific evidence of knowledge as not only a product of a community in which it is developed but something that is best explained by the practices that are typical of such a community.   Heaton & Taylor (2002, p. 222) further suggest that "[b]ecause text – whatever its manifestation, spoken or written – is grounded in process, it is essentially a medium for the maintenance of interaction, not just a material record, or 'product'."   To conclude, while an interest in the links between knowledge and communication exist, such research has not been carried out in the MNC context in the field of communication research.   Therefore, in order to understand one of the reasons why the MNC is such a special context, diversity is examined next.

2.4. Diversity

Given the multi-contextual and geographically scattered nature of the MNC, it is not surprising that employees differ from one another in terms of many attributes. This results in workplace diversity. Furthermore, studying diversity is important since the underlying principle of much of the social network research is that people prefer to interact with others who are similar to themselves (Kilduff & Tsai, 2003). Therefore, diversity may impact communications and knowledge flows in networks in significant ways.

2.4.1. Defining Diversity

Jackson, Stone & Alvarez (1993, p. 53) give a general definition, according to which diversity refers to "situations in which the actors of interest are not alike with respect to some attribute(s)." Workplace diversity focuses on both observable and underlying attributes; observable attributes include nationality, race/ethnicity, age, and gender, while underlying attributes comprise of values, skills, knowledge, and cohort membership (Milliken & Martins, 1996). Examining the role of these attributes is important because as discussed earlier, they may at times be a decisive factor in terms of who belongs to which network and how effectively those network members are able to partake in knowledge exchanges. However, it should be emphasised here that as the above mentioned attributes illustrate, diversity is not solely based on cultural attributes (e.g., Cummings, 2004; Milliken & Martins, 1996; Witherspoon & Wohlert, 1996), although a cultural/ethnicity based view to diversity is often adopted in communication research (e.g., Fine, 1996; Grimes, 2002; Grimes & Richard, 2003; Muir, 1996).

2.4.2. Different Approaches to Diversity

Williams & O'Reilly (1998) conduct an extensive review of research carried out in the area of demography and diversity in organisations spanning over four decades, and conclude that there are three primary theories underlying organisational diversity research: social categorization, similarity/attraction, and information/decision making. The first two theories focus mainly on diversity defined in terms of demographic attributes (e.g., gender, race, or age) and personal attributes (e.g., status, expertise, or style); while the information/decision making theory usually examines the variation in the levels of expertise or information. A brief overview of the three theories is provided next (based on a discussion presented in Essay 3, in Part II of this Dissertation).

Social categorization theory argues that variations in the workgroup's demographic composition affect group process whereas the similarity/attraction theory rests on the assumption that the similarity of attributes increases interpersonal attraction and liking. To understand the background to this discussion better, we can turn to Carley's (1991) seminal work, which suggests that individual characteristics influence the formation of groups through relative similarity between individuals leading to interaction and often to the selection of interaction partners. The similarity/attraction theory is embedded in the principle of homophily, referring to a "tendency to associate with people 'like' yourself" (Watts, 1999, p. 13), and leads to the supposition that people have a tendency to interact with similar others and that such similarity breads connection (McPherson, Smith-Lovin & Cook., 2001). More specifically, McPherson et al. (2001, p. 415) state that "[h]omophily limits people's social worlds in a way that has powerful implications for the information they receive, the attitudes they form, and the interactions they

experience".   Studies based on the theories of social categorization and similarity/attraction have typically concluded that diversity has a negative effect on group process and performance (Williams & O'Reilly, 1998).   For example, Brass (1995, p. 51) suggests that "similarity is thought to ease communication, increase predictability of behaviour, and foster trust and reciprocity."

The information/decision making theory explores how information and decision making are affected by the heterogeneity of the group composition. This approach differs from the previous two streams by assessing the information benefits that can be achieved from diverse connections. More specifically, Williams & O'Reilly (1998, p. 86) argue that "given that there is propensity for individuals to communicate more with similar others, individuals in diverse groups may have greater access to informational networks outside their work group. This added information may enhance group performance even as the diversity has negative impacts on group process."   In support of this argument are the findings of Cummings (2004), who gives evidence of diversity, rather than similarity, enhancing external knowledge sharing and performance. Similarly, Ancona & Caldwell (1992) find that the greater the functional diversity, the more communication outside team boundaries takes place. Therefore, this perspective argues for the additional value diversity brings through new information. Consequently, although similarity may ease and enhance connectivity, similarity may also diminish information benefits due to failure to access and use the potentially wide range of available information (Williams & O'Reilly, 1998)[9].

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[9] Parallels can be drawn to bonding and bridging relationships. Bonding relationships may be easier to form and maintain (as is contact with people who are similar to yourself) but bridging relationships give access to non-redundant information (as is often the case with contacts dissimilar to yourself).

2.4.3. Diversity in the MNC Context

In terms of the actual research areas, previous diversity studies have tended to focus on various group processes, performance, or at times both. These studies have examined nationality/culture related attributes for a managerial network (Manev & Stevenson, 2001); the impact of structural and demographic forms of diversity on knowledge sharing (Cummings, 2004; Mäkelä, Kalla & Piekkari, 2006); the role of tenure and functional diversity in relation to group processes (goal setting, prioritisation, and planning) and group external communication (Ancona & Caldwell, 1992); workgroup diversity, conflict and performance (Jehn, Northcraft & Neale, 1999; Pelled, Eisenhardt & Xin, 1999); and the impact of organisational demography on turnover (Pfeffer, 1985; Wagner, Pfeffer & O'Reilly, 1984).

Many of the above discussed studies focus on workgroups within the MNC context. Studying workgroups is important because organisations dependent on the efficient functioning of groups as Jehn et al. (1999, p. 741) highlight, "[t]he resulting flatter, more decentralized organizational forms tend to be built around groups and depend on rich synchronous communication provided by teams and task forces." This Dissertation also focuses on workgroups and the bonding relationships that exist within workgroups (intra-workgroup context) and bridging relationships that are present between them (inter-workgroup context). Thus, of particular interest to this study is the impact of different forms of diversity on intra-workgroup and inter-workgroup communication patterns.

Another area of diversity that is often discussed is the role of culture (Adler, 1997; Gudykunst & Ting-Toomey, 1988; Hofstede, 1989; 1991; Joyant & Warner, 1996). As already shown earlier, multinational corporations by their very nature are dispersed between different countries and composed of different nationalities. Therefore, cultural diversity can be argued to play a significant role. However, it is argued here that diversity is not solely based on cultural or ethnicity based attributes, although such approaches are often adopted in communication research (e.g., Fine, 1996; Grimes, 2002; Grimes & Richard, 2003; Muir, 1996). Therefore, instead of focusing on the issue of culture specifically, this study assumes that by its very nature, the MNC is a multicultural work setting. The way cultural diversity is incorporated into this study is via an inclusion of employees of different nationalities, based in different countries.

2.4.4. Diversity and Internal Communications

The context of the multinational corporation is a challenging environment for conducting business given its differentiated nature. Moreover, the automatic existence of workgroup diversity, that the MNC introduces, further complicates interactions. However, the evidence for whether diversity enables, complicates or hinders interpersonal communication is at best equivocal (Ancona & Caldwell, 1992; Mäkelä et al., 2006; Smith & al, 1994). Therefore, this complex and intriguing environment provides a very interesting context for the study of internal communications, and highlights the need to better understand the impact of these complexities on communication patterns. Also, as argued earlier, given the limited internal communications research in the MNC context, it would be beneficial to more fully

understand how different forms of diversity may impact communication in different situations.

Previous research in the field of communication has addressed the relationship between diversity and communication, but not to a sufficient degree. A special issue of the Journal of Business Communication (1996, 33(4)) introduced a variety of perspectives on workplace diversity and their links to business/managerial communication. However, the discussions tended to centre around the management of diversity and increasing awareness of and sensitivity to differences among the workforce, using such vehicles as advisory panels (Hermon, 1996), mentoring (Egan, 1996; Wanguri, 1996), and approaches promoting readiness (Muir, 1996) and openness (Wanguri, 1996). While examining different approaches or tools for enhancing the participation and opportunities of minority groups is necessary, it alone is not enough (as discussed in more detail in Essay 2, in Part II of this Dissertation).

Later articles have focused on diversity in terms of power struggles and different organisational voices (Grimes & Richard, 2003; Kirby & Harter, 2003), and also examined the role of shared language in horizontal communication (Charles & Marschan-Piekkari, 2002). Therefore, although such research provides interesting and important insights, it does not sufficiently address the need to understand what direct implications different forms of diversity have on internal communication patterns. Furthermore, these articles do not often take into account that diversity does not need to be based only on demographic or observable attributes, but may also comprise of such underlying attributes as values, skills, knowledge, and cohort membership (Milliken & Martins, 1996). Having examined the four key phenomena of this study, it is time to

see how they all tie together in the following integrated internal communications framework.

2.5. Integrated Internal Communications Framework

It is argued in this Dissertation that a traditional view of internal communications does not enable us to fully understand the role of internal communications within the MNC. Therefore, a more holistic approach of integrated internal communications is proposed as a more viable alternative. The concept of integrated internal communications is now presented, followed by an integrated internal communications framework, which explains the studied relationships between the key research phenomena.

2.5.1. Integrated Internal Communications

The definition for integrated internal communications is drawn from the knowledge and research carried out in the communication domains discussed previously, i.e. corporate, organisational, management, and business communication, and research from the management and international business literatures is also incorporated. In order to include elements from all of these domains and to present a more holistic approach to internal communications, a definition for integrated internal communications is expressed as *all formal and informal communication[10] taking place internally at all*

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[10] Communication is here understood as interaction through messages (Fiske, 1990). However, while all forms of communication are recognised to contribute to this definition, the focus of this study is on the exchange of work-related knowledge through these various communication actions. The distinction between formal and informal purely alludes to the fact that informal chats by the coffee machine can be equally important to formal presentations (Ibarra, 1992; Sprague & Del Brocco, 2002), but this study does not specifically explore the differences between the two.

levels of an organization. In this study, the term integrated internal communications is used in the plural because the goal is to capture all the communication processes that take place simultaneously inside an organisation.

One of the challenges related to internal communication activities, especially in the ever more complex organisations is knowing who belongs and who does not, when the boundaries are fluctuating and fuzzy (Kitchen, 1999). While being able to separate internal and external audiences is challenging, it has been equally difficult to adopt a view that would include all different internal audiences in the study of internal communications. Many of the communication domains discussed previously have tended to focus on a specific internal audience, rather than incorporating all forms of communications performed by all employees. However, it is important to understand that employees receive information from various sources, and the balance has to be right for them (Clampitt et al., 2000). For example, a balance has not been achieved if one aspect works well (e.g. corporate communication) and another (e.g. management communication) is failing the employees' expectations.

Consequently, discussing or assessing the true impact of internal communications has been extremely difficult because the focus has often tended to be on a certain sub-group of the organisation, rather than adopting a holistic view as is proposed by the integrated internal communications definition. Therefore, this work argues that informal chats by the coffee machine may be equally important to formal senior management presentations for the flow of information inside the organisation. More specifically, employees do not work in isolation in multinational corporations; instead, they often rely on the interpersonal networks that exist between employees and managers to

provide the most efficient communication channels for knowledge exchange (e.g., Borgatti & Cross, 2003; Cross et al., 2001). However, unless all such communications are recognised to contribute to the communications mix equally, the position of internal communications cannot be evaluated fully (see Essay 1 in Part II of this Dissertation for a more detailed discussion on integrated internal communications).

2.5.2 Developing a Theoretical Framework

While the literature review examined some of the links that exist between internal communications, social capital, and knowledge sharing, the research findings are limited and cause-and-effect relationships not clear. Consequently, Figure 3 attempts to capture the relationships between integrated internal communications, social capital, and knowledge sharing in their fullest sense. The two-directional arrows attempt to show that the influence between the phenomena is rarely one-directional and may change at different stages in the process. For example, the implication is that while integrated internal communications may enhance the creation of social capital (Bourdieu, 1986; Hazleton & Kennan, 2000; Kostova & Roth, 2003), existing social networks may in turn also enhance communications (Ghoshal & al, 1994). Similarly, although communication is taken to be a pre-condition for knowledge sharing (Burgess, 2005; Tucker et al., 1996), the desire to share knowledge may also encourage communication. Finally, social capital has been shown to enhance knowledge sharing (e.g. Borgatti & Cross, 2003; Cross et al. 2001; Hansen, 1999, 2002; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998), but the knowledge sharing process may also result in more social capital being created.
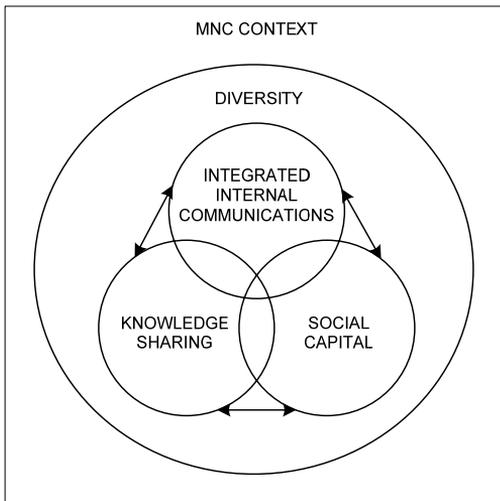
Figure 3. Interrelationships between the Key Concepts of the Study

Another area that Figure 3 highlights is diversity as a contextual factor within the MNC. While diversity is not studied at the same level as social capital and knowledge sharing, it is nevertheless an important issue to incorporate. Networks are usually based on ethnicity, religion, language, and profession, which means that diversity has the ability to influence network formation both positively and negatively (Quibria, 2003). Furthermore, the figure illustrates the complex relationships that exist among the phenomena, which at times overlap given that there are certain characteristics that the phenomena share. Exploring those areas is outside the scope of this study but the aim of the conceptual framework is to illustrate how difficult it is to explain the exact boundaries between the three, and also to highlight the embeddedness of the phenomena. As an example, some may argue that communication is embedded in social capital (e.g., Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998), although it is clearly also the central activity of integrated internal communications.

Based on the interrelationships between the key concepts of the study, the following theoretical framework was developed. The goal of Figure 4 is to illustrate which theories are studied and how each is approached in this Dissertation.
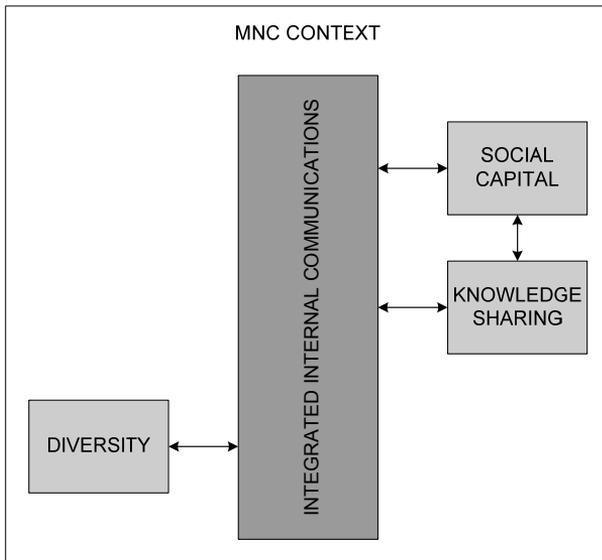
Figure 4. Theoretical Framework of the Study

To synthesise, integrated internal communications is shown as the central block because that is the primary focus of this research. Then, social capital and knowledge sharing are show to the right of integrated internal communications because this study seeks to understand how integrated internal communications influences the two phenomena. At the same time, there is an arrow between social capital and knowledge sharing, since that relationship is one of the premises of this research and it is also incorporated into the empirical part of the study. Diversity, on the other hand, is included on the left-hand side of the central block because this study mainly examines how it influences integrated internal communications (rather than is being influenced by it).

The reason why diversity is here shown as another block, instead of an underlying contextual factor, is to illustrate the relationships between the key constructs of this study within an integrated internal communications framework. While it is without a doubt that diversity would also influence social capital and knowledge sharing, the scope of this Dissertation does not allow it to be studied in that context. Furthermore, the fact that diversity, social capital, and knowledge sharing are all of about equal size is meant to show their relative importance in this study; integrated internal communications occupies the largest area since it is the focal point. Finally, it should be mentioned that the reason for including two-directional arrows is to show that even if these phenomena are approached in a certain way in this study, the linkages between them are nevertheless multidirectional.

The way the theoretical framework is approached in the three essays that compose this Doctoral Dissertation is the following. Essay 1 explores integrated internal communications via qualitative data. Essay 2 examines the relationships between integrated internal communications, social capital and knowledge sharing, through quantitative data. Essay 3 focuses on the influence of diversity on integrated internal communications via quantitative data. The next chapter of this study describes the methodology with a description of the case company and the qualitative and quantitative parts of the study.

3. METHODOLOGY

The research presented in this Doctoral Dissertation was all conducted within one focal organisation, and multiple data collection methods consisting of both qualitative and quantitative approaches were used. Therefore, the empirical data for the three essays comes from two data sets: (1) a set of in-depth qualitative interviews with 12 senior managers, and (2) a quantitative questionnaire survey with complete answers provided by 749 managers. Essay 1 draws on the qualitative data, while Essay 2 and Essay 3 utilise the quantitative data. To present these methods in a logical manner, this chapter is divided into three main sections. First, the case study setting is described with a brief presentation of the focal organisation (referred to hereafter as the case company). Second, the data collection is described with an emphasis on the qualitative and quantitative methodological approaches. Third, issues relating to the validity and reliability of the study are discussed.

3.1. The Case Study Setting

As stated above, this study focuses on a singe multinational corporation, however, different business units and countries are included to give more representative results. Therefore, an embedded, single-case design is adopted (Yin, 2003). Adopting a case study strategy in this study is appropriate since the specific research questions being asked are "how" questions, and those questions are asked about a contemporary set of events, which the researcher cannot control (Eisenhardt, 1989; Yin, 2003). This particular case company was selected because its global presence and matrix communication structure provided an appropriate real-life context where the

contemporary phenomenon of integrated internal communications could be studied. Furthermore, due to my previous work experience at the case company, access to people and sensitive information not in the public domain was made easier initially. Gummesson (1991) and Johns (2001) argue that different roles played by the researcher within the research process can produce sound contextualisation of the research phenomenon. However, it should be specified here that at the time of this research, I was no longer working for the case company. Only one MNC was included in this study to harmonise the effect of company culture; but due to the MNC being a leader in its field, we can assume that the results will be somewhat representative of best practice.

The case company is a world-leading telecommunications MNC based in Finland. At the end of 2005, the company employed over 58,000 people globally with operations in all six continents and sales in over 130 countries. For 2005, the company's net sales were EUR 34.2 billion. The company could be described as a differentiated global network, where the daily operational work of the organisation involves frequent interaction between managers across the different MNC units. The initial qualitative data collection phase focused on the key senior communications and HR managers, hence they tended to be largely based at the company headquarters. However, based on the insight gained from these interviews, six business units with a focus on their operations in six key markets were included in the larger quantitative data collection phase. More detailed background statistics are provided when the specific data collection methods are discussed.

3.2. Data Collection

The primary data collection methods included the qualitative interviews and the quantitative questionnaire survey, but the findings gained through these data sets are supported by case company documents, observation, and discussions with a key informant. Different case company documents ranged from communications strategy and intranet discussion-groups to publicly reported shareholder information and news stories. Observation took place during the interviews and also during the questionnaire survey development phase, when I spent several days at the case company offices. Furthermore, I had a monthly meeting with my key informant, a senior communications manager, who facilitated access to people and information. The key informant was also very knowledgeable about the research area, and was hence in a position to give additional insights, which made contextualization of the data easier. Combining such methods is common, given that according to Eisenhardt (1989, p. 534) "[c]ase studies typically combine data collection methods, such as archives, interviews, questionnaires, and observations." These different data collection phases have been organised in chronological order in Figure 5.
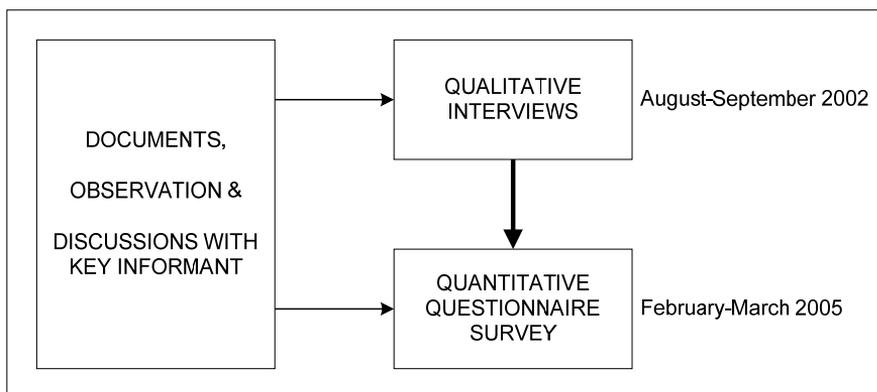
Figure 5. Data Collection Phases

3.2.1. Qualitative Interviews

The qualitative interviews served as an information gathering phase, allowing the researcher to gain a better understanding of the views of the case company management through explorative in-depth interviews (Marschan-Piekkari, Welch, Penttinen & Tahvarainen, 2004; Mason, 2002; Ritchie & Lewis, 2003). Explorative interviews are a good way for a researcher to find out more information about the subject of the study through a relatively unstructured interview format. When the topic of the research is relatively sensitive, it implies that it is easier to approach it in an interview as opposed to a questionnaire (Downs, 1988; Hirsjärvi & Hurme, 1991). The specific purpose of the interviews was to verify topic areas found relevant based on academic research, establish possible new topic areas, and to gain a deeper understanding of the case company communications culture.

Twelve interviews were conducted in August-October 2002, with a focus on communication practices and social capital (the thematic interview guide is provided in Appendix 1). Knowledge sharing was not one of the themes to be discussed explicitly but the theme emerged throughout the discussions. The twelve interviewees were specified by the key informant and they included key communications and HR managers of the case company. Three quarters of these senior managers were based at the company headquarter in Finland (n=9) and a quarter in the United Kingdom (n=3). There was a bias towards Finnish interviewees, but the sample was representative of senior managers within the studied functions. Information about the background of the interviewees is provided in Table 1.

Number of interviewees	12
Management level	Senior managers
Functional background (number)	Corporate Communications (5), HR (7)
Geographic location (number)	Finland (9), United Kingdom (3)
Nationality (number)	British (2), Finnish (9), Swedish (1)
Gender (number)	Male (7), Female (5)

Table 1. Interviewee Background Information

Each interview was recorded and lasted about an hour (the range was 40 to 100 minutes), following which it was transcribed. The interviews were conducted in English and Finnish, and verbatim quotations in Finnish have been translated into English by the author. The interviews were analysed according to Dey's (1993) 'Circular Process' for qualitative analysis, which consists of three different stages: describing, classifying, and connecting. Dey (1993, p. 30) himself explains that, "[d]escription lays the basis for analysis, but analysis also lays the basis for further description." This is a process that happens over and over again in a spiral-like shape. The emphasis is on description, and then on splicing and splitting the data in order to form new and more comprehensive categories gathered under a common theme. The insights that emerged during this data collection phase have been presented in Essay 1 (in Part II of this Dissertation), and those insights have then been studied further in the quantitative questionnaire survey.

3.2.2. Quantitative Questionnaire Survey

Although qualitative methods are often more telling when looking at communications research, using quantitative methods here is beneficial as it brings additional validity to the research, and is more appropriate for establishing cause-and-effect relationships (Hair, Anderson, Tatham & Black, 1995). Furthermore, a quantitative questionnaire

survey has been chosen as the main method because it is a useful and an efficient way of collecting a large number of data from midlevel managers spread around the globe.

Before explaining in detail how the questionnaire survey was constructed and the participants selected, the questionnaire content is briefly explained. The questionnaire survey was interested in the four main phenomena that this Doctoral Dissertation addresses, i.e. integrated internal communications, social capital, knowledge sharing, and diversity. The operationalisation of these four key constructs is now briefly explained, and detailed descriptions are provided in conjunction with Essay 2 and Essay 3 (a copy of the questionnaire survey instrument is provided in Appendix 2). Essay 2 addresses the relationships between communication intensity, relational-cognitive embeddedness, and knowledge sharing; and Essay 3 explores the relationship between diversity and the frequency of communication. Consequently, the two essays use different subsets of variables with the exception that they both include the communication related measures.

Integrated internal communications   Integrated internal communications was operationalised in terms of the communication intensity/frequency, i.e. the frequency at which managers communicate with their 'close group of colleagues'[11] (bonding or intra-workgroup relationships) and 'other contacts'[12] (bridging or inter-workgroup relationships) when seeking work-related facts or information and advice or insight to work-related problems. The use of frequency as a measure of communication is the

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[11] *"My close group of colleagues"* - Think of a group of colleagues who work for [Company X], and with whom you interact most frequently on work-related matters on a normal working day or week.

[12] *"My other contacts"* - Think of a group of colleagues who work for [Company X] but who are not a part of your "close group of colleagues", but with whom you interact relatively regularly on work-related matters during your working week or month (they may be from other business units or functions but they serve as important sources of information).

most typically used measure of communication in quantitative studies (Allen, 1984; Hansen, 1999, 2002; Kostova & Roth, 2003). While it is acknowledged that communication is a multifaceted phenomenon and that frequency alone is not a fully representative measure, it was chosen in line with previous research.

Social capital Social capital was operationalised in terms of relational-cognitive embeddedness, i.e. a combination of Tsai & Ghoshal's (1998) relational and cognitive dimensions of social capital, following the example of Yli-Renko (1999). The structural dimension was not included here, since communication intensity has been included as a separate construct. There were six measures in total for each of the bonding and bridging relationship contexts. The three measures representative of the relational aspect of social capital were closeness, integrity, and reliability, and the three measures of the cognitive aspect of social capital were shared values, codes, and goals (following Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998).

Knowledge sharing Knowledge sharing was operationalised in terms of how much useful explicit and tacit knowledge managers received from the two groups of colleagues (i.e., close and others). Explicit knowledge was operationalised as work-related facts or information and tacit knowledge was operationalised as advice or insight to work-related problems (following Hansen, 1999, 2002). Knowledge sharing was approached in this study from the perspective of the knowledge recipient, as it is typically an integrated part of interpersonal interaction, and may or may not be intentional or even conscious from the perspective of the sharer. Furthermore, the usefulness of shared (rather than received) knowledge would only have been the

respondent's perception of his/her colleagues' experience (see Reagans & McEvily, 2003 for further discussion on unidirectionality of knowledge sharing).

Diversity   Diversity was operationalised in terms of three separate measures deemed important for the MNC, namely geographic, functional, and nationality diversities (Cummings, 2004; Mäkelä et al., 2006).   Those measures were then made into statements where the respondents' perception of the similarity of their colleagues determined what proportion of their intra-workgroup and inter-workgroup colleagues were similar/dissimilar.   This is a commonly adopted approach in terms of measuring diversity (Kirchmeyer, 1995; Riordan, 1997), given that completely objective measures or proxies are rarely available

Developing a solid questionnaire survey framework and knowing how to apply it to the organisational context are very important considerations; hence close to a year was spent on the development, testing, and fine-tuning of the instrument, in order to ensure internal validity of the questionnaire survey (Edwards, Thomas, Rosenfeld & Booth-Kewley, 1997; Punch, 2003).   Initially informal testing of the questionnaire survey was carried out in a university setting before testing the statements in the corporate setting. A pilot questionnaire survey was then compiled and tested at the case company in paper format in one-to-one and small group interviews (n=15) in order to get maximum amount of feedback about the overall content and clarity of statement wording.   Based on the feedback final adjustments were made, and a wider pilot test was carried out on the case company intranet (n=60).   No additional changes were necessary based on the feedback to the second pilot, and the questionnaire survey was launched to the whole target sample.

The questionnaire survey was administered to a random stratified sample of 1800 midlevel managers. The random stratified sample was compiled with a two-step selection procedure using a database of 6000 managers. First, initially all managers from the six chosen business groups based in the six chosen countries were included. Second, among those remaining 3000 managers, about 300 managers were selected from each business group using a random stratified sampling technique in order to have relatively equal representation from each of the six business groups and the six countries. The questionnaire survey was conducted on the case company Intranet, and out of the 1800 invitations sent, 50 were returned due to incorrect e-mail addresses or the respondents having left the company. Hence, the final sample was 1750, and the number of completed questionnaire surveys was 767 (response rate = 44%). Observations with missing data were deleted completely, bringing the final sample size to 749 (n=749). Furthermore, organisational level scores were obtained by an aggregation of the 749 individual level responses from managers.

The participants were restricted to management, given their critical role in knowledge sharing, but the midlevel and upper-midlevel managers came from the key business areas of the company. The demographics of the managers who participated in the questionnaire survey were representative of the sample; the managers represented over 30 nationalities, the average length of service was nine years (ranging from one to over 30), 51 percent worked in R&D, and 86 percent were male. The background variables of the questionnaire survey respondents are described in more detail in Table 2.

The data analysis was carried out via different methods in Essay 2 and Essay 3. On the one hand, Essay 2 explored specific links between the studied phenomena, hence

utilising multiple regression analyses based on ordinary least squares (OLS). On the other hand, Essay 3 compared the means of groups with varying degrees of diversity to understand the influence of diversity on communication frequencies, this was accomplished via the statistical method of ANOVA (analysis of variance) (Hair et al., 1995). These different statistical approaches are examined in detail in the two essays.

Number of respondents (complete entries)	749	
Management level	Middle and Senior Managers	
Average age in years (standard deviation)	40.8 (6.4)	
Average length of service in years (standard deviation)	9.0 (5.2)	
Gender [number, percent]	- Male [641, 86%]	
	- Female [108, 14%]	
Functional background [number, percent]	- R&D [385, 51%]	
	- Sales & Marketing [118, 16%]	
	- Product Marketing [69, 9%]	
	- Customer Support [49, 7%]	
	- Business Control [46, 6%]	
	- Other [82, 11%]	
Geographic location [number, percent]	- Finland [337, 45%]	
	- USA [194, 26%]	
	- Germany [81, 11%]	
	- UK [58, 8%]	
	- Denmark [56, 7%]	
	- Singapore [23, 3%]	
Nationality [number, percent]	- Finnish [368, 49%]	
	- American [136, 18%]	
	- German [74, 10%]	
	- British [59, 8%]	
	- Danish [55, 7%]	
	- Singaporean [12, 2%]	
	- Other [45, 6%]	
Business group [number, percent]	- BG1 [159, 21%]	
	- BG2 [153, 20%]	
	- BG3 [119, 16%]	
	- BG4 [112, 15%]	
	- BG5 [111, 15%]	
	- BG6 [95, 13%]	

Table 2. Questionnaire Survey Respondent Background Information

3.3. Validity and Reliability of the Study

The most important criterion of research is validity and it refers to the question of whether the study is measuring or recording what it is intended to measure or record; three types of validity will be discussed, i.e. construct, internal, and external validity

(Bryman & Bell, 2003; Yin, 2003). Another important criterion for research is the reliability of the study, referring to whether the results of a study are repeatable and likely to apply at other times (Bryman & Bell, 2003; Yin, 2003). However, while these criteria are very important for research, it should be remembered that their application to qualitative research is not always as simple as their use in quantitative research (Mason, 2002; Tashakkori & Teddlie, 1998). Given that these four criteria are commonly used in establishing the quality of empirical social research, Yin (2003) argues also for their relevance in case studies. These criteria are now briefly defined and then they are discussed in more detail in relation to the qualitative and quantitative parts of the study.

First, *construct validity*, also known as measurement validity, relates to the attributes of the collected data (Tashakkori & Teddlie, 1998; Yin, 2003). More specifically, Bryman & Bell (2003, p. 33) contend that construct validity addresses "the question of whether a measure that is devised of a concept really does reflect the concept that it is supposed to be denoting". Second, *internal validity* refers to the issue of causality, i.e. whether a suggested causal relationship holds (Bryman & Bell, 2003); hence this issue emerges during the data analysis phase (Yin, 2003). Third, *external validity* refers to the question of whether the findings of the study can be generalized beyond a particular research context (Bryman & Bell, 2003); hence relating to the research design (Yin, 2003). Fourth, *reliability* refers to the repeatability of the results of the study, including issues of stability of the investigation, and the internal consistency of measures (Bryman & Bell, 2003); an issue relevant during the data collection phase (Yin, 2003).

3.3.1. Qualitative Interviews

In the case of the qualitative interviews, construct validity was addressed in the following manner. First, the data collection was informed by previous research in the fields of communication and social capital research. Second, the terminology used in the interviews was adjusted to concepts that the managers could relate to instead of using academic terminology in order to assure that they knew what the phenomena referred to. Furthermore, if there were any problems understanding any of the terms or topics, the interviewer could provide additional clarifications in the interview situation. Third, multiple sources of evidence were used, including interviews, observation, internal and public documents, and discussions with key informant (Yin, 2003). Fourth, a chain of evidence was established including recorded interviews and a research journal with insights arising during the research process (Yin, 2003).

In terms of internal validity, Yin (2003) contends that it is only relevant for explanatory or causal studies, not for descriptive or exploratory studies, as was the case with the qualitative interviews in this research. However, internal validity in qualitative work can also be argued to relate to the attributes of conclusions or the validity of interpretation (Mason, 2002; Tashakkori & Teddlie, 1998). Furthermore, internal validity is often said to be more important than external validity because if it does not hold, then no accurate conclusions can be drawn (Frey, Botan, Friedman & Kreps, 1992). Thus, the issue of internal validity was addressed by re-reading the transcribed data several times, followed by careful classification and categorisation of emerging themes, following Dey's (1993) circular process.

External validity is particularly interesting because according to Frey et al. (1992, p. 315) it shows "the extent to which the findings from a study can be generalised to other populations (universes) and/or other settings." They further state that external validity is maximised in three ways: when subjects of the study are representative of the population to which the results are being applied; when research is replicated it should lead to consistent findings; and when a study demonstrates ecological validity i.e. reflects real-life circumstances. In this research, the subjects of the study were representative of senior communications and HR managers, and the study demonstrated ecological validity as the observation and the interviews took place in the usual work environment and addressed normal work behaviour. As for the replication of the research, it should be possible since the process was carefully described and the thematic interview guide is attached (see Appendix 1).

Finally, reliability is addressed in accordance with Rubin & Rubin (1995, p. 85), "researchers judge the credibility of qualitative work by its *transparency*, *consistency-coherence*, and *communicability*." In this study, transparency was achieved by the description of the data collection procedures in order to make it clear to others and to the researcher how the interviews were conducted. Consistency-coherence was addressed by having the themes consistently explained to the interviewees in their preferred language by a single interviewer, and the consistency of responses by different individuals was taken into account by carefully reporting the results in Essay 1 (in Part II of this Dissertation). The third item is communicability, which refers to the researcher's ability to vividly and convincingly describe the research arena and to make sure that interviewees only talk about their first-hand experiences. I tried to ensure that only first-hand experiences were included and to verify as many statements as possible

by comparing the answers of the interviewees with one another. Furthermore, given that all interviews were conducted and analysed by the same interviewer, the potential pitfalls of multiple interviewers concerning training and inter-interviewer consistency could be avoided (Bryman & Bell, 2003; Fowler, 2002).

3.3.2. Quantitative Questionnaire Survey

In the quantitative questionnaire survey, the construct validity was addressed through a careful design of the questionnaire (DeVellis, 2003; Fowler, 2002), and an establishment of correct operational measures for the concepts under study (Yin, 2003). First, all constructs were deduced from theory, particularly following the work of Hansen (1999, 2002), Kostova & Roth (2003), Nahapiet & Ghoshal (1998), Tsai & Ghoshal (1998), and Cummings (2004). Second, operationalisations validated in previous research were used whenever possible and when such operationalisations were not available, questionnaire items were built by closely following previous key work concerning those particular constructs. Essay 2 and Essay 3 (in Part II of this Dissertation) provide a detailed description of the questionnaire items and their sources.

Internal validity was addressed by examining the convergent and discriminant validity of the research. Convergent validity refers to the homogeneity of the constructs included in the model, i.e. whether each of the constructs relates to its designated set of indicators only (DeVellis, 2003). Convergent validity was tested through confirmatory factor analysis and the Cronbach Alpha coefficients (these values are presented in Essay 2, in Part II of this Dissertation). Multiple measurement items were used for nearly all of the constructs, the only single-item measures were the diversity related measures

because it was important to study their roles separately. Discriminant validity refers to the assessment of the separateness of the constructs (DeVellis, 2003), and each construct loaded only on one factor and the correlations were at acceptable levels. The only correlations that were perhaps higher than they should have been were the correlations between the same measure in the context of bonding and bridging relationships. However, it was theoretically justified to separate the two contexts, and hence those correlations are not considered a significant issue.

The external validity was addressed as follows. The study used a carefully designed selection process for a stratified random sample to ensure equal representativeness of different business groups and countries (Fowler, 2002; Hair et al., 1995), as described in Section 4.2.2. Furthermore, the sample was representative of the population it was targeted at and the response rate was high, hence avoiding the two biggest compromises in surveys which lead to errors (Fowler, 2002). Finally, although only one MNC was included in this study in order to harmonise the effect of company culture, we can assume that the results will be somewhat representative of best practice given the market leader position of the multinational. Hence, it is my firm belief that these results are applicable also to other complex organisations.

To ensure reliability and increase transparency of the questionnaire survey, the various operational steps are carefully described (in Section 3.2.2.), and the questionnaire survey instrument and the attached covering letter with instructions to respondents are provided (in Appendix 2). However, the use of single respondents means that the data was essentially based on the perceptions of the respondents. Several steps were taken to ensure that the respondents provided reliable answers to the questionnaire in order to

minimise potential bias in the data (DeVellis, 2003; Fowler, 2002). First, the terminology used in the questionnaire survey was tested in a face-to-face setting to ensure that respondents would understand the statements correctly. Furthermore, the management levels included in the sample were such, that by the nature of the participants' work, they should all have fluency in the English language (the language of the questionnaire survey). These procedures increased the likelihood that the statements were answered consistently by all respondents. Second, questionnaire items were formulated to measure tangible matters rather than opinions, whenever possible. However, many of the key constructs required the use of perceptual measures, mainly because objective proxies do not exist. To address this, previously used measures were used wherever possible.

To conclude, the combination of qualitative and quantitative methods enabled the use of triangulation and a more informed understanding of the phenomena under study (Bryman & Bell, 2003; Tashakkori & Teddlie, 1998). In terms of methodological triangulation, the qualitative part of the study served as the preliminary data collection stage and the quantitative part was the follow up study (Bryman & Bell, 2003). While both forms of data collection pose certain challenges in themselves, they could be here used to support one another given that both data sets came from the same case company. Consequently, while the validity and reliability of the qualitative and quantitative parts of the study were addressed separately, the fact that methodological triangulation was used increases the validity of this study in itself. Furthermore, this study used multiple means of triangulation beyond methodological triangulation, including theoretical triangulation (multiple theoretical perspectives) and data triangulation (use of different forms of the data including explorative interviews,

questionnaire survey, and observation) (Hurmerinta-Peltomäki & Nummela, 2004; Tashakkori & Teddlie, 1998). Adopting the described approach was necessary for better understanding the complex phenomena under study, as will again be illustrated as the essay summaries are presented in the next chapter.

4. ESSAY SUMMARIES

This chapter focuses on summarising the three essays that this Dissertation is composed of by reporting the main results and highlighting key contributions to the overall study. Each essay constitutes an independent piece of work, and hence links between the essays are not explicitly stated in the text. The focus areas of the essays are such that each addresses one of the three specific research questions and then explores the corresponding area of the theoretical framework. The theoretical framework is presented again in Figure 6 below, with the addition of the focus areas of each essay being clearly outlined.
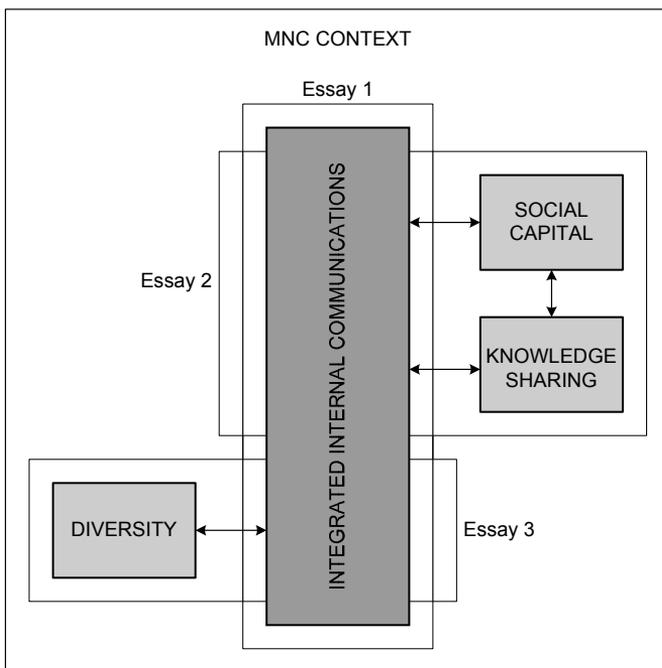
Figure 6. Areas of the Theoretical Framework Discussed in the Three Essays

The first of the three essays focuses on integrated internal communications; the second essay explores the relationships between integrated internal communications, social capital, and knowledge sharing; and the third essay examines the influence of diversity on integrated internal communications. Data for all three essays were collected from the case company. The first essay is based on qualitative interview data, while the second and third rely on quantitative questionnaire survey data. Each essay is now briefly presented and the part of the theoretical framework they focus on highlighted. Overall implications of these three essays are then jointly discussed in Chapters 5 and 6.

4.1. Summary of Essay 1

Title:	Integrated Internal Communications: A Multidisciplinary Perspective
Author:	Hanna Kalla
Publication:	*Corporate Communications: An International Journal*
Year:	2005
Volume:	10
Number:	4
Pages:	302-314

This essay addresses Sub-question 1: "*How does integrated internal communications manifest itself in the MNC?*" The essay engages in a theory-building discussion, which results in a definition for integrated internal communications, and also examines the issue of integrated internal communications through qualitative data from a leading telecoms multinational corporation. The focus of this essay is hence mostly on integrated internal communications, as illustrated in Figure 7.
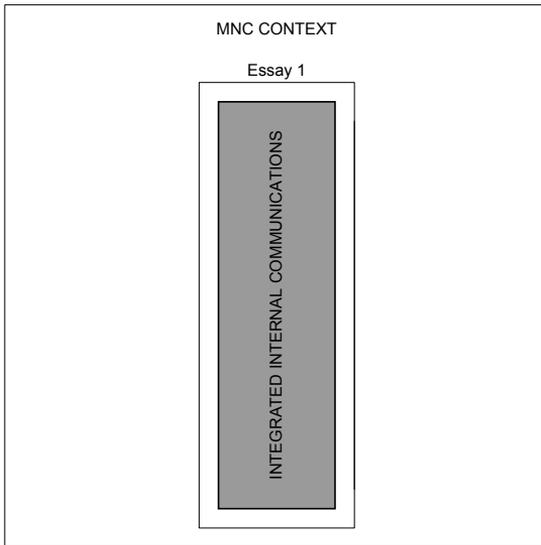
Figure 7. Area of the Theoretical Framework Discussed in Essay 1

The aim of the essay is to understand how internal communications has been defined previously, and how such communication may contribute to an organisation's competitive advantage. The essay begins by examining the multitude of definitions given to internal communications and an exploration of the different forms of knowledge that business, management, corporate and organisational communication domains or disciplines have brought to the study of internal communications (as discussed also in Section 2.1 of the Literature Review). As a result, a more inclusive approach is suggested, named here integrated internal communications. Integrated internal communications is defined as all formal and informal communication taking place at all levels of an organisation. This approach hence integrates practical and theoretical knowledge and incorporates all internal audiences in order to take a more holistic look at internal communications. This multidisciplinary and multilevel approach hence recognises that both theoretical and practical components guide the actions of corporate communication experts, mangers, and all employees in their formal

and informal communication tasks. It is further argued that integrated internal communications gives us an approach that can better address the strategic needs of an organisation; we can try to balance out information flows and enable more effective internal knowledge sharing only after we acknowledge that employees receive information from various sources (integrated internal communications was also discussed in Section 2.5 of the Literature Review).

The empirical data from 12 qualitative interviews provides support for the existence of integrated internal communications, which can be seen to manifest itself both as a multidisciplinary and a multilevel phenomenon. Knowledge sharing is also seen as an important and strategic function of integrated internal communications, given that knowledge sharing is shown to impact the efficiency of operations and to increase the feelings of security and motivation amongst employees. Therefore, in order for organisations to communicate effectively, they need to view internal communications as strategic rather than as skills-oriented, and also include managers and employees at all levels to ensure the delivery of important messages.

The contribution of this essay to the overall Dissertation is to give more theoretical insight and empirical evidence of integrated internal communications as a multi-disciplinary and multilevel phenomenon. More specifically, viewing knowledge sharing as a function of such integrated internal communications may help us to understand how communication contributes to the organisation's competitive advantage.

4.2. Summary of Essay 2

Title:	Interpersonal Knowledge Sharing Through Social Capital: The Strategic Role of Communication
Author:	Hanna Kalla
Publication:	*An earlier version of this essay received the Best Academic Paper Award at the Conference on Corporate Communication in Wroxton, UK*
Date:	June 2005

This essay addresses Sub-question 2: "*How does integrated internal communications relate to social capital and knowledge sharing in the MNC?*" This then leads to a focus on the right-hand side of the theoretical framework, illustrated in Figure 8. This essay reviews previously established links between the three constructs and develops hypotheses, which are tested in the empirical part of the paper. It is established that those links are complex and multidirectional, and an isolation of certain relationships has to be done in order to be able to carry out quantitative analysis. The data is from a questionnaire survey (n=749) and it was analysed using regression analysis.
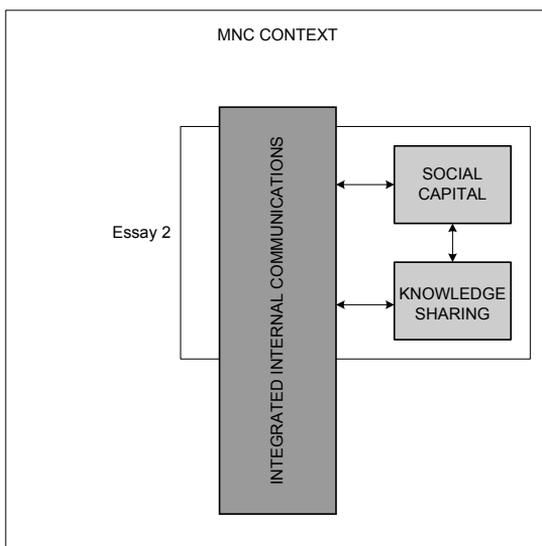
Figure 8. Area of the Theoretical Framework Discussed in Essay 2

Effective knowledge sharing internally is a fundamental part of the organisation's competitive advantage (as discussed more extensively in Section 2.3 of the Literature Review); therefore the link between communication and knowledge sharing is an extremely important and relevant issue, yet one that has not been extensively studied. However, a positive relationship between social capital and knowledge sharing is more established (as discussed in more detail in Sections 2.2 and 2.3 of the Literature Review). Consequently, the framework provided by Nahapiet & Ghoshal (1998) and then applied to the MNC by Tsai & Ghoshal (1998) is drawn on. In order to be able to build on Tsai & Ghoshal's (1998) research, communication intensity is studied along with relational-cognitive embeddedness. The proposed model then examines the impact of communication intensity on relational-cognitive embeddedness, and in turn the impact of each of those two on knowledge sharing. Furthermore, these relationships are examined in two contexts of interaction: close colleagues (bonding relationships) and other contacts (bridging relationships) (these relationships were discussed in more detail in Section 2.2 of the Literature Review).

The main findings from a quantitative questionnaire survey highlight several interesting issues. First, close colleagues were the most critical point of contact for managers who communicated more frequently with them than other contacts, had higher levels of trust and shared values with them, and also received more information and knowledge from them than other colleagues. Second, communication intensity had a statistically positive effect on relational-cognitive embeddedness, although its practical significance was slightly low in both bonding and bridging relationships. Third, communication intensity had a direct and indirect positive effect on knowledge sharing in both bonding and bridging relationships. Fourth, relational-cognitive embeddedness had a highly

significant positive effect on knowledge sharing in both relationship contexts. What these results, then, show is that social capital has a significant influence on knowledge sharing, and that communication plays a very critical role in that.

The contribution of this essay to the overall Dissertation is a deeper understanding of the relationships that exist between integrated internal communication, social capital, and knowledge sharing. Furthermore, the findings that show how communication intensity positively influences relational-cognitive embeddedness and knowledge sharing give us support as to why communication plays a strategic role in MNCs. Finally, this essay also emphasises the need to foster an atmosphere of open communication, trust and common cognitive ground, and hence highlights the need for MNCs to focus on interpersonal level knowledge sharing instead of only focusing of technological enablers.

4.3. Summary of Essay 3

Title:	Diversity in the MNC Context: The Impact of Functional, Geographic, and Nationality Diversities on the Frequency of Communication
Author:	Hanna Kalla
Publication:	*Journal of Business Communication*
Date:	In review process

This essay addresses Sub-question 3: "*How does integrated internal communications relate to diversity in the MNC?*" This then leads to a focus on the left-hand side of the theoretical framework, illustrated in Figure 9. This essay examines three forms of workgroup diversity, namely geographic, functional, and nationality diversities, in order to assess what impact they have on communication patterns in the multinational corporation. Data from the same questionnaire survey, as utilised in the previous essay,

is used here for hypotheses testing. The chosen statistical data analysis method was the analysis of variance (ANOVA), which tests for mean differences among groups.
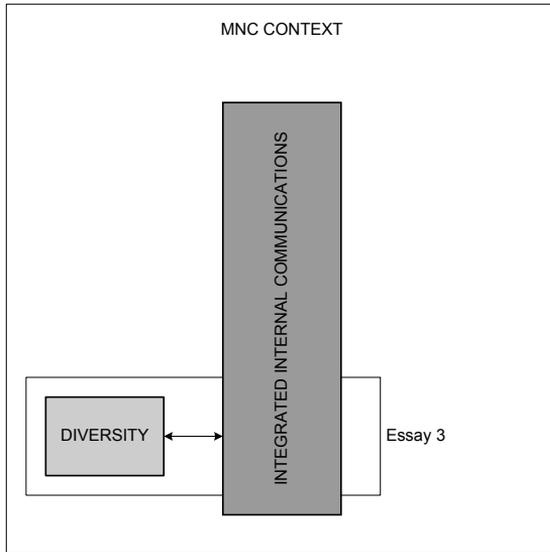
Figure 9. Area of the Theoretical Framework Discussed in Essay 3

Prior research on diversity and internal communications has been limited with findings yielding mixed results. However, given that the geographically scattered and multi-contextual nature of the multinational corporation is a particularly challenging environment for knowledge sharing, the roles of internal communications and diversity are highlighted. This essay reviews the concepts of diversity and homophily from various theoretical perspectives (as briefly described in Section 2.4.2 in the Literature Review), with a focus on three forms of diversity deemed important for the MNC; these forms are functional, geographic and nationality diversities. Furthermore, specific hypotheses are proposed for the impact of those three diversity forms on the frequency of communication in intra-workgroup and inter-workgroup contexts.

The results show that diversity did not significantly influence the frequency of interpersonal communication within the intra-workgroup context (bonding relationships). However, within the inter-workgroup context (bridging relationships), diversity had a significant and positive effect on the frequency of interpersonal communication. Functional diversity had the most significant role, which may be attributed to its informational diversity qualities.

The contribution of this essay to the overall Dissertation is an insight into the role of the multi-contextual nature of the MNC, which often results in people from different backgrounds having to communicate and work with one another. The issue of diversity is by no means straight forward but this essay illustrates that diversity may influence intra-workgroup communication patterns differently when compared with those of the inter-workgroup. This hence gives us another insight into the complex role of integrated internal communications within organisations and how it influences and is influenced by various attributes. The findings of these three essays are now discussed in more detail in the following chapter.

5. DISCUSSION

The purpose of this chapter is to draw the findings of the Dissertation together and answer the overarching research question of *"What is the nature and role of integrated internal communications in the MNC?"* . The chapter is divided into two parts. First, the nature of integrated internal communications is discussed along with the first of the three sub-questions, therefore drawing on the qualitative findings of Essay 1. Second, the role of integrated internal communications is explored in light of the next two sub-questions, whereby the quantitative results of Essay 2 and Essay 3 are presented. Following the discussion of these findings, their theoretical contributions and managerial implications are presented in Chapter 6, along with avenues for future research.

5.1. The Nature of Integrated Internal Communications

Sub-question 1 is phrased as *"How does integrated internal communications manifest itself in the MNC?"*. This question was approached through qualitative interview data in Essay 1, and the findings give evidence of the multidisciplinary and multilevel nature of integrated internal communications. The multidisciplinary and multilevel aspects of integrated internal communications are now discussed in more detail in order to assess how they address the first sub-question and the overall research question.

Internal communications is traditionally seen as a function of corporate communication, with a focus on informing employees of various corporate issues through different channels (Argenti, 1996, 2003). Essay 1, however, contends that internal

communications is really a multidisciplinary phenomenon with theoretical foundations in corporate, business, management and organisational communication domains as well as management and international business disciplines (as also discussed in Section 1.2 of the Introduction and Section 2.1 of the Literature Review); empirical data from the case company support this view.

On the one hand, internal communications emphasises such business communication skills as writing, creation of internal announcements and newsletters, and the publication of web content (Ober, 2003; Quible et al., 1996; Bovée & Thill, 2000) – relying on knowledge central to corporate and business communication domains. Furthermore, managerial communication is also often recognised as an important component of effective overall message delivery, hence drawing on the knowledge of the management communication domain. However, due to inadequate communication skills and lack of time by managers, it also brings many additional challenges as highlighted by a case company interviewee (from Essay 1, p. 132). *"...management communication is a stumbling stone. I am certain that people want more face-to-face than more e-mails or Intranet sites, people want an opportunity to ask and get information at a level that is relevant for them specifically." (Interviewee 9)* The consequences of this are discussed in more detail in Section 6.2, under managerial implications.

On the other hand, in the increasingly complex business world communication skills alone are no longer sufficient when an overall understanding of organisational life as a whole is required (Argenti & Forman, 2002). Therefore, communicators need to draw on the knowledge of organisational communication and management & international

business in order to address these new challenges, as illustrated by another interviewee (from Essay 1, p. 132). *"I came from the position that we really have to redefine what role Communications [function] plays in the company. Not a passive infrastructure management role but a much more influential role in the culture and environment of the company." (Interviewee 1)* Therefore, communication skills combined with an understanding of the business and cultural environment are seen as important competencies for communicators. This has many implications for the development of theory and for the role of communicators (as discussed in Sections 6.1 and 6.2 respectively).

The nature of integrated internal communications is not only multidisciplinary but also multilevel. This means that all formal and informal communications that take place at various levels of the organisation are deemed an important part of the overall communication process. More specifically, empirical data in Essay 1 suggests that internal communications is not limited to official corporate communication messages and senior management presentations, although that is often what companies do best as concluded by an interviewee (from Essay 1, p. 132). *"Informing about company matters is probably what we do best…CEO's quartile letters to the whole staff and communication packages about quartile results to managers are important steps and fill largely the informing function." (Interviewee 9)*

Instead, internal communications also includes general information exchange between colleagues, discussions in team meetings, and informal chats by the coffee machine. Hence, all these formal and informal as well as planned and unplanned communications contribute to the flow of information and knowledge within an organisation. This is a

point that a senior communications manager at the case company fully recognised, as the following quotation shows (from Essay 1, p. 133). *"Ninety-nine percent of internal communications is something other than what the Internal Communications department does, i.e. superior-subordinate communication, communication in meetings, or informal knowledge sharing, e-mail. The majority of it takes place outside formal channels, e.g. e-mail, phone, PowerPoint, meetings, etc." (Interviewee 2)* Consequently, unplanned informal chats by the coffee machine are often an equally important part of integrated internal communications as the more formal communication activities like meetings and corporate communications (this is an issue that will be discussed further in Chapter 6).

Another aspect of the multilevel nature of integrated internal communications is the role of people at different organisational levels and in different functional tasks as a natural part of the communication process. People who bring in expertise from outside the communication function are welcomed because they may have some business knowledge that will enable the creation of more effective messages. Furthermore, it is not possible for the communications professionals to carry out all communications, as was discussed in relation to management communication; hence the participation of other interested parties is usually welcome. This point is highlighted by the following quotation from a communications manager at the case company (from Essay 1, p. 133), *"... there is increasingly interaction, where I don't see any sort of barriers. It does not matter who gets involved, there is very little worry about who is in a Communication, HR or Line Management function..." (Interviewee 12)*

To address Sub-question 1, it can be concluded that integrated internal communications manifests itself as a multidisciplinary and multilevel phenomenon. Furthermore, in

terms of the overall research question, it has been illustrated that the nature of integrated internal communications is both multidisciplinary and multilevel, as summarised in Figure 10 below. Viewing internal communications in this way is important because as Dess & Picken (2000, p. 18) argue, "to compete in the information age, firms must increasingly rely on the knowledge, skills, experience, and judgement of *all* their people." Furthermore, recognising that the most frequent source of information for managers are people rather than computers (Cross et al., 2001), and that employees find face-to-face communication invaluable in a technology-driven work environment (Hargie & Tourish, 2002; Nohria & Eccles, 1992; O'Kane, Hargie & Tourish, 2002), it is possible to understand why integrated internal communications manifests itself in so many different ways, rather than residing purely in official corporate communication messages.

MULTIDISCIPLINARY	PHENOMENON	MULTILEVEL
THEORETICAL FOUNDATIONS: ▪ Organisational Communication ▪ Corporate Communication ▪ Management Communication ▪ Business Communication ▪ Management & International Business	**INTEGRATED INTERNAL COMMUNICATIONS**	EXAMPLES OF MANIFESTATIONS: ▪ Information exchange between colleagues ▪ Official corporate communication messages ▪ Senior management presentations ▪ Discussions in team meetings ▪ Informal chats by the coffee machine

Figure 10. Summary of the Nature of Integrated Internal Communications

To summarise, due to the sheer size of the globally dispersed operations of multinational corporations, it is not possible for the corporate communication function alone to provide effective communication for the whole organisation; hence managers become critical in bridging the different layers. Therefore, in order for organisations to communicate effectively, they need to recognise the multidisciplinary and multilevel

nature of integrated internal communications, which means the inclusion of managers and employees at all levels to ensure the effective delivery of important messages (consequences of this are discussed in more detail in Chapter 6).

5.2. The Role of Integrated Internal Communications

The role of integrated internal communications is approached via the last two sub-questions, with empirical data collected through a quantitative questionnaire survey; additionally, qualitative data from Essay 1 is used to give the results some context. Sub-question 2 is worded as *"How does integrated internal communications relate to social capital and knowledge sharing in the MNC?"* and Sub-question 3 is stated as *"How does integrated internal communications relate to diversity in the MNC?"*. The four main findings are that communication intensity is positively related to relational-cognitive embeddedness (Essay 2), communication intensity is positively related to knowledge sharing (Essay 2), integrated internal communications increases the efficiency of MNC operations (Essay 1), and that the level of diversity impacts the frequency of communication in inter-workgroup but not intra-workgroup contexts (Essay 3). These findings are now explored one at a time, after first briefly describing the types of relationships studied. Then, at the end of this section, Sub-question 2 and Sub-question 3 are addressed along with the overall research question.

The quantitative study approached integrated internal communications by focusing on mid-level and senior level managers due to their critical role in either enabling or blocking communications (Clampitt et al., 2000; Nonaka & Takeuchi, 1995; Tourish & Hargie, 2000). Furthermore, to include different types of interactions, the behaviour of

these managers was explored in two types of contexts, namely bonding or intra-workgroup relationships and bridging or inter-workgroup relationships (these two relationship contexts are discussed in more detail in Section 2.2.2 of the Literature Review as well as Essay 2 and Essay 3). Part of the reason for including bonding and bridging relationships was that the qualitative case interviews showed that information seeking and knowledge sharing took place in many contexts, as illustrated in this quotation from an interviewee (from Essay 1, p. 134). *"What is part of our culture is that people talk to those who have the best expertise, and things don't need to go through the command route." (Interviewee 10)* To see how these relationship contexts influence different business activities, the four key findings are now explored.

First, the relationship between communication intensity and relational-cognitive embeddedness is discussed. The theoretical relationship between communication and social capital is very complex, as extensively discussed in Essay 2. The position adopted in Essay 2 was to study communication as an integral part of social capital (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998), hence exploring the relationships between communication intensity and relational-cognitive embeddedness. The results show that there is a statistically significant and positive relationship between the constructs, both in the context of bonding and bridging relationships. Furthermore, the results of Essay 2 illustrate that communication intensity explains more of the variance of relational-cognitive embeddedness in the context of bonding rather than bridging relationships. It can therefore be concluded that communication intensity acts as an enabler for the creation and/or maintenance of trust and common cognitive ground. However, in order to better understand what trust and common cognitive ground enable, their links to knowledge sharing are explored next.

Second, the relationship between communication intensity and knowledge sharing is discussed. The results show that there is a statistically significant and positive relationship between the two, although the results of Essay 2 illustrate that communication intensity explains more of the variance of knowledge sharing in the context of bonding rather than bridging relationships. Furthermore, the results show that communication intensity has a direct impact on knowledge sharing as well as an indirect one through relational-cognitive embeddedness (relational-cognitive embeddedness in fact explains more of the variance in knowledge sharing than communications intensity). Consequently, given the statistically significant positive relationships, we can conclude that communication intensity enhances knowledge sharing. However, communication intensity alone does not explain the complex relationships that exist between integrated internal communications, social capital, and knowledge sharing.

Third, the role of integrated internal communications in terms of increasing the efficiency of MNC operations is presented. To understand the implications of the above discussed results more comprehensively from the standpoint of integrated internal communications, reviewing some of the qualitative data presented in Essay 1 may prove helpful. One of the case company managers highlights the fact that the role of communication is critical as it has the power to increase the efficiency of actions, as seen in the following quotation (from Essay 1, p. 134). *"Internal interaction and sharing of knowledge have a direct impact on how efficiently a firm can act and direct its activities, and change its functioning. And here results speak for themselves."* *(Interviewee 2)* Another interviewee emphasises the direct link between communication and knowledge sharing, and implicitly underlines the role of integrated internal

communications (from Essay 1, p. 134). *"The role of Internal Communications is to share results and other information, but the transfer of knowledge and information, as well as the openness of internal communications, may play a more important role in people's day-to-day work than in the goals or functions of our official internal communications." (Interviewee 8)* Therefore, integrated internal communications has the power to enhance internal knowledge sharing and as a result even the overall effectiveness of the MNC operations (the theoretical and managerial consequences of which are discussed in Chapter 6).

Fourth, the relationship between diversity and communication frequency is discussed. The empirical data came from the same questionnaire survey which was used in Essay 2, and it is presented in Essay 3 in more detail. The results of the study clearly show that diversity impacts the frequency of communication in the inter-workgroup context but not in the intra-workgroup context. More specifically, three diversity forms deemed critical for the functioning of the MNC were included in the study: functional, geographic, and nationality diversities (Cummings, 2004). Out of the three diversity forms studied, functional diversity was statistically the most significant factor differentiating workgroups with varying degrees of diversity. Within the intra-workgroup context more than half of one's colleagues had the same functional, geographic and nationality background, whereas in the inter-workgroup context less than half had the same background (see Essay 3 for exact figures). Therefore, the results emphasise the fact that the multinational corporation is typically characterised by high levels of diversity even amongst close colleagues (intra-workgroup context), many of whom work in different functions (R&D, marketing, sales, etc.), are based in different physical locations, and are of different nationalities. This consequently shows

that communication networks are not restricted by geographical, functional, or cultural boundaries in the MNC context (as discussed in Essay 3), which distinguishes the MNC context from many other organisational settings (the consequences are discussed under theoretical contributions in Section 6.1).

One explanation for the intra-workgroup result is that communication between close colleagues is necessary for getting the job done, and therefore diversity does not influence the frequency of communication[13]. On the other hand, the finding that functional diversity in the inter-workgroup context results in higher communication frequencies is in line with previous research (Ancona & Caldwell, 1992; Cummings, 2004) but at odds with research that has found that the similarity of actors makes communication easier between them (Brass, 1995; Mäkelä et al., 2006). However, one explanation for this potential discrepancy is that diversity may increase the frequency of interaction due to exposure to varied information sources (Cummings, 2004; Pelled et al., 1999). Therefore, communication with people who are similar to you in some way is still probably easier than communication with dissimilar people (as argued by Brass, 1995; Mäkelä et al., 2006), but the ease or naturalness of communication may be overridden by the motivation to access new information which people similar to you may not be able to provide (the implications of these findings are discussed in Chapter 6 in more detail)

To address Sub-question 2, it can be surmised that those managers that communicate more frequently also have higher levels of social capital and access to higher levels of useful knowledge. Therefore, the above discussed results lead us to conclude that the

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[13] However, although diversity did not influence the frequency of communication, I would suggest that diversity may have an impact on the ease of communication as argued by other authors (Brass, 1995; Carley, 1991; Mäkelä et al., 2006; McPherson et al., 2001).

role of integrated internal communications is important for enhancing an atmosphere of trust and common cognitive ground, which in turn results in more knowledge sharing taking place and more efficient operations of the MNC as a whole. In terms of addressing Sub-question 3, we can see that managers communicate differently[14] with diverse groups in the inter-workgroup context, but also that functional diversity plays a much more significant role than either geographic or nationality diversities (as shown in Essay 3). Therefore, the role of integrated internal communications in relation to diversity may be to create linkages between people who are different from one another in order to access more diverse knowledge pools.

To summarise, the role of integrated internal communications is highly important and strategic for multinational corporations. The role of communication can be argued to be strategic because it has the power to increase the efficiency and effectiveness of operations as well as to enhance relational cognitive-embeddedness and knowledge sharing. Such a strategic role can be argued to be due to social capital and knowledge sharing fundamentally contributing to competitive advantage (Grant, 1996; Hansen, 1999, 2002; Kogut & Zander, 1993; Nahapiet & Ghoshal, 1998; Spender, 1996; Tsai & Ghoshal, 1998). Furthermore, workgroups within MNCs are shaped by high levels of functional, geographic and nationality diversities both in the case of close colleagues and other contacts. Thus, the role of communication and relational-cognitive embeddedness become even more critical than they would perhaps be in the context of a less international organisation due to providing links to different parts of the organisation and creating common ground and trust. What this then implies is that the

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[14] The difference can be seen when we compare the communication frequencies between groups that have varying degrees of diversity, i.e. groups with low diversity levels communicate less, whereas groups with high diversity levels communicate more. When this result is compared with the intra-workgroup setting, it is possible to see that in that context there was no difference between how frequently managers communicated with groups that had low or high levels of diversity.

frequency of communication is a critical factor along with relational-cognitive embeddedness for enhancing internal knowledge flows. Therefore, integrated internal communications, which takes place in the formal and informal interactions between managers and other employees, significantly contributes to the functioning of the MNC, as summarised in Figure 11 below.
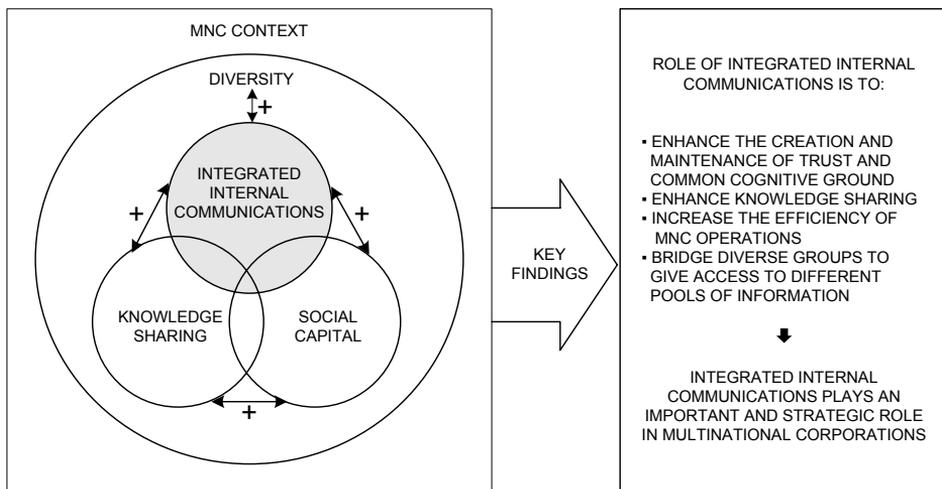
Figure 11. Summary of the Role of Integrated Internal Communications

To conclude this chapter, the key findings can be reiterated in light of the main research question as follows. First, the nature of integrated internal communications can be characterised as multidisciplinary and multilevel. This then has the advantage that it allows us to view communications in a more comprehensive way, which has important implications for theory and practice as is discussed in the next chapter. Second, the role of integrated internal communications is to enhance an atmosphere of trust and common cognitive ground (relational-cognitive embeddedness), to increase the level of knowledge sharing; and consequently to enhance the effectiveness of the MNC operations, and bridge diverse organisational groups. Such a result is unlikely to be

achieved through only formal corporate communication. More specifically, diversity influences the communication between managers and their teams, but while it makes communication more complex due to the lack of common ground and shared codes, it can also give access to more diverse sources of information. Therefore, the multi-contextually diverse nature of the MNC creates both opportunities and obstacles for communication; how such opportunities are used and obstacles overcome depends on the way employees communicate and use their social capital. Finally, what multinationals are ultimately concerned about is effective knowledge sharing, and this research has shown that such knowledge sharing is influenced by integrated internal communications, social capital, and diversity. The next chapter now discusses the consequences of some of these findings further.

6. CONTRIBUTIONS AND IMPLICATIONS OF THE STUDY

This is the last of the six chapters in Part I, and its goal is to summarise the contributions and implications of the research conducted as part of this Doctoral Dissertation. The chapter is divided into three parts. First, theoretical contributions are presented. Second, managerial implications are discussed. Third, avenues for future research are outlined.

6.1. Theoretical Contributions

This section focuses on the theoretical contributions by highlighting the following key issues. First, the integrated internal communications approach has attempted to answer the call of previous researchers for creating more synergies between the different communication domains (Eisenberg, 1996; Reardon, 1996; Rogers, 2001). More specifically, it is argued that to recognise the changing role of internal communications and to better address the needs of the employees in the future, we need to draw from the theoretical and practical knowledge that organisational, corporate, management and business communication have produced and to combine it with the research from management and international business disciplines. However, such a change can only take place if we have the language to discuss it. Therefore, it is the hope of this Dissertation that the term integrated internal communications could be taken as a neutral term where no-one has to feel threatened about their disciplinary boundaries but where new collaboration can take place and new knowledge be born. As has been argued, all these different disciplines or domains add value in their own way, and therefore a shared term could be used to build common ground.

Second, an integrated internal communications view is something that practitioners have often already adopted in their work, as is illustrated by the empirical data in Essay 1. Therefore, in order for academia to contribute to the development of the field and provide theory that can be adopted by or applied to communicators, research should reflect practice. Furthermore, incorporating both more and less formal communication activities at various organisational levels simultaneously, allows us to adopt a more holistic and strategic approach to communication within organisations, as has been argued in the preceding chapters. The view that communication is strategic is also supported by Kitchen & Daly (2002, p. 47) who go so far as to argue that "internal communication is not only a crucial variable in relation to achieving organisational success, it is also a precursor for organisational existence as well."

Third, given the imbalance between the perceived importance of communications and the actual attention and resources given toward it (Argenti & Forman, 2002; Oliver, 1997; Tourish & Hargie, 2004b), it is critical to show how internal communications adds value in a concrete way. This research has done that by showing that integrated internal communications enhances relational-cognitive embeddedness (trust and common ground) as well as knowledge sharing, confirming the link between communication intensity and the other two phenomena in quantitative terms. This is an important contribution since social capital and knowledge sharing have been shown to contribute to competitive advantage (Grant, 1996; Hansen, 1999, 2002; Kogut & Zander, 1993; Nahapiet & Ghoshal, 1998; Spender, 1996; Tsai & Ghoshal, 1998), but have not been incorporated very extensively into communications research.

Fourth, research with a focus on internal communications in the context of the MNC has been very limited (e.g., Charles & Marschan-Piekkari, 2002; Ghoshal et al., 1994; Marschan, 1996; Tucker et al., 1996), although much of today's business takes place in that particular setting. Therefore, this research highlights an extremely important area for both communication and management researchers. The theoretical and empirical findings of this study contribute to an enhanced understanding of the multi-faceted phenomenon of internal communications in the MNC context through an integrated internal communications framework (see Section 2.5 of the Literature Review). More specifically, an examination of different diversity forms has stressed the unique working environment that exists within the MNC. Therefore, while communications research carried out in other organisational settings touches upon many of the issues critical also for the multinational corporation, they may not address the various aspects highlighted by the results of this study relating to diversity as seen next.

Fifth, empirical research focusing on studying the role of communication in relation to diversity is limited, especially where two different types of relationship contexts have been compared. Therefore, this study contributes to this literature by comparing intra-workgroup with inter-workgroup communication frequencies against three diversity forms (functional, geographic, and nationality diversities). The results enhance our understanding as to why diversity has sometimes been an enabler and at other times a disabler of communication; the intra-workgroup context showed no effect whereas the inter-workgroup communication showed a positive relationship with diversity. Therefore, it may be argued that in the intra-workgroup context diversity has no effect due to employees having to communicate frequently for getting their work done, whereas in the inter-workgroup context diversity may increase communication

frequencies due to access to more varied information sources (Cummings, 2004; Pelled et al., 1999). Furthermore, this finding suggests that the definition of diversity in the field of communication should be expanded to include areas other than the traditionally examined culture/ethnicity and gender.

6.2. Managerial Implications

Having looked at the theoretical contributions of the study, it is also important to assess what value the insights of this research bring to practitioners. First, this research has shown us that the work of communicators is not solely to manage Intranets and write CEO quarterly letters. Instead, communicators need to additionally understand the business demands and strategy to be able to respond to the challenges that organisations are facing. More specifically, communicators can no longer be viewed just as the administrative executers of strategy, they are the mediators whose role it is to ensure that the strategies are understood by employees; hence their role can now be argued to include even the shaping or creation of an environment where such strategies will succeed (as was highlighted by an interviewee quotation on p. 132 in Section 5.1.). The skills that have been stressed within the corporate communication function traditionally emphasise communication as information transfer, i.e. communication as a one-way process (Eisenberg & Goodall, 2004); whereas integrated internal communications incorporates knowledge sharing, which can be equated more with a two-way process or dialogue. Too often, organisations are only able to focus on these traditional aspects of communication, or at least that is what they are best at, as was discussed in the previous chapter (Section 5.1).

Second, communication departments no longer have the sole responsibility for communication, as again highlighted in the previous chapter (Section 5.1). This has important implications for the roles of the internal communications managers. Their roles are changing from executors to coaches/consultants for other parts of the organisation where communication competences may well be lacking or inadequate, but simultaneously their consultant roles include more than the teaching of communication skills to managers. Traditionally, communication skills have had a fairly low priority in the skill-set required of managers, but with the way work is done in today's multinational corporations, communication skills are rapidly becoming an important competence for all managers and employees. Most work roles are not solitary specialist tasks, instead team work is increasingly important, and hence employees also need to be able to build bonding and bridging relationships in order to share knowledge effectively.

Third, informal chats may be argued to be equally important to more formal communication activities, hence both need to be considered and incorporated into the activities of the MNC. More specifically, organisations need to consider creating space and opportunities for all forms of communication, as the efficiency of their functioning significantly depends upon it. For example, this research has shown the importance of common ground and trust for knowledge sharing; hence various communication activities should enable their creation and/or maintenance in a constructive way. Furthermore, the greater the common cognitive background, the less information needs to be encoded into a message (Hartley & Bruckmann, 2002). Ways to do that may include such shared experiences as time spent on joint projects, expatriate experiences, or even task forces (see Mäkelä, 2006 for an excellent discussion).

Fourth, this research has also discussed the impact of diversity on the way managers communicate with their team members and colleagues in intra-workgroup and inter-workgroup contexts. What those results highlighted was that despite the fact that workgroups in MNCs are usually characterised by a large number of individuals from different nationality/cultural backgrounds who work in different countries, the role of functional diversity may be something that needs to be considered in more detail. In fact, diversity of skills and experiences may be a more relevant issue for the MNC than the issue of demographic diversity.

Fifth, although an integrated internal communications perspective makes it quite difficult to manage internal communications and to place exact boundaries on it, such a view also opens up more opportunities. For example, storytelling is a concept that has become very popular over the last couple of years (e.g., Brown, Denning, Groh & Prusak, 2005; Denning, 2001, 2004; Smith & Keyton, 2001), and successful organisational storytelling can only be build on integrated internal communications. Organisations use stories for various purposes ranging from effective strategy communication to transmitting organisational values and culture. Good stories are effective because as Denning (2004, p. 124) summarises, "[a]nalysis might excite the mind, but it hardly offers a route to the heart – and that's where we must go to motivate people." However, for the message to be heard and taken to heart, it must be consistent and inspiring. What employees often find most confusing is when the CEO says one thing, their own manager says something else, and their team members have yet another view. One good story alone can improve the present for a few, while many good and consistent stories can change the future for most.

6.3. Avenues for Future Research

Finally, while this research has outlined many theoretical contributions and managerial implications, several avenues for future research also exist. First, the inclusion of other dimensions of communication other than frequency, may well offer better explanations as to the role of communication in the formation and maintenance of social capital and knowledge sharing. More specifically, while this research has established the critical role of integrated internal communications, we do not know what specific types of communication behaviour would best enable the creation of trust and common cognitive ground and the sharing of business-related knowledge.

Second, communications research could focus more on examining employees bonding and bridging relationships in terms of how they define them vs. how organisations define them in order to better understand internal communications and knowledge flows. As this research has illustrated, communication takes place also largely outside formal networks, and in such informal and unplanned formats as chats by the coffee machine or when a relevant business topic emerges during a social lunch break. Therefore, it would be interesting to see how big a role all these different manifestations of integrated internal communications have, and for what purposes employees and managers use them in their respective networks.

Third, this research has found that diversity does not impact the frequency of communication in the same manner in bonding and bridging relationships. It would be useful to verify whether this finding is the same in other organisations. Furthermore, it would be insightful to explore the issue of ease of communication versus access to more

varied information in an interview format where the researcher could probe into these issues through meaningful examples. That way we may better understand why managers communicate more frequently with their diverse bridging relationships and why geographical and nationality diversities proved not to be equally significant when compared with functional diversity. This finding is especially interesting since there is evidence that employees want more face-to-face communications, yet geographical diversity does not appear to play a very significant role – one explanation may be extensive business travel by managers, but this is a topic that requires more research.

Fourth, it would be fruitful to delve deeper into the relationships that exist between integrated internal communications, relational-cognitive embeddedness, and knowledge sharing. The way to do that would be to test the relationships found relevant in this study in other organisations, explore the phenomena via other methodological approaches, and examine the relationships that different forms and types of communication have with the phenomena. This could be a great potential contribution both to the field of communication as well as to management and international business researchers interested in the topics of social capital and knowledge sharing.

To conclude, this chapter has highlighted important theoretical contributions and managerial implications, which hopefully have shed light into the complex and multifaceted issue of integrated internal communications in multinational corporations. Furthermore, some specific areas for future research have been discussed, and it is the hope of this research that the overall findings of this Doctoral Dissertation prompt researchers to carry out more research in the area and encourage practitioners and organisations as a whole to review the nature and role of internal communications from

a slightly new perspective. For more insight and a more detailed discussion of the findings, the three essays are presented next, in Part II of this Doctoral Dissertation.

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APPENDIX 1: THE THEMATIC INTERVIEW GUIDE

Date:
Interviewee name:

BACKGROUND INFORMATION:

Gender   (Male/Female)
Nationality   (   )
Geographic Location   (Finland/UK)
Functional Background   (Communication/HR)
History at Company X   (Open-ended, e.g. length of service, previous jobs)

INTERVIEW THEMES:

Communications Culture
- Please tell me about your communications culture.
  - How you do things around here?
  - What is important?
  - What you do well and where could you improve?

Change
- Please tell me about the role of change at Company X.
  - Is change something positive or negative?
  - How do you communicate about change?
  - Are you good at communicating change?

Social Capital
- Are you familiar with the concept of social capital?
  - If yes, please tell me about its role at Company X.
  - If not, it refers to the contacts or networks people have and the various resources people can access through those networks. It can be divided into three dimensions and it may be easier to approach it via those:
    - The structural dimension (linkages)
    - The relational dimension (trust and trustworthiness), and
    - The cognitive dimension (shared codes, goals, and values)

Culture
- Please tell me what role national culture(s) play(s) at Company X.
  - How do you approach cultural issues?
  - What works well and what causes problems?
  - How do you see the national identity of Company X?

The Role of Soft/intangible Values to Business Success
- Please tell me if/how "soft values" (things that cannot be measured) contribute.

Additional Comments
- Is there anything else you would like to add?

The Interviewer's Own Observations during the Interview

APPENDIX 2: THE QUESTIONNAIRE SURVEY INSTRUMENT

ELECTRONIC MAIL INVITATION[15]:

Email Title: Your view on networking & knowledge sharing in Company X

Email Message:

You are invited to participate in a survey, which examines how people share knowledge and information within their network. This will only require <u>15 minutes</u> of your valuable time.

Your participation is important because you represent a critical management layer in an important part of the organisation, and are therefore in a key position to ensure that information flows to appropriate parts of the organisation.

This survey is conducted as part of a PhD research project, which examines the relationship between internal communications, networking and knowledge sharing.

The results will have a more immediate impact for you as they will be used directly by Company X to improve the way we communicate across the organisation and how we can make better use of networking in our business and cultural development.

Your answers will be completely anonymous and the information you provide will remain fully confidential.

Please make sure your part of the organisation is well represented by completing this survey: *(Intranet address provided)*

<u>Instructions:</u>

The survey consists of 16 pairs of statements, for the odd numbered ones the statements address "my close group of colleagues" and the even numbered ones address "my other contacts".

Please read the following two definitions carefully before answering the statements:

1) *"My close group of colleagues"* - Think of a group of colleagues who work for Company X, and with whom you interact most frequently on work-related matters on a normal working day or week.

2) *"My other contacts"* - Think of a group of colleagues who work for Company X but who are not a part of your "close group of colleagues", but with whom you interact relatively regularly on work-related matters during your working week or month (they may be from other business units or functions but they serve as important sources of information).

Note: There may be people at work who don't belong to either one of these groups.

If you have any further questions, please contact me directly.

Many thanks for your time and participation!

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[15] The questionnaire survey was conducted on the case company (referred to here as Company X) intranet and participants were invited to take part in the survey via an e-mail provided here.

QUESTIONNAIRE SURVEY[16]:

Background Questions[17]:

1. What is your primary business group or horizontal entity?

2. What is your function?

3. How many years have you worked for Company X?

4. Which site are you physically based at?

5. How many different Company X sites have you been physically based at (including different cities within one country)?

6. What is your gender?

7. When were you born?

8. What nationality are you?

Survey Statements[18]:

1. a)   The following proportion of my close group of colleagues work at my site.

None	Some	About half	Most	All
1	2	3	4	5

1. b)   The following proportion of my other contacts work at my site.

None	Some	About half	Most	All
1	2	3	4	5

---

[16] This questionnaire survey was conducted on the case company intranet; hence the presentation of the statements was slightly different. More specific descriptions are provided under the two sub-headings.

[17] The background information was all on one page with individual drop-down menus for each question. The drop-down menus had a question specific list of options provided and the last option was always "other" which the respondents could then fill in (e.g., in case their nationality was not listed).

[18] The actual survey statements were presented one at a time to the respondent, i.e. they could see only one statement per page, and once they had answered that statement, they could click a button to move forward (they could also go back if they wanted to). At the end of the survey, the respondents were asked if they were ready to submit; if they clicked yes, then their final answers were stored on a database anonymously. It should also be stated that three of these items were not used for any part of this Doctoral Dissertation, those items were statements 11, 14, and 16.

2. a)   The following proportion of my close group of colleagues work in my business support function, e.g. Marketing or R&D.

None	Some	About half	Most	All
1	2	3	4	5

2. b)   The following proportion of my other contacts work in my business function, e.g. Marketing or R&D.

None	Some	About half	Most	All
1	2	3	4	5

3. a)   The following proportion of my close group of colleagues are of my nationality.

None	Some	About half	Most	All
1	2	3	4	5

3. b)   The following proportion of my other contacts are of my nationality.

None	Some	About half	Most	All
1	2	3	4	5

4. a)   I have a close working relationship with my close group of colleagues.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

4. b)   I have a close working relationship with my other contacts.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

5. a)   I can rely on my close group of colleagues without fear of them taking advantage of me, even if the opportunity arises.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

5. b)   I can rely on my other contacts without fear of them taking advantage of me, even if the opportunity arises.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

6. a)   I trust my close group of colleagues to always keep the promises they make.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

6. b)   I trust my other contacts to always keep the promises they make.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

7. a)   I feel that my close group of colleagues and I share the same values.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

7. b)   I feel that my other contacts and I share the same values.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

8. a)   The way my close group of colleagues and I communicate makes it easy for us to understand each other and work together.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

8. b)   The way my other contacts and I communicate makes it easy for us to understand each other and work together.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

9. a)   My close group of colleagues and I have common goals at work.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

9. b)   My other contacts and I have common goals at work.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

10. a) I turn to my close group of colleagues for work-related facts or information.

   Daily   Couple of times a week   Weekly   Monthly   Less frequently
     1   2   3   4   5

10. b) I turn to my other contacts for work-related facts or information.

   Daily   Couple of times a week   Weekly   Monthly   Less frequently
     1   2   3   4   5

11. a) I most frequently use the following method of communication when I turn to my close
        group of colleagues for work-related facts or information.

   E-mail   E-mail and phone   Phone   Phone and face-to-face   Face-to-face meetings/
                                        meetings/discussions   discussions
     1   2   3   4   5

11. b) I most frequently use the following method of communication when I turn to my other
        contacts for work-related facts or information.

   E-mail   E-mail and phone   Phone   Phone and face-to-face   Face-to-face meetings/
                                        meetings/discussions   discussions
     1   2   3   4   5

12. a) I receive useful work-related facts or information from my close group of colleagues.

   Strongly   Disagree   Neutral   Agree   Strongly
   disagree   agree
     1   2   3   4   5

12. b) I receive useful work-related facts or information from my other contacts.

   Strongly   Disagree   Neutral   Agree   Strongly
   disagree   agree
     1   2   3   4   5

13. a) I turn to my close group of colleagues for advice or insight to work-related problems.

   Daily   Couple of times a week   Weekly   Monthly   Less frequently
     1   2   3   4   5

13. b) I turn to my other contacts for advice or insight to work-related problems.

   Daily   Couple of times a week   Weekly   Monthly   Less frequently
     1   2   3   4   5

14. a) I most frequently use the following method of communication when I turn to my close group of colleagues for advice or insight to work-related problems.

E-mail	E-mail and phone	Phone	Phone and face-to-face meetings/discussions	Face-to-face meetings/discussions
1	2	3	4	5

14. b) I most frequently use the following method of communication when I turn to my other contacts for advice or insight to work-related problems.

E-mail	E-mail and phone	Phone	Phone and face-to-face meetings/discussions	Face-to-face meetings/discussions
1	2	3	4	5

15. a) I receive useful advice or insight to work-related problems from my close group of colleagues.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

15. b) I receive useful advice or insight to work-related problems from my other contacts.

Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1	2	3	4	5

16. a) The following proportion of the information I need in my overall work comes from people rather than electronic sources, e.g. databases or the Intranet.

None	Some	About half	Most	All
1	2	3	4	5

16. b) The following proportion of the information I need in my overall work comes from internal people rather than external sources, e.g. contacts in other companies.

None	Some	About half	Most	All
1	2	3	4	5

PART II

ESSAY 1

INTEGRATED INTERNAL COMMUNICATIONS:

A MULTIDISCIPLINARY PERSPECTIVE

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INTEGRATED INTERNAL COMMUNICATIONS:
A MULTIDISCIPLINARY PERSPECTIVE

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Abstract

Purpose – This article explores the multidisciplinary nature of internal communications, and argues that an integrated approach is beneficial when assessing knowledge sharing in organisations. This integrated view draws knowledge from the domains of business, management, corporate, and organisational communication, and includes all formal and informal communications that take place inside an organisation.

Design/methodology/approach – A review of relevant current literature is presented, and then the key issues are explored through 12 qualitative interviews conducted at a multinational corporation, which served as a case study for this research.

Findings – The empirical data provides support for the integrated view of internal communications, which can be seen to manifest itself both as a multidisciplinary and a multilevel phenomenon. Knowledge sharing is also seen as an important and strategic function of integrated internal communications, given that knowledge sharing is shown to impact the efficiency of operations and to increase the feelings of security and motivation amongst employees.

Practical implications – In order for organisations to communicate effectively, they need to view internal communications as strategic rather than as skills-oriented, and also include managers and employees at all levels to ensure the delivery of important messages.

Originality/value – The novel way of looking at internal communications through an integrated lens enables us to adopt a more strategic perspective of internal communications. More specifically, viewing knowledge sharing as a function of such integrated internal communications may help us to understand how communication contributes to the organisation's competitive advantage.

Keywords Internal communications, multidisciplinary, integrated, knowledge sharing, MNC

Paper type Research paper

INTRODUCTION

Internal communications has an important role in organisations given the evidence that companies with effective communications strategies are usually successful, while others tend to fall short of the optimal performance (Argenti & Forman, 2002; Tourish & Hargie, 2004a). However, simultaneously an imbalance exists between the perceived importance of communications and the actual attention and resources given toward it (Argenti & Forman, 2002; Tourish & Hargie, 2004b). Furthermore, Oliver (1997) points out that communications is rarely recognised as a principal competency required. Therefore, a paradox exists because although increasing awareness concerning the importance of communications to organisations exists, that knowledge appears to have rarely translated into practice.

It is proposed in this article that an integrated view to internal communications is advantageous if the benefits of internal knowledge sharing want to be fully enjoyed. Here, integrated internal communications is seen as being composed of all the academic disciplines or domains that Miller (1996) identifies as meeting at the cross-section between communication and organisational life, i.e. business, organisational, management, and corporate communication. Furthermore, integrated internal

communications is not limited to the formal tasks performed by the corporate communication function; instead all formal and informal communication taking place inside an organisation is included.

The goal of this article, then, is twofold. The first goal is to understand the complex and multidisciplinary nature of integrated internal communications, which is challenging due to the multiplicity of inconsistently used terms and sometimes too tightly defined boundaries (e.g. Shelby, 1993; Reinsch, 1996). The second goal is to comprehend the strategic impact of internal communications by assessing how integrated internal communications manifests itself within the MNC context and how that in turn enhances knowledge sharing. Evaluating the knowledge sharing function of internal communications is important as many notable scholars stress that the ability to effectively share knowledge internally is fundamental for maintaining a competitive advantage (Doz, Santos & Williamson, 2001; Grant, 1996; Kogut & Zander, 1993; Spender, 1996).

The remainder of this article is divided into five sections. First, the complex nature of communication(s) is explored by looking at different definitions and discussing certain key features. Second, the multidisciplinary approach to integrated internal communications is discussed, drawing from the domains of business, organisational, management, and corporate communication. Third, the methodology is described. Fourth, empirical findings from twelve qualitative interviews, conducted at a world-leading multinational telecoms company, are presented. Fifth and last, the central findings and most important contributions of this article are highlighted.

COMPLEX NATURE OF COMMUNICATION(S)

The nature and role of communications are rarely the focus of research or discussion because they are taken to be self-explanatory (e.g. Tourish & Hargie, 2004b). However, the role of communication within organisations is far from clear, and the large array of academic terms in usage has made it difficult to establish 'common cognitive ground' (a term introduced by Nonaka & Takeuchi, 1995, p. 14). After all, who are "us, communications professionals" – a term one often hears being used in academia and business?

Defining communication(s)

There are various interpretations of the term communication(s), while everyone recognises it, few can define it satisfactorily (Fiske, 1990). At its simplest, the definition for communication is social interaction through messages (Fiske, 1990; see also Bovée & Thill, 2000; Tourish & Hargie, 2004b). On the other hand, Oliver (1997, p. 64) provides a more comprehensive definition of communication as "an interchange of ideas, facts and emotions, by two or more persons, with the use of words, letters and symbols based on the technical problem of how accurately the symbols can be transmitted, the semantic problem of how, precisely, the symbols convey the desired meaning, and the effectiveness of how the received meaning affects conduct in the desired way." In order to better understand the nature of communication(s) and the

definition chosen for internal communications within this article, certain key issues will now be explored.

Effective communication.   Some authors distinguish between communication and effective communication (e.g. Bovée & Thill, 2000); whereas others take communication to always refer to effective communication (e.g. Oliver, 1997; Spence, 1994). For example, Bovée & Thill (2000, p. 4) believe that effective communication only takes place when participants "achieve a shared understanding, stimulate others to take actions, and encourage people to think in new ways." On the other hand, Spence (1994) argues that communication is always a persuasive two-way process, where the sender usually has an intention of influencing the receiver; while others (e.g. Eisenberg & Goodall Jr., 2004) are less adamant and view communication as a goal-oriented process only in certain situations.   Furthermore, Spence also contends that for communication to be effective, a message must be received and understood, and only then can it produce resultant action. Therefore, communication is not a neutral process of information transfer (Mumby & Stohl, 1996), and elements of a persuasive process exist (e.g. Spence, 1994; Oliver, 1997). However, here, effective communication will be defined as an interactive two-way communication process resulting in an action or decision (even if it is not the intended action or decision); effective communication can be distinguished from communication (two-way exchange of messages without action), and informing (one-way sending of messages).

Internal communication(s).   Internal communication(s) can be defined in many different ways. For example, Bovée & Thill (2000, p. 7) define internal communication as "the exchange of information and ideas within an organization." Argenti (2003, p. 128), however, contends that "[i]nternal communication is, in essence, about creating an atmosphere of respect for all employees within the organisation. Communication from management should come directly from one manager to the next, and from supervisor to employee, but as companies grow larger and more complex, this often becomes more difficult – hence the need for the internal communication function."

In this article, however, internal communications is defined as integrated internal communications, i.e. all formal and informal communication taking place internally at all levels of an organisation. This definition is new, and it may be necessary to explain the choice of the plural over the singular form. Although there does not appear to be any established and consistent usage of the terms across the field, Spence (1994, p. 86) argues that "[w]hile interpretations of the terms can vary slightly the most widespread practice is to consider *communication* (in the singular) as being the social process which ordinarily operates when personal interaction takes place. *Communications* (plural) is used more specifically to indicate the channels and the technological means by which this process may be facilitated."   Argenti & Forman (2002), on the other hand, distinguish corporate communication from corporate communications by the former being the process and the latter the products of communication, e.g. memos, web-sites, and e-mails. In this article, the term internal communications is used in the plural because the goal is to capture all the communication processes that simultaneously take place inside an organisation.

THE MULTIDISCIPLINARY APPROACH

One of the goals of this article is to produce a multidisciplinary[1] look at internal communications in the light of business, management, corporate, and organisational communication. These particular domains of communication[2] were chosen because they are at the crossroads between communication and organisational life (Miller, 1996). Each of the four communication domains have certain unique features, and hence bring different perspectives to the study of internal communications. At the same time, each may be argued to display features of both practical and theoretical knowledge, have some areas that focus on dyads and others focusing on larger groups, and also include functions of both internal and external communications (e.g. Argenti, 1996; Mumby & Stohl, 1996; Reinsch, 1996; Shelby, 1993, 1996; Smeltzer, 1996).

Review of the four communication domains

The four domains of communication will be discussed separately in the following sections, but no clear-cut boundaries exist between them (Eisenberg, 1996; Reardon, 1996; Rogers, 2001). The focus here is to understand how each domain has been defined and how it contributes to the study of internal communications; not to carry out an exhaustive study of all features, nor to participate in the debate on where the exact boundaries between these domains lie (for that, see e.g. Shelby, 1993). However, it would perhaps be fair to say that in the context of integrated internal communications, business communication addresses the communication skills of all employees, management communication focuses on the development of the managers' communication skills and capabilities, corporate communication focuses on the formal corporate communication function, and organisational communication addresses more philosophically and theoretically oriented issues.

Business communication. Reinsch (1996, p. 28) defines business communication as "the scholarly study of the use, adaptation, and creation of languages, symbols, and signs to conduct activities that satisfy human needs and wants by providing goods and services for private profit." Reinsch continues by calling business communication a practical-science because he believes that neither an ivory-tower approach (knowing-why without knowing-how) or a trade-school approach (knowing-how without knowing-why) is sufficient, and hence both knowing-why and knowing-how elements should be and are present in business communication. However, many books with the term business communication in the title tend to mostly address specific skills like letter writing over more theoretically focused issues (see, e.g. Ober, 2003; Quible, Johnson & Mott, 1996; Bovée & Thill, 2000).

Management communication. According to Smeltzer (1996, pp. 22-23), the unifying goal of management communication is "to develop and disseminate knowledge that increases effectiveness and efficiency of managers functioning in contemporary business environments." Therefore, the focus may be argued to be the development of the knowledge sharing skills of managers. Communication as a key managerial competence is important because a large part of a manager's time is spent on communicating, and his/her communication effectiveness can also impact subordinates job satisfaction (Oliver, 1997). There is a strong focus on skill development. Skills include business letter writing, oral presentations, use of graphic aids, and listening,

with a tendency to find prescriptive solutions for managers (Bell & Smith, 1999; Hattersley & McJannet, 1997; Smeltzer, 1996).

Corporate communication. Argenti & Forman (2002, p. 4) define corporate communication as "the corporation's voice and the images it projects of itself on a world stage populated by its various audiences, or what we refer to as constituencies." Oliver (1997) believes that corporate communication can be seen as an umbrella term consisting of all the various internal and external organisational communication functions[3]. Given that the same methods and tactics can be used in both internal and external communications, it makes sense to call internal communications (in plural) employee relations, which makes it comparable to public relations in terms of the terminology (Oliver, 1997). However, the interest in corporate communication from the perspective of this article is on the official internal communications function, which emphasises formal communication performed by communication professionals.

Organisational communication. Miller (2003, p. 1) states that organisational communication "involves understanding how the context of the organization influences communication processes and how the symbolic nature of communication differentiates it from other forms of organizational behaviour." Tourish & Hargie (2004b, p. 10) take a slightly different view of "how people ascribe meanings to messages, verbal and nonverbal communication, communication skills, the effectiveness of communication in organizations, and how meanings are distorted or changed while people exchange messages, in both formal and informal networks." This latter view comes closest to the definition for integrated internal communications adopted in this article, but is not consistent with the previous definition due to its inclusion of less theory-driven elements like communication skills. This domain contributes to integrated internal communications by giving it a context (Miller, 2003; Mumby & Stohl, 1996), which may in part be explained by organisational communication being equally strongly positioned in the fields of organisational studies and communication studies (Jablin et al., 1987; Tourish & Hargie, 2004b).

Integrated internal communications

Figure 1 attempts to visualise the multidisciplinary nature of integrated internal communications, highlighting that internal communications draws from the theoretical and practical knowledge of all four communication domains discussed in this article. This is meant as a conceptual framework for describing how integrated internal communications is understood in this article, and not as a guide to what the relative importance of each domain is (hence the size of all the domains is the same), or what the exact relationships are between the domains (hence the order and placement of the domains is not highly significant). The fact that all four domains of communication have both an internal and external communications side also has to be underlined, while emphasising that the focus here is on the internal functions (hence certain areas of each domain fall outside the sphere of integrated internal communications).
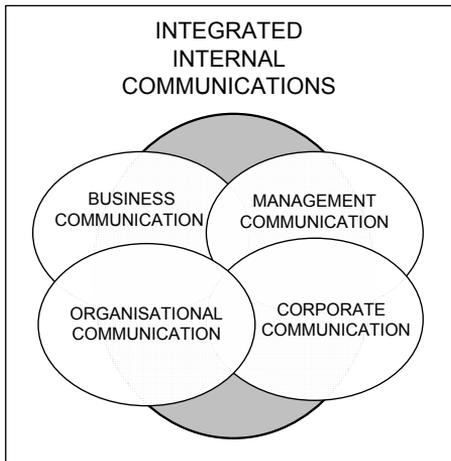
Figure 1. Conceptual framework of integrated internal communications

The main argument here has been that if an integrated view to internal communications is adopted, then it has to be recognised that both theoretical and practical components guide the actions of corporate communication experts, managers, and all employees in their formal and informal communication tasks. This view is important because it helps us understand that employees receive information from various sources, and the balance has to be right for them, i.e. a balance has not been achieved if one aspect works well (e.g. corporate communication) while another (e.g. management communication) is failing the employees' expectations. This integrated view also implies that it may be possible to create common cognitive ground amongst academics and practitioners interested in the multidisciplinary topic of internal communications. Finally, this holistic view also has important implications for understanding knowledge sharing in the organisational context, which will be explored after the methodological approach has been described.

METHODOLOGY

The methodology appropriate for this study was deemed to be thematic qualitative interviews, which are part of a more extensive, multi-phase case study being conducted at a world-leading telecoms multinational corporation. This particular case company was selected because it provided an appropriate real-life context where the contemporary phenomenon of integrated internal communications could be studied (Yin, 2003). Furthermore, due to the researcher's previous work experience at the case company, access to people and sensitive information not in the public domain was made easier. Gummesson (1991) and Johns (2001) argue that different roles played by the researcher within the research process can produce sound contextualisation of the research phenomenon. Hence, the observational material, together with the interviews, forms an important part of the data.

Twelve interviews were conducted in 2002, with a focus on communication practices and organisational social capital. Knowledge sharing was not one of the themes to be discussed explicitly but the theme emerged throughout the discussions, hence it has

been raised in this article. There was a bias towards Finnish interviewees, but the sample was representative of senior managers within the studied functions. Interviews were conducted in English and Finnish, and verbatim quotations in Finnish have been translated into English by the author. Due to confidentiality concerns, the company and individual identities have been made anonymous. Since the sample size is small, interviewees are only identified by a number (in parentheses after each quotation); this approach avoids recognition but makes the data more transparent to the reader. Table 1 summarises the interviewee information.

Focus area	Communication practices & social capital
Industry	Telecoms
Type of organisation	MNC
Number of interviews	12
Functional background of interviewees	Corporate Communication, Human Resources
Management Level	Senior Managers
Geographic location of interviewees (Number)	Finland (9), United Kingdom (3)
Nationality of interviewees (Number)	British (2), Finnish (9), Swedish (1)
Gender of interviewees (Number)	Male (7), Female (5)

Table I: Interviewee information

Each interview was recorded and lasted about an hour, following which it was transcribed. The interviews were analysed according to Dey's (1993) 'Circular Process' for qualitative analysis, which consists of three different stages: describing, classifying, and connecting. Dey (1993: 30) himself explains that, "[d]escription lays the basis for analysis, but analysis also lays the basis for further description." This is a process that happens over and over again in a spiral-like shape. The emphasis is on description, and then on splicing and splitting the data in order to form new and more comprehensive categories gathered under a common theme. The results are presented in the following section.

FINDINGS

The findings section has been divided into two sections. The first addresses the nature of integrated internal communications within the MNC context, and the second views knowledge sharing as a function of integrated internal communications.

Nature of integrated internal communications within MNCs

Given that integrated internal communications has been presented as a multidisciplinary phenomenon occurring at many levels of an organisation, the interview data will be discussed under the subheadings of multidisciplinary and multilevel.

Multidisciplinary. Internal communications is traditionally seen purely as a function of corporate communication.   As such, it typically emphasises such business communication skills as writing, creation of internal announcements and newsletters, and the publication of the web content (Ober, 2003; Quible et al., 1996; Bovée & Thill, 2000). Traditionally, those are the skills that have been stressed within the corporate communication function, although they do not necessarily fulfil the requirements for effective communication, as illustrated in the following two quotations.

"Informing about company matters is probably what we do best…CEO's quartile letters to the whole staff and communication packages about quartile results to managers are important steps and fill largely the informing function." (9)

"…getting our messages to result in changes in behaviour and other things is something we can probably improve on because the current communication probably comes mostly to the intellectual side." (10)

However, in the increasingly complex business world communication skills alone are no longer sufficient when an overall understanding of organisational life as a whole is required (Argenti & Forman, 2002). Hence, professionals working in that area have needed to develop a much more diverse set of skills and a broader knowledge base. It may be that as a result there has been a greater need to understand the underlying strategic issues, and perhaps those topics emphasised in the organisational communication literature. The following quotations sum up well the current situation.

"I came from the position that we really have to redefine what role Communications [function] plays in the company. Not a passive infrastructure management role but a much more influential role in culture and environment of the company." (1)

"…our operational environment and the business is becoming more complicated all the time and hence it is becoming more and more challenging for people to know where the whole business is going and what [this company] does. … Internal Communications [function] could be a catalyst in saying that our people want a clearer direction and vision…" (9)

Multilevel. The second part of integrated internal communications is its all encompassing nature, manifesting itself at multiple levels of the organisation. However, although the multilevel nature is discussed separately from the multidisciplinary nature, the two are closely linked. Management communication is a good example of this overlap. On the one hand, management communication is an important domain of internal communications, hence contributing to the multidisciplinary discussion. On the other hand, management communication addresses the need for multilevel communication, whereby managers act as bridges linking the different levels. The current situation is such that people are the most frequent source of information for managers (Cross et al., 2001), and employees find face-to-face communication invaluable in the technology-driven world (Hargie & Tourish, 2002; Nohria & Eccles, 1992; O'Kane, Hargie & Tourish, 2002). Hence, due to the sheer size of the globally dispersed operations, it is not possible for the corporate communication function alone to provide effective communication for the whole organisation, especially in the face-to-face format. Therefore, managers become critical in bridging the different layers, as suggested in the following quotations.

"…management communication is a stumbling stone. I am certain that people want more face-to-face than more e-mails or Intranet sites, people want an opportunity to ask and get information at a level that is relevant for them specifically." (9)

> *"Now we have this much more flat and virtual set-up, and I understand from a lot of people that they don't understand the same sense of identity and clarity." (4)*

At the same time, communication is the responsibility and right of everyone within an organisation. Dess & Picken (2000, p. 18) argue that "to compete in the information age, firms must increasingly rely on the knowledge, skills, experience, and judgement of *all* their people." Remarks by interviewees provide support for the integrated view by stating that the boundaries between communications and other functions are no longer so clear, while also emphasising that much of internal communications takes place outside the corporate communication function.

> *"... there is increasingly interaction, where I don't see any sort of barriers. It does not matter who gets involved, there is very little worry about who is in a Communication, HR or Line Management function..." (12)*

> *"Ninety-nine percent of internal communications is something other than what the Internal Communications department does, i.e. superior-subordinate communication, communication in meetings, or informal knowledge sharing, e-mail. The majority of it takes place outside formal channels, e.g. e-mail, phone, PowerPoint, meetings, etc." (2)*

While communication is an inevitable part of organisations at all levels (Tourish & Hargie, 2004b), employees too often see it as belonging to corporate communication; and may not necessarily associate it as also being an integral part of their own everyday working lives. As highlighted in the following quotation, it is important for employees to be receptive to information and even look for it actively by themselves.

> *"It is not enough that we are open and share information, because people have to also be interested. ... I come across situations all the time where people don't know that the information is on the web, and even if they do, they won't still go and look at it actively and out of their own initiative." (5)*

In summary, if we view internal communications through the integrated lens, it can be seen to manifest itself both as a multidisciplinary and a multilevel phenomenon. This then implies that in order for organisations to communicate effectively, they need to view internal communications as strategic rather than as skill-oriented, and also include managers and employees at all levels to ensure the delivery of important messages. This change, however, cannot occur unless employees understand that communication is a core competence for everyone – not a competence required by corporate communication alone.

Knowledge sharing as a function of integrated internal communications

Knowledge sharing and related concepts are a relatively new phenomenon to be discussed in the field of communication (most specifically, Monge & Contractor, 2003; Kalla, 2003; MCQ, Forum: Knowledge Management and/as Organizational Communication, 2002; Zorn & Taylor, 2004). Here, knowledge sharing is understood as the formal and informal exchanges through ongoing social interaction, which mobilise knowledge that is dispersed around the organisation (Mäkelä, Kalla &

Piekkari, 2004). Two themes relevant for knowledge sharing emerged from the data; one addressing efficiency, and the other, motivation and security.

Efficiency. One of the reasons knowledge sharing provides such an important focus for internal communications is that the ability to effectively share knowledge internally is fundamental for maintaining a competitive advantage (Doz et al., 2001; Grant, 1996; Kogut & Zander, 1993; Spender, 1996). The following quotations highlight the importance of communication and knowledge sharing as strategic aspects of company operations.

> *"Internal interaction and sharing of knowledge have a direct impact on how efficiently a firm can act and direct its activities, and change its functioning. And here results speak for themselves. A firm that in difficult conditions can react to changing markets, a firm that can change the geographical and technological focus of its business, can produce the kind of results that we can, then internal communications can't be on a completely shaky ground. I think it is directly comparable to the efficiency of our activities."* (2)

> *"The role of Internal Communications is to share results and other information, but the transfer of knowledge and information, as well as the openness of internal communications, may play a more important role in people's day-to-day work than in the goals or functions of our official internal communications."* (8)

Several authors argue that an important part of knowledge sharing is the existence of formal and informal networks because they facilitate the knowledge sharing process (e.g. Abrams et al., 2003; Borgatti & Cross, 2003; Cross et al., 2001). The first of the following two quotations emphasises the need to use such networks, so that people can connect directly with experts, and hence enhance the effectiveness of knowledge sharing. Meanwhile, the second quotation highlights the importance of balancing technology-mediated communications with face-to-face communications in order to facilitate social interaction and knowledge sharing.

> *"What is part of our culture is that people talk to those who have the best expertise, and things don't need to go through the command route."* (10)

> *"So the trick then is, how you stay effective by having enough face-to-face meetings while utilising this technology fully, so that you get some social interaction through these people. We form a social group, someone starts suddenly sending me all this information I wouldn't otherwise have and we build trust at the same time."* (12)

Simultaneously, although internal communications can enhance knowledge sharing, more is not necessarily better. According to Zorn & Taylor (2004) one of the reasons knowledge management has become an important topic of discussion in recent years is the explosion in the available information, and the subsequent information overload. If there is so much information available that it leads to an inability to act, then that is clearly undesirable, as the following quotation highlights.

"We cannot share everything with everyone, and that is not our goal either. Information flood leads to information overload, i.e. you may get so many e-mails that you cannot take care of things or even prioritise them." (2)

Security and motivation. The second aspect of knowledge sharing is that it appears to increase employees' feeling of security. The current business environment is such that the workforce is under increasing pressure, which has resulted in increasing fatigue and stress being observable (e.g. Eisenberg & Goodall Jr., 2004). Creating a feeling of security and motivating employees is especially important in times when job insecurity and downsizing have resulted in increased uncertainty and decreased levels of trust (Tourish & Hargie, 2004c). The following quotations show that motivation and security are relevant issues for communications, and involve the sharing of a different type of knowledge.

"...communication is so important because people who stay [after layoffs] should not get scared but should be ready to enthusiastically implement new strategy. The challenge is how to communicate negative news to some, while simultaneously creating a positive and secure atmosphere for others." (3)

"I think where we are also going through a learning process, and what is not engraved in the culture, is for line management to take part in the other side of internal communications, and that is the motivational part and driving part." (12)

In summary, effective knowledge sharing appears to increase the efficiency of employees, and also enhance their motivation and the feeling of security. However, efficiency and motivation are not completely independent of one another. Open knowledge sharing often results in more effective work practices, which in turn can also increase one's motivational levels. Therefore, given the importance of effective knowledge sharing at all levels of an organisation, it is suggested here that true effectiveness can only be obtained through incorporating all organisational members, and hence viewing knowledge sharing as a function of integrated internal communications.

CONCLUSIONS

This article has examined the multidisciplinary nature of internal communications, and showed that an integrated perspective can be observed within the MNC context. That is a perspective, which is also beneficial for enhancing our understanding of knowledge sharing within organisations. Therefore, if we adopt the view that the employee is the most valuable asset of the corporation (Argenti & Forman, 2002) or possibly even the only sustainable source of competitive advantage (Englehardt & Simmons, 2002), then the integrated view helps us comprehend that we need to incorporate all employees to our analysis of internal communications and knowledge sharing.

It is suggested here that in order to adopt a more strategic perspective to internal communications, there are two main issues to be considered. First, this article has presented a novel way of looking at internal communications through an integrated lens, enabling us to see it as all formal and informal communication taking place internally at

all levels of an organisation. Second, viewing knowledge sharing as a function of such integrated internal communications may help us to understand how communication contributes to the organisation's competitive advantage. This warrants further research to be conducted.

One of the limitations of this study is that the results are from the first phase of a multi-phase study conducted within one multinational corporation. Therefore, the results presented in this article may be taken as indicative but will need further testing and a wider sample before final conclusions can be drawn.

Notes

1. The term 'multidisciplinary' is used here because of its widely accepted and recognised usage. However, perhaps a more appropriate term would have been "multi-domain", in line with discussing domains rather than disciplines of communication.
2. Instead of referring to disciplines, domains of communication are discussed because there are many different ways to define an academic discipline, and the focus of this article is not to participate in the debate over which of these four domains constitute as disciplines (for that discussion, see e.g. Argenti, 1996; Mumby & Stohl, 1996; Reinsch, 1996; Shelby, 1996; Smeltzer, 1996).
3. Argenti (1996, 2003) includes the following functions under corporate communication: corporate advertising and advocacy, media relations, marketing communication, internal communication, investor relations, community relations and corporate philanthropy, government relations, and crisis management.

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ESSAY 2

INTERPERSONAL KNOWLEDGE SHARING THROUGH SOCIAL CAPITAL:

THE STRATEGIC ROLE OF COMMUNICATION

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INTERPERSONAL KNOWLEDGE SHARING THROUGH SOCIAL CAPITAL:

THE STRATEGIC ROLE OF COMMUNICATION

This paper examines the role of communication in the context of the multinational corporation (MNC). More specifically, the role of communication is studied in relation to social capital and knowledge sharing, which have been shown to enhance competitive advantage. In order to build on previous research, communication intensity is studied here as a dimension of social capital, along with relational-cognitive embeddedness. This paper draws on quantitative results from a questionnaire survey (N = 749), which show that communication and an atmosphere of trust and common cognitive ground are critical factors for effective knowledge sharing internally; therefore, highlighting the need for MNCs to focus on interpersonal level knowledge sharing, and not just on technological enablers.

Keywords: Knowledge sharing, social capital, internal communications, communication intensity, relational-cognitive embeddedness, bonding, and bridging.

In an increasingly competitive business environment, organisations have to try to differentiate themselves from others and sustain a competitive advantage. A fundamental step towards maintaining that competitive advantage is the ability to effectively share knowledge internally (Doz, Santos & Williamson, 2001; Grant, 1996; Kogut & Zander, 1993; Spender, 1996). Such knowledge sharing has been studied from various perspectives and in many different contexts. One approach that has gained increasing interest in recent years is the role of social capital and social networks in enabling knowledge sharing (Cross, Parker, Prusak, & Borgatti, 2001; Hansen, 1999, 2002; Nahapiet & Ghoshal, 1998; Oh, Chung & Labianca, 2004; Tsai & Ghoshal, 1998; Tsai, 2001). However, a much more neglected area of research is the role of communication in relation to knowledge sharing and social capital (Burgess, 2005; Kalla, 2003; Monge & Contractor, 2003; Tucker, Meyer & Westerman, 1996; see also the special forum presented in MCQ, 2002, 16(2)). Studying the role of communication is important because it may be argued that without communication neither social capital nor knowledge sharing would exist. Furthermore, while it is widely recognised that communication is a critical aspect of successful organisational life, not enough research has explored what shape and form communication takes in different types of relationships; and what impact that, in turn, has on knowledge sharing.

Knowledge sharing does not take place in a vacuum, and given the focus of this paper on interpersonal knowledge sharing between MNC managers, it is relevant to study the relationships in which such knowledge sharing takes place. Much of the previous research on knowledge transfer and knowledge sharing within the MNC context has tended to largely focus on organisational or business unit level solutions or outcomes, rather than focusing on interpersonal networks (e.g., Hansen 1999, 2002; Tsai, 2001; Tsai & Ghoshal, 1998). However, it has recently been acknowledged that interpersonal knowledge exchanges are an important part of the overall internal knowledge flows within the MNC (Foss & Pedersen, 2004; Mäkelä, 2006; Monge & Contractor 2003). Furthermore, the sharing of explicit and tacit knowledge within organisations has been explored in the context of bonding and bridging relationships (Hansen, 1999, 2002; Newell, Tansley & Huang, 2004; Oh et al., 2004; Reagans & McEvily, 2003). While this research has enhanced our understanding of knowledge sharing, it has not fully

incorporated all elements of social capital. The focus of such previous research has largely been on network ties and the structural component of social capital, with little attention on its relational and cognitive aspects.

Although communication is rarely discussed explicitly in relation to knowledge sharing, previous research has contended that social interaction enhances both social capital (Bourdieu, 1986; Kostova & Roth, 2003) and knowledge sharing (Hansen, 1999, 2002; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). This type of social interaction could often be equated with communication, but given that much of this research has been presented in the field of international business, the term social interaction may have been thought more appropriate. Furthermore, social interaction is commonly placed within the domain of social capital, and more specifically, within the structural dimension (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). Therefore, in order to bridge the gaps between different research, it is argued here that the role of communication within the structural dimension of social capital has been under-explored, and that social capital research has not been sufficiently applied to communication studies. This paper attempts to address this research gap by exploring the relational and cognitive aspects of social capital in more detail and by incorporating communication to the structural dimension more fully in order to understand their impact on interpersonal knowledge sharing within the contexts of bonding and bridging relationships.

The remainder of this paper is divided into four sections. The first section reviews the strategic role of communication within multinational corporations by examining the relationships that exist between communication, social capital, and knowledge sharing; the resulting conceptual framework and proposed model are then presented. The second section describes the methodology and operationalisation of constructs. The third section presents the results of the empirical study conducted at a world-leading telecoms multinational corporation (MNC). Finally, the fourth section discusses the findings and highlights key conclusions, concluding with areas for future research and managerial implications.

STRATEGIC ROLE OF COMMUNICATION IN MULTINATIONAL CORPORATIONS

Communication is something that everyone recognises but few can define satisfactorily (Fiske, 1990). Similarly, communication within corporations is something that everyone sees as essential for the functioning of the organisation, but few truly value or understand its role (Argenti & Forman, 2002; Oliver, 1997; Tourish & Hargie, 2004). Although internal communication between employees performs various functions, ranging from social exchanges to the sharing of complex business knowledge, the focus here is on the role of communication in enabling effective knowledge sharing.

LINKING COMMUNICATION AND SOCIAL CAPITAL

Given that communication is a complex and multifaceted phenomenon, it is important to explain the approach adopted in this paper. The main focus here is on internal communication, i.e. social interaction through messages (Fiske, 1990) between employees within one focal organisation. It is not implied that external communication is not equally important but the scope of this paper does not allow its inclusion. The focus of this paper is to understand how managers communicate with their colleagues, and what impact those communication patterns have on social capital and interpersonal level knowledge sharing. Social capital is defined in accordance with Nahapiet & Ghoshal (1998, p. 243) as "the sum of the actual and potential resources embedded within, available through, and derived from the network of relationships possessed by an individual or social unit. Social capital thus comprises both the network and the assets that may be mobilized through that network." Although the term social capital has been around since 1916 (Engeström, 2001), social capital research with a focus on corporations is very recent (Gabbay & Leenders, 2001a; Kostova & Roth, 2003; Leana & van Buren, 1999; Nahapiet & Ghoshal, 1998; Newell et al., 2004; Oh et al., 2004; Tsai & Ghoshal, 1998). Social capital is a complex and multifaceted concept that is defined and understood in a number of varying ways in different contexts. Furthermore, there appears to be significant overlap in the social capital and social network research traditions. Kilduff & Tsai (2003) see social network research as focusing on the issues of embeddedness, social capital, structural holes, and centrality; Adler & Kwon (2002) include social networks under the umbrella term of social capital; and Burt (1997) views social capital theory as its own entity. Although the social networks approach is a separate research tradition, many of the ideas presented complement the social capital approach. Therefore, although the focus here is on social capital, relevant research will also be borrowed from the social networks tradition.

The work by Nahapiet & Ghoshal (1998) and Tsai & Ghoshal (1998) has been instrumental in creating a social capital model which can be applied to the multinational corporation. They place social interaction within the structural dimension of the social capital framework. The structural dimension refers to the overall linkages between people and units, incorporating both whom you can reach and how you reach them (Burt, 1992, 1997; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). Hence, the structural dimension essentially includes linkages between people, with communication embedded in those linkages. Along with the structural dimension, the relational and cognitive dimensions have been identified. The former has a long research tradition behind it (e.g., Coleman, 1988; Granovetter, 1985), while the latter is a dimension first introduced by Nahapiet & Ghoshal (1998). The relational dimension describes the relational embeddedness of the relationships, referring to relationships developed through a history of interactions (Granovetter, 1973, 1985). Nahapiet & Ghoshal (1998) include such factors for this dimension as trust and trustworthiness, norms and sanctions, obligations and expectations, and identity and identification. Given that such relational attributes usually only develop through a history of interactions, the role of communication is highlighted. The cognitive dimension, on the other hand, refers to shared systems of meaning among actors, and can be examined in terms of a shared vision or common language/code, which enables access to people and their information (Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). These two dimensions will be combined into one dimension in this paper and referred to as relational-cognitive

embeddedness. The reason for doing this is that while the structural dimension, i.e. communication intensity, is quite distinct, the relational and cognitive dimensions are highly interrelated. Although it is recognised that the two dimensions emphasise slightly different aspects of social capital, they have been combined to form one dimension in previous quantitative empirical research (see e.g., Yli-Renko, 1999).

Consequently, how internal communication relates to social capital is a somewhat ambiguous issue, which perhaps explains why research in the area is relatively sparse and recent (Hazleton & Kennan, 2000; Kalla, 2003; Monge & Contractor, 2003). On the one hand, it may be argued that social capital creates a network of relationships and resources through which communication travels (Hansen, 1999; Tsai, 2001), hence leveraging internal communication. Furthermore, Ghoshal, Korine & Szulanski (1994) show that lateral networking has a significant positive effect on internal communication. On the other hand, Nahapiet & Ghoshal (1998, p. 253) emphasize that all new resources are created through the generic processes of combination and exchange, and continue by stating that "meaningful communication" is an essential part of the processes of social exchange and combination. They further argue that social relationships are usually strengthened through interaction. Bourdieu (1986) takes it a step further by contending that interaction is a precondition if dense social capital is to be created and maintained. Furthermore, Kostova & Roth (2003, p. 305) propose that "the larger the number of contacts and interactions and the greater the frequency and intensity of past interactions, the higher the level of the individual's social capital." This leads to the posing of the following two hypotheses.

> *H(1a):* The higher the level of communication intensity within bonding relationships, the higher the level of relational-cognitive embeddedness within those bonding relationships.

> *H(1b):* The higher the level of communication intensity within bridging relationships, the higher the level of relational-cognitive embeddedness within those bridging relationships.

LINKING COMMUNICATION AND KNOWLEDGE SHARING

Knowledge related issues are attracting increasing interest in many research fields, and debate over the definition and constitution of knowledge is on-going (Amin & Cohendet, 2004; Choo & Bontis, 2002; Tsoukas & Vladimirou, 2001). Tsoukas & Vladimirou (2001, p. 979) define knowledge as "the individual ability to draw distinctions within a collective domain of action, based on an appreciation of context or theory, or both". This definition emphasises the role of the individual in the creation and sharing of knowledge, while recognising that knowledge is always created within particular contexts. Furthermore, Cross & Prusak (2003, p. 468) draw our attention to an interesting point, which is that "knowledge does not simply flow through an organization but is bartered, blocked, exchanged, and modified." Therefore, when applied to the MNC context, the implication is that the geographically scattered and multi-contextual nature of the MNC is a particularly challenging environment for knowledge sharing (Bartlett & Ghoshal, 1989; Nohria & Ghoshal, 1997; Doz et al., 2001). This paper builds on the knowledge-based theory of the firm, according to

which knowledge is scattered across organisational units and routines. Hence, knowledge sharing is seen as a major task of the differentiated MNC. Within that context, it is the key boundary-spanning individuals that play a critical role in the coordination, integration, and exchange of resources within the geographically dispersed subunits of the MNC (Kostova & Roth, 2003; Tushman & Katz, 1980). Such boundary-spanning, intermediating functions are often performed by managers, who coordinate activities between different business units and geographical locations.

Much of the initial research on knowledge transfer and knowledge sharing tended to emphasise technical solutions, hence many organisations focused on the development of technology-based knowledge management systems. These systems have enhanced the transfer of explicit knowledge, but have largely ignored tacit knowledge and the important role played by interpersonal knowledge networks. However, it has recently been acknowledged that interpersonal knowledge exchanges are an important part of the overall internal knowledge flows within the MNC (Foss & Pedersen, 2004; Mäkelä, 2006). In this paper, interpersonal knowledge sharing is understood as the formal and informal business-related knowledge exchanges in ongoing interaction between MNC managers (Barner-Rasmussen, 2003; Mäkelä, 2006). Given that knowledge is not of a homogeneous nature, these business-related knowledge exchanges include both explicit and tacit knowledge. Explicit knowledge is defined as knowledge that can be spelled out or formalised, while tacit knowledge is associated with skills and know-how (Nonaka & Takeuchi, 1995; Polanyi, 1966). Therefore, although knowledge management systems perform an important task, social processes complement them in a critical way (Brown & Duguid, 1998; Flanagin, 2002; Hayes & Walsham, 2003; Walsham, 2002).

An important aspect of social processes relating to knowledge sharing is the role of communication. Tsoukas (2003, p. 426) gives support to this view by arguing that "[n]ew knowledge comes about not when the tacit becomes explicit, but when our skilled performance – our praxis – is punctuated in new ways through social interaction." A key audience, in facilitating the creation and sharing of knowledge, are mid-level managers who are often seen as the key to enabling or blocking communication and knowledge flows (Nonaka & Takeuchi, 1995; Tourish & Hargie, 2000). More specifically, knowledge flows can take place either within bonding or bridging relationships, which relate to the concepts of strong and weak ties respectively (Adler & Kwon, 2002; Burt, 1992, 1997, 2000; Granovetter, 1973; Woolcock & Narayan, 2000). Bonding relationships or strong ties refer to cohesive and frequently occurring ties that exist among individuals belonging to a group (Granovetter, 1973; Hansen, 1999). In the MNC context this may refer to a team working in a specific functional discipline or a task group consisting of people from different backgrounds. Bridging relationships or weak ties, on the other hand, refer to those relationships which bridge an information gap, for example the interaction between members of different teams or functions, consisting of more distant and infrequent relationships (Granovetter, 1973; Hansen, 1999).[1]

More specifically, Hansen (1999) established that weak ties were more efficient for the search and transfer of codified knowledge, whereas complex knowledge would often require strong ties. Consequently, bridging relationships are important for multinational corporations because it is extremely difficult to spread vital information between units without links existing between them (Szulanski, 1996). Therefore, bridging

relationships, consisting of interunit links, provide channels through which information and knowledge can flow (Hansen, 1999; Tsai, 2001). However, bonding relationships tend to promote shared norms, trust, and cooperation, which in turn motivate knowledge sharing (Coleman, 1988; Granovetter, 1985; Reagans & McEvily, 2003). This, then, implies that the existing network and the characteristics of that network become important for one's ability to acquire and share knowledge, hence highlighting the importance of social capital. Therefore, it can be argued that it is important to have both bonding and bridging ties (Burt, 2000; Newell et al., 2004; Woolcock & Narayan, 2000). A case in point is Brown & Duguid's (1998, p. 97) argument that "isolated communities can get stuck in ruts, turning core competencies into core rigidities. When they do, they need external stimuli to propel them forward." Communities that have very strong internal ties usually preclude external ties, making it difficult to diffuse knowledge. To address this issue, Granovetter (1973) talks about 'the strength of weak ties', referring to people who are loosely linked to several communities and who often facilitate knowledge flows. Burt (1992, 1997, 2000) takes it a step further by addressing the bridging of structural holes; more specifically, he states that social networks characterised by bridging relationships increase information diffusion. Hence, boundary spanning relationships consisting of either strong or weak bridging relationships are important, but bonding relationships also have a significant role to play.

Returning back to the discussion on the relationship between communication and knowledge sharing, it is possible to observe that communication is rarely discussed explicitly in connection with knowledge sharing; except when the exchange and combination processes of knowledge creation are described (Nahapiet & Ghoshal, 1998; Nonaka & Takeuchi, 1995). This is interesting because one may ask, "what is knowledge sharing essentially but effective communication"? This point is supported by views raised in the collection of essays presented in Management Communication Quarterly's Forum on "Knowledge Management and/as Organizational Communication" (MCQ, 2002, 16(2)). More specifically, Zorn & May (2002, p. 238) state that "[o]ur motivation for initiating this Forum is the belief that KM is fundamentally an organizational communication process, one to which communication scholarship can make a valuable contribution. […] Furthermore, the issues that KM practitioners struggle with are largely communication issues, such as how to organize the generation, sharing, understanding and use of knowledge." Social interaction incorporates many forms, but the exchange of messages is at the heart of interaction, hence linking social interaction back to communication. More specifically, Heaton & Taylor (2002, p. 222) state that "[b]ecause text – whatever its manifestation, spoken or written – is grounded in process, it is essentially a medium for the maintenance of interaction, not just a material record, or 'product'."

Finally, in terms of the structure of the MNC, relationships tend to be more complex and a high information processing capacity is needed. Hence, Gupta & Govindarajan (1991) show that higher information processing capacity is created by more intense communication patterns. Furthermore, Ghoshal & Bartlett (1988) contend that internal communication is a key source for the MNC's ability to create, adopt, and diffuse knowledge and innovations. On the other hand, at the interpersonal level, several studies argue that interaction between two members of an organisation increases the level of knowledge sharing between them (Hansen, 1999, 2002; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998). This can therefore be argued to suggest that more intense

communication patterns increase knowledge sharing (Reagans & McEvily, 2003), leading to the posing of the following two hypotheses.

> *H(2a):* The higher the level of communication intensity within bonding relationships, the higher the level of knowledge sharing within those bonding relationships.

> *H(2b):* The higher the level of communication intensity within bridging relationships, the higher the level of knowledge sharing within those bridging relationships.

LINKING SOCIAL CAPITAL AND KNOWLEDGE SHARING

The previous sections have defined knowledge sharing, communication, and social capital, and established links between them. However, one area that remains to be examined is the link between social capital and knowledge sharing (apart from the structural dimension, which was discussed under communication). The existence of the link between social capital and knowledge sharing is in many ways the starting point of this paper. Much of the previous research in this area has explored various links between the two, and shown that social capital does indeed increase knowledge sharing (Nahapiet & Ghoshal, 1998; Oh et al., 2004; Soda, Usai, & Zaheer, 2004; Tsai & Ghoshal, 1998).

Nahapiet & Ghoshal (1998) and Tsai & Ghoshal (1998) explore the impact of the three dimensions of social capital on the creation of intellectual capital and value creation. More specifically, Tsai & Ghoshal's empirical research provides strong support for the argument that social capital facilitates value creation through resource exchange and combination. Furthermore, the results of the research demonstrate that the relational dimension has a significant impact on resource exchange, and while the cognitive dimension does not contribute directly, it significantly impacts the relational dimension. These findings are supported by social network research, for example, Abrams, Cross, Lesser & Levin (2003) show how trust in different shapes contributes to knowledge sharing. Therefore, the following two hypotheses are proposed.

> *H(3a):* The higher the level of relational-cognitive embeddedness within bonding relationships, the higher the level of knowledge sharing within those bonding relationships.

> *H(3b):* The higher the level of relational-cognitive embeddedness within bridging relationships, the higher the level of knowledge sharing within those bridging relationships.

CONCEPTUAL FRAMEWORK AND PROPOSED MODEL

What the previous discussion suggests, even though specific hypotheses have been proposed, is that it may be difficult to display the relationships between the three constructs in a linear model since the constructs overlap and are not discrete. Hence,

the conceptual framework in Figure 1a aims to depict perhaps a more accurate picture by showing that all three constructs are interrelated and the influence among them is cyclical. The arrows circle the three constructs in a figure eight format, reinforcing the process as it takes place over and over again. Therefore, it is argued that communication may enable the creation of social capital, which in turn enhances communication further, thereby allowing knowledge sharing to take place. At the same time, the desire to share knowledge may result in more communication also taking place. Using the same logic, it can therefore also be argued that social capital and knowledge sharing reinforce each other indirectly. This then implies that the existence of social capital may give access to various information and resources, i.e. enabling knowledge sharing, but what actualises the process is the intensity of communication. For example, two employees may share the same goals and trust each other, but without communication they cannot benefit from knowledge sharing. Therefore, Figure 1a suggests a cyclical view to the relationships that exist between communication, social capital, and knowledge sharing; and highlights the critical and strategic role communication has in relation to both social capital and knowledge sharing. However, although much of the research in the international business field has tended to view communication as embedded in the social capital and knowledge sharing processes, this conceptual framework suggests that it may in fact be the social capital and knowledge sharing which are embedded in communication. Furthermore, despite the interdependencies, communication is here nevertheless seen as an independent construct because despite helping to create and maintain social capital and knowledge sharing in important ways, it also performs other functions. Monge & Contractor (2003, p. 81) list four functions of communication: surveillance of the environment to identify threats and opportunities, coordination of response to threat, transmission of social and cultural heritages, and entertainment.

However, while theoretically or conceptually we can separate the three constructs from one another, and argue over the complex and interdependent relationships between them, it is more challenging to do so in practice. Therefore, although it is recognised that communication is an independent construct, in previous research it has been embedded within the structural dimension of social capital. Hence, to understand the role of communication better within that context, we must study the under-explored communication components of the structural dimension, or communication intensity as it is referred to in this paper, along with relational-cognitive embeddedness. Therefore, the communication intensity and relational-cognitive embeddedness, together, form the social capital construct in the proposed model. Furthermore, given the focus on exploring bonding and bridging relationships, the two components of social capital and knowledge sharing are each represented within both the bonding and bridging context. Also, although it is recognised that the influence between the different components is not unidirectional, such an approach is adopted in this paper for the sake of clarity. Therefore, based on the conceptual framework, a simplified model was developed in order to be able to better understand how communication intensity and relational-cognitive embeddedness influence knowledge sharing within bonding and bridging relationships of MNC managers. Figure 1 illustrates the proposed relationships between the constructs and also shows how the six hypotheses fit into the picture.
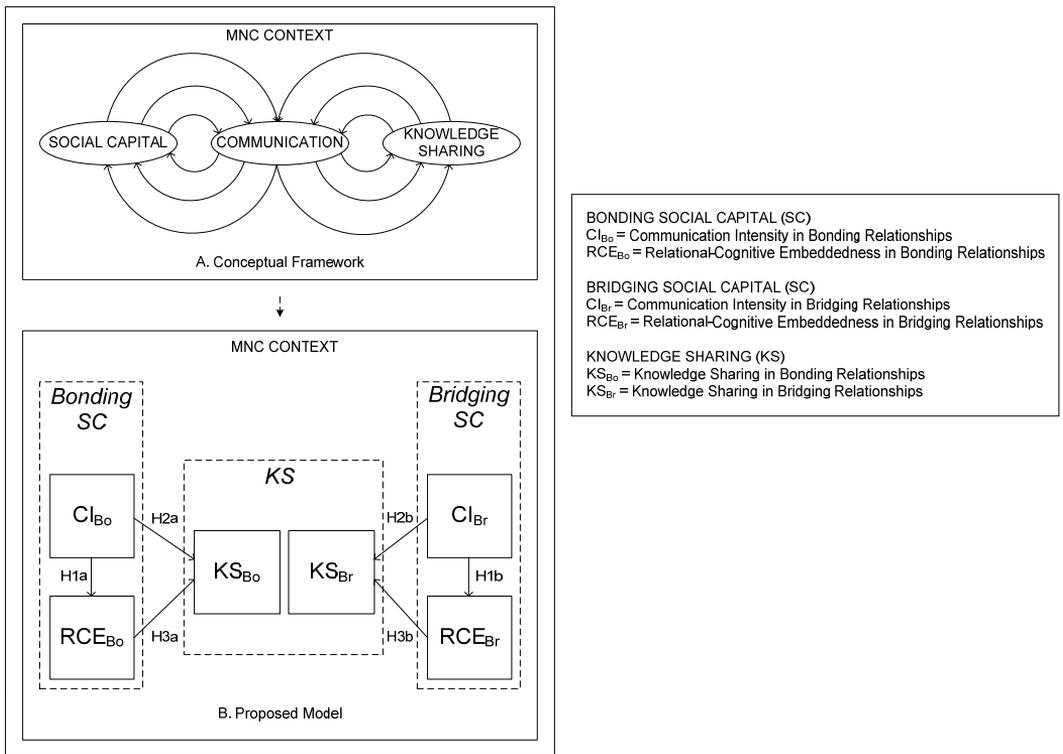
Figure 1. Conceptual Framework and Proposed Model

METHOD

This section explores the setting for the case study research, describes the data collection through a questionnaire survey, and presents the latent and observed measures by summarising construct operationalisation.

THE CASE STUDY SETTING

The chosen research strategy is a case study with an embedded, single-case design (Yin, 2003). The case company is a world-leading telecoms MNC, based in Finland, with global operations and markets. The MNC's global presence and matrix communication structure provided a good context for the contemporary phenomena being studied (Eisenhardt, 1989; Yin, 2003), highlighting the role of communication and networks. Furthermore, due to the MNC being a leader in its field, we can assume that the results will be somewhat representative of best practice. The reason for including only one MNC was to harmonise the effect of company culture. However, the embedded design enhances representativeness of the sample by including managers from six of the most important business units, based in six strategically significant countries (USA, UK, Singapore, Germany, Finland, and Denmark).

The participants were restricted to management, given their critical role in knowledge sharing, but the midlevel and upper-midlevel managers came from all key business areas of the company. The demographics of the managers who participated in the survey were representative of the sample; the managers represented over 30 nationalities, the average length of service was nine years (ranging from one to over 30), 51 percent worked in R&D, and 85 percent were male.

SAMPLING PROCEDURES

This study is based on a questionnaire survey administered to a random stratified sample of 1800 midlevel managers. Considerable time was spent on the development, testing, and fine-tuning of the survey, in order to ensure internal validity of the survey instrument (DeVellis, 2003; Edwards, Thomas, Rosenfeld & Booth-Kewley, 1997; Fowler, 2002; Punch, 2003). A pilot survey was compiled and tested in paper format in one-to-one and small group interviews (N = 15) in order to get maximum amount of feedback about survey content and clarity of statement wording. Based on the feedback final adjustments were made, and a wider pilot test was carried out on the case company Intranet (N = 60). No additional changes were necessary based on the feedback to the second pilot, hence the survey was launched to the whole target sample.

The random stratified sample was compiled with a two-step selection procedure using a database of 6000 managers. First, initially all managers from the six chosen business groups based in the six countries were included. Second, among those remaining 3000 managers, about 300 managers were selected from each business group using a random stratified sampling technique in order to have relatively equal representation from each of the six business groups and the six countries. The survey was conducted on the case company Intranet, and out of the 1800 invitations sent, 50 were returned due to incorrect e-mail addresses or the respondents having left the company. Hence, the final sample was 1750, and the number of completed surveys was 767 (response rate = 44%). Observations with missing data were deleted completely, bringing the final sample size to 749. Furthermore, organisational level scores were obtained by an aggregation of the 749 individual level responses from managers.

MEASURES

The questionnaire survey consisted of 20 observed variables (statements), which served as the measures for the six expected latent variables. The latent variables were composed of communication intensity in bonding relationships (CI_{Bo}), communication intensity in bridging relationships (CI_{Br}), relational-cognitive embeddedness in bonding relationships (RCE_{Bo}), relational-cognitive embeddedness in bridging relationships (RCE_{Br}), knowledge sharing in bonding relationships (KS_{Bo}), and knowledge sharing in bridging relationships (KS_{Br}).

Applying bonding and bridging ties to the MNC, however, is not straight forward when examining workgroups characterised by a global matrix structure, i.e. there are not

necessarily any clear boundaries between location, function, or nationality. That means that your closest colleagues may be based in different countries and work in different functions, hence they bring in new information from their own functional or national settings. This study hence applies the terminology of bonding relationships to those relationships managers have with their 'close group of colleagues', and bridging relationships to those they have with 'other contacts.' When answering statements concerning "my close group of colleagues", the respondents were instructed to think of a group of colleagues who work for (the case company), and with whom they interact most frequently on work-related matters on a normal working day or week. When answering statements concerning "my other contacts", the respondents were instructed to think of a group of colleagues who work for (the case company) and who are not a part of the "close group of colleagues", but with whom they interact relatively regularly on work-related matters during their working week or month (those contacts may be from other business units or functions but they serve as important sources of information). Appendix 1 summarises the operationalisation of the six latent and 20 observed variables, and their sources. These measures and the control variables will now be presented briefly.

<u>Communication intensity.</u> Communication is context dependent, and in this study that context is information and knowledge seeking. Hence, communication was operationalised in terms of frequency (Hansen, 1999, 2002; Kostova & Roth, 2003) for both explicit and tacit knowledge seeking separately. In two separate statements, respondents were asked how frequently they turned to their close colleagues for either work-related facts and information or advice and insight to work-related problems (CI_{Bo}). The same two statements were then addressed with regards to other contacts (CI_{Br}). The 5-point scale was adjusted from Hansen's 7-point scale (1 = *daily*, 2 = *a couple of times a week*, 3 = *weekly*, 4 = *monthly*, 5 = *less frequently*). The order of these answers was reversed during analysis to make them comparable with the other scale of *strongly disagree* to *strongly agree*, therefore in this paper, i.e. 1 = *less frequently than monthly* and 5 = *daily*.

<u>Relational-cognitive embeddedness.</u> In this study the relational and cognitive dimensions were combined to form the dimension relational-cognitive embeddedness (following Yli-Renko, 1999). Three measures were taken from the relational dimension and another three from the cognitive dimension. The first relational measure was taken from Hansen (1999), and it asked the respondents to indicate if they had a close working relationship with their colleagues. The next two measures were used word-for-word from Tsai & Ghoshal (1998), with the adjustment of applying them to the individual level. The first statement referred to integrity and the second to reliability. The cognitive measures were based on two measures by Tsai & Ghoshal (1998), who operationalised the cognitive dimension in terms of shared vision, which in this study was adjusted to shared values (since applying vision to the individual level was not appropriate); and another statement about collective goals, which was adjusted to common goals in this study. The third item was developed based on Nahapiet & Ghoshal's (1998) original discussion of the cognitive dimension, which included such facets as shared codes and language, and shared narratives. The last statement was therefore formulated for this study as "[t]he way my (close colleagues/ other contacts) and I communicate makes it easy for us to understand each other and work together." Therefore, there were six measures for each group of colleagues, forming the scales for

RCE$_{Bo}$ and RCE$_{Br}$. Responses for all these statements were on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*).

Knowledge sharing. The knowledge sharing section of the survey was adopted mainly from Hansen's (1999, 2002) work, which includes codified (explicit) and complex (tacit) knowledge. The observed variables for both the explicit and tacit knowledge were unidirectional, i.e. measuring only how useful the respondent found the received knowledge.[2] The two measures for KS$_{Bo}$ and KS$_{Br}$ consisted of explicit and tacit knowledge sharing. Respectively, they were: "I receive useful work-related facts or information from my (close colleagues/ other contacts)" and "I receive useful advice or insight to work-related problems from my (close colleagues/ other contacts)." Responses were on a 5-point Likert scale (1 = *strongly disagree* to 5 = *strongly agree*).

Control variables.   Three variables were included as controls: *age*, *tenure*, *and nationality*. Age and tenure were included to capture the influence of experience on behaviour, while nationality aimed at capturing the possible differences in people's networks and the ensuing effects. To measure age, respondents were asked to select the year of their birth, which was then converted into years, and tenure was measured directly in years. Nationality originally included a full list of the respondents' nationalities, which were then coded into a dummy variable (0 = national of the MNC's home country, 1 = not a national of the MNC's home country).

RESULTS

Descriptive statistics are presented in Table 1. When the descriptive statistics are examined, we see that the mean values are higher for all latent and observed variables in bonding relationships when compared with the equivalent values in bridging relationships (see Table 1 for latent variables and Appendix 2 for observed variables). This means that managers received higher levels of useful information/knowledge from their close colleagues than other contacts (KS$_{Bo}$ = 4.23 vs. KS$_{Br}$ = 3.85 with t(748) = 18.14, $p \leq 0.001$); they communicated more frequently with their close colleagues than other contacts (CI$_{Bo}$ = 4.07 vs. CI$_{Br}$ = 2.95 with t(748) = 38.22, $p \leq 0.001$); and higher levels of relational-cognitive embeddedness could be found in their bonding rather than bridging relationships (RCE$_{Bo}$ = 4.11 vs. RCE$_{Br}$ = 3.49 with t(748) = 31.51, $p \leq 0.001$). The *t*-tests used were dependent or paired-samples *t*-tests.   This finding is not particularly surprising but shows clear consistency across the answers in the whole sample, and demonstrates that one's closest colleagues are a key knowledge source for managers. If we then turn to the mean scores of the observed variables, it is possible to conclude that, within both bonding and bridging relationships, managers felt that they received more explicit rather than tacit knowledge from their colleagues (for bonding relationships t(748) = 7.99, $p \leq 0.001$; for bridging relationships t(748) = 9.02, $p \leq 0.001$). One would perhaps expect managers to seek and receive more explicit than tacit knowledge from their colleagues, but although explicit knowledge has a higher mean score, the difference in the scores of explicit and tacit knowledge is surprisingly small.

TABLE 1: Descriptive Statistics and Correlations between Variables for Total Sample ($N = 749$)

	Mean	SD	1	2	3	4	5	6	7	8
1. Age	40.79	6.39								
2. Tenure	8.98	5.19	.26***							
3. Nationality	.51	.50	.10**	-.37***						
4. Knowledge sharing (KS$_{Bo}$)	4.23	.55	.06	.03	-.09*					
5. Knowledge sharing (KS$_{Br}$)	3.85	.56	.04	.02	-.10**	.48***				
6. Communication intensity (CI$_{Bo}$)	4.07	.81	.01	.08*	-.10**	.37***	.15***			
7. Communication intensity (CI$_{Br}$)	2.95	.90	.01	.06	-.12***	.17***	.23***	.57***		
8. Relational-cognitive embeddedness (RCE$_{Bo}$)	4.11	.49	.03	.03	-.00	.54***	.24***	.27***	.10**	
9. Relational-cognitive embeddedness (RCE$_{Br}$)	3.49	.49	.04	-.04	-.00	.18***	.42***	.05	.14***	.40***

***$p \leq .001$, **$p \leq .01$, *$p \leq .05$; two-tailed tests.

The 20 observed variables were subjected to a confirmatory factor analysis, and this step was carried out separately for bonding and bridging relationships (10 observed variables in each). The confirmatory factor analysis was carried out with an oblique rotation of direct oblimin in order to permit partial correlation between factors. This rotation method was chosen, since the underlying theory implies linkages between the expected independent and dependent latent variables, and the Cronbach's alphas confirm the unidimensionality of scale scores (see Appendix 2). The values for the Cronbach's alphas range from 0.64 to 0.80 and they are within acceptable limits (Hair, Anderson, Tatham & Black, 1995). Based on these results, summated scales were formed by averaging the added scores of the separate measures for each latent variable (Hair et al., 1995). These new summated scales or factor scores were then used for the six latent variables when carrying out multiple regression analyses based on ordinary least squares (OLS).

In order to test the hypotheses, multiple regression analyses were carried out separately for bonding and bridging relationships. Tables 2 and 3, respectively, present the results of these analyses. The first column in each of the main four models presents the base model with the control variables (age, tenure, and nationality), and the partial and full models include the relevant standardised beta coefficients for the linear predictors. Variables in each column were entered simultaneously. The VIF-statistics and tolerance values of the variables were examined to detect potential multicollinearity. None of the VIF-statistics were significantly greater than 1, and the tolerance values were well above 0.2; therefore, multicollinearity should not cause problems in the regression analyses (Field, 2000).

BONDING RELATIONSHIPS

Table 2 presents the results of two models that test the hypotheses in the bonding context. In Model 1, the dependent variable is relational-cognitive embeddedness (RCE$_{Bo}$), and hypothesis 1a receives support. The results show that the control

variables have no significance either in the base or the full model, but communication intensity (CI_{Bo}) has a significant impact on RCE_{Bo} ($b = .28$, $p \leq 0.001$). However, although the relationship is statistically highly significant, the practical significance is a little low (Adj. $R^2 = 0.07$).

In Model 2, the dependent variable is knowledge sharing (KS_{Bo}), and hypotheses 2a and 3a are confirmed. In the base model, nationality and age are significant control variables, indicating that not being a national of the MNC's home country has a negative effect on the level of KS_{Bo} ($b = -.10$, $p \leq 0.01$), while age has a slight positive effect ($b = .07$, $p \leq 0.10$). In the partial model, CI_{Bo} is added to the control variables; then in the full model, RCE_{Bo} is added to the variables that were present in the partial model. This was done in order to verify whether CI_{Bo} has a direct impact on knowledge sharing, or only a mediating effect through RCE_{Bo}. The results show that communication intensity has both a direct effect and a mediated effect on knowledge sharing because although the direct effect in the partial model is greater ($b = .37$, $p \leq 0.001$), the mediated effect in the full model is still highly significant ($b = .24$, $p \leq 0.001$). Furthermore, given that the standardised equation allows us to compare the coefficients without having to take into account the original units of measurement (Field, 2000), the full model shows us that RCE_{Bo} has almost twice as big an impact on KS_{Bo} when compared with CI_{Bo}. Therefore, we know that if RCE_{Bo} is increased by one standardized unit, KS_{Bo} will increase by 0.47 units, whereas an increase of one standardised unit of CI_{Bo} will increase KS_{Bo} by 0.24 units. However, given the mediated effect of CI_{Bo} on KS_{Bo} through RCE_{Bo}, we can conclude that the real difference is not as great since CI_{Bo} has both a direct and a mediated effect.

TABLE 2: Regression Models for Bonding Relationships, Total Sample ($N = 749$)

Variable	MODEL 1 [a]: Hypothesis 1a		MODEL 2 [b]: Hypotheses 2a and 3a		
	Base	Full	Base	Partial	Full
Intercept	4.03***	3.36***	4.05***	3.03***	1.23***
Age	.02	.02	.07†	.07*	.07*
Tenure	.03	.01	-.03	-.05	-.05
Nationality	.01	.03	-.10**	-.07*	-.09**
Communication Intensity (CI_{Bo})		.28***		.37***	.24***
Relational-Cognitive Embeddedness (RCE_{Bo})					.47***
Model fit					
Number of observations	749	749	749	749	749
Adjusted R Square	.00	.07	.01	.15	.35
F	.31	15.41***	3.08*	31.96***	81.56***
Degrees of freedom (regression, residual)	3, 745	4, 744	3, 745	4, 744	5, 743

a. Dependent variable: Relational-cognitive embeddedness (RCE_{Bo})
b. Dependent variable: Knowledge sharing (KS_{Bo})
Coefficients are standardised beta weights.
*** $p \leq .001$, ** $p \leq .01$, * $p \leq .05$, † $\leq .10$; two-tailed tests.

Finally, in terms of the role of the control variables in the full model, nationality has a negative effect ($b = -.09$, $p \leq 0.01$), implying that people who are not nationals of the

company's home country have a very slightly lower level of knowledge sharing in their bonding relationships; age has a positive effect ($b = .07$, $p \leq 0.05$). It is interesting to note that tenure is statistically non-significant in both Models 1 and 2, and that the correlation between age and tenure is unusually low in Table 1 ($r = .26$, $p \leq 0.001$).

BRIDGING RELATIONSHIPS

Table 3 presents the results of two models that test the hypotheses in the bridging context. In Model 3, the dependent variable is relational-cognitive embeddedness (RCE_{Br}), and hypothesis 1b receives support. The results show that age is the only slightly significant control variable in the base model ($b = .06$, $p \leq 0.10$), while tenure is the only significant control variable in the full model ($b = -.07$, $p \leq 0.10$). This implies that people with a shorter tenure have higher levels of RCE_{Br}, which is the opposite of what one would expect. Then, in terms of hypothesis 1b, the results show that communication intensity (CI_{Br}) has a significant impact on RCE_{Br} ($b = .15$, $p \leq 0.001$). However, although the relationship is statistically highly significant, the practical significance is low (Adj. $R^2 = 0.02$).

In Model 4, the dependent variable is knowledge sharing (KS_{Br}), and hypotheses 2b and 3b are confirmed. In all of the various stages, nationality is the only significant control variable ($b = -.12$ to -0.8, $p \leq 0.05$), indicating that employees who are not nationals of the company's home country have lower levels of KS_{Br}. In the partial model, CI_{Br} is added to the control variables; then in the full model, RCE_{Br} is added to the variables that were present in the partial model. This was done again in order to verify whether CI_{Br} has a direct impact on knowledge sharing, or only a mediating effect through RCE_{Br}. The results show that communication intensity has both a direct and a mediated effect on knowledge sharing because although the direct effect in the partial model is greater ($b = .22$, $p \leq 0.001$), the mediated effect in the full model is still highly significant ($b = .16$, $p \leq 0.001$). Furthermore, similarly to the findings of knowledge sharing in bonding relationships, the full model shows us that RCE_{Br} has more than twice as big an impact on KS_{Br} when compared with CI_{Br}. Therefore, we know that if RCE_{Br} is increased by one standardized unit, KS_{Br} will increase by 0.39 units, whereas an increase of one standardised unit of CI_{Br} will increase KS_{Br} by 0.16 units. However, we again have to remember the effect of CI_{Br} on RCE_{Br}, and take that into account when assessing the full impact of CI_{Br} and RCE_{Br} on KS_{Br}.

Finally, if we examine the overall model fit statistics, we can see that the Adjusted R Square statistic and F-statistic are almost twice as high in Model 2 when compared with Model 4. This means that bonding social capital, i.e. communication intensity and relational-cognitive embeddedness, can explain 0.35 of the overall variance of knowledge sharing in bonding relationships (KS_{Bo}), while bridging social capital can explain 0.20 of the overall variance of knowledge sharing in bridging relationships (KS_{Br}).

TABLE 3: Regression Models for Bridging Relationships, Total Sample (*N* = 749)

Variable	MODEL 3 [a]: Hypothesis 1b		MODEL 4 [b]: Hypotheses 2b and 3b		
	Base	Full	Base	Partial	Full
Intercept	3.37***	3.13***	3.74***	3.34***	1.95***
Age	.06†	.06	.06	.06	.03
Tenure	-.07	-.07†	-.04	-.04	-.01
Nationality	-.03	-.02	-.12*	-.09*	-.08*
Communication Intensity (CI_{Br})		.15***		.22***	.16***
Relational-Cognitive Embeddedness (RCE_{Br})					.39***
Model fit					
Number of observations	749	749	749	749	749
Adjusted R Square	.00	.02	.01	.06	.20
F	1.35	5.03***	3.15*	12.00***	39.22***
Degrees of freedom (regression, residual)	3, 745	4, 744	3, 745	4, 744	5, 743

a. Dependent variable: Relational-cognitive embeddedness (RCE_{Br})
b. Dependent variable: Knowledge sharing (KS_{Br})
Coefficients are standardised beta weights.
*** $p \le .001$, ** $p \le .01$, * $p \le .05$, † $\le .10$; two-tailed tests.

DISCUSSION AND CONCLUSIONS

This paper has argued that the role played by communication is strategic because it enhances the creation and maintenance of social capital and supports knowledge sharing in a critical manner. The reason communication was studied in relation to these two constructs is because social capital has been shown to enhance knowledge sharing (e.g., Tsai & Ghoshal, 1998); and effective knowledge sharing internally is argued to be a key component of competitive advantage (e.g., Kogut & Zander, 1993). Furthermore, if we accept the previous argument, then it may also be suggested that communication is a critical component of competitive advantage. To gain a better understanding of what role social capital, through communication intensity and relational-cognitive embeddedness, plays in enabling knowledge sharing, knowledge sharing was explored in the context of bonding and bridging relationships.

MAIN FINDINGS

The results showed that communication intensity and relational-cognitive embeddedness were significant factors for the enhancement of knowledge sharing in both bonding and bridging relationships. Furthermore, within the same context, communication intensity was shown to positively influence relational-cognitive embeddedness. Therefore, this empirical research has given support to all six proposed hypotheses. Consequently, this study has extended the discussion on social capital and knowledge sharing by showing that communication has a critical role to play, and that the frequency of communication is, in fact, a very significant enabler or predictor of

knowledge sharing. Although these results need to be explored further, they highlight some important issues for the MNC.

The findings show that while both studied dimensions of social capital indeed enhance knowledge sharing within bonding and bridging relationships, the relative direct influence of relational-cognitive embeddedness is larger than the influence of communication intensity – although communication intensity also influences relational-cognitive embeddedness, and hence has both a direct and indirect influence on knowledge sharing. What this implies, is that communication is a critical factor of interpersonal knowledge sharing, and relationships characterized by the existence of trust and common cognitive ground (Nonaka & Takeuchi, 1995) are crucial for the understanding of effective knowledge sharing.

One way common cognitive ground enables the sharing of knowledge is by giving people a shared language or a way of communicating, which allows them to interact without too many misunderstandings and gives them access to each other's thought-worlds (Abrams et al., 2003; Leana & van Buren, 1999; Nahapiet & Ghoshal, 1998; Nonaka & Takeuchi, 1995). If people do not have this type of a shared code or language, it means that misunderstanding will occur all the time due to the frames or filters of interpretation being completely different, i.e. common cognitive ground is lacking. Other areas of common cognitive ground explored in this paper included shared values and goals. In terms of shared values and goals, one explanation for their inclusion and role is that if one seeks advice or insight to a business problem, the person giving that advice needs to have the same approach to doing business (shared values) and understand the context and goals. Therefore, if the two people share common values and goals, they may be able to relate to each other better and hence be able to give more appropriate advice than someone who has a completely different agenda. It, therefore, follows that in order to share knowledge effectively, one needs to have common cognitive ground based on shared codes, values, and goals. On the other hand, the finding that trust contributes to knowledge sharing is not surprising because whether one seeks explicit or tacit knowledge, its role in terms of the integrity, reliability and closeness of the relationship is critical. If such trust is lacking, then the manager seeking information or advice, would perhaps choose to approach someone they knew would deliver the agreed information on time (reliability), or not take advantage of the contents of a confidential discussion (integrity). Furthermore, if one can trust a colleague and the two have common cognitive ground, then that may well be the critical factor for connectivity in today's globalising business world. Given that many managers are in constant interaction with people from different backgrounds, relational-cognitive embeddedness in the shape of trust and common cognitive ground may reflect those values that previously used to be represented by a shared location, function, and/or nationality.

Although the previous paragraph has highlighted the crucial role of trust and common cognitive ground, this study has also confirmed the critical role of communication within multinational corporations. Communication intensity was shown to increase relational cognitive-embeddedness and also knowledge sharing. This result is very important because while previous research in the field of communication has highlighted the important role of communication within organisations (Argenti & Forman, 2002; Oliver, 1997; Tourish & Hargie, 2004), developed communication audits that measure communication satisfaction (Downs, 1988; Hargie & Tourish, 2000), little

of that research has explored the specific impact of communication on knowledge sharing. This study has hence tried to bridge the gap between studies focused on exploring social interaction in relation to knowledge sharing in the field of international business (e.g., Hansen, 1999, 2002; Nahapiet & Ghoshal, 1998; Tsai & Ghoshal, 1998) and the relevant research conducted in the field of communication (e.g., MCQ, 2002, 16(2); Monge & Contractor, 2003). The term social interaction has been "translated" to communication intensity in order for it to be more suitable for the audience of communication researchers, and also in order to highlight to managers that communication has a critical function in enhancing knowledge sharing and, indirectly, competitive advantage.

LIMITATIONS AND FUTURE RESEARCH

No single piece of research can ever be perfect or address all of the relevant questions. Therefore, certain limitations and areas of future research will now be highlighted. First, communication intensity influences relational-cognitive embeddedness, but its role is perhaps less significant than one may have expected. While communication intensity comes out as statistically significant for relational-cognitive embeddedness in bonding and bridging relationships, its practical significance remains low. One reason for this could be the operationalisation of communication intensity, which was primarily focused on knowledge sharing rather than communication that builds or enhances new and existing relationships. However, gaining further understanding about this issue would be valuable, especially if such research would be able to highlight whether, for example, certain types of communication activities are more likely to increase relational-cognitive embeddedness than others.

Second, the results indicate that communication intensity and relational-cognitive embeddedness explain a larger percentage of the variance of knowledge sharing in bonding than in bridging relationships. The same was true for communication intensity as an indicator of relational-cognitive embeddedness in bonding versus bridging relationships. Therefore, it would be useful to understand better why these variables may have a larger influence within the bonding rather than the bridging context. Furthermore, an understanding of other group differences based on certain background variables would be beneficial. For example, the composition of one's workgroup in terms of nationality, function, and location; and whether people based on different sites or working in different functions behave differently. This would help to further our understanding about connectivity within MNCs (Mäkelä, 2006).

Third, it is perhaps interesting to examine the role of the control variables in this study. There are two interesting issues, which may benefit from additional research. The first one is the relationship between age and tenure, and their impact on knowledge sharing and relational-cognitive embeddedness. Although the correlation between the two variables was highly significant, their influence on knowledge sharing appears to be quite independent. Age played a significant role in bonding but not in bridging relationships, while tenure played no significant role in either relationship – neither variable had a highly significant impact on relational-cognitive embeddedness. One may have expected tenure to play a more critical role in the formation of social networks, and hence on knowledge sharing, but there is no such evidence based on this

data. The second interesting issue is the role played by nationality. Nationality had no significant influence on relational-cognitive embeddedness but it did have a consistently negative impact on knowledge sharing in bonding and bridging relationships. This is interesting because it indicates that employees who were nationals of the MNC's home country appeared to be more effective at knowledge sharing. This result needs further investigation as here nationality was only a control variable, but if indeed it is accurate, it could imply that home country nationals have a better idea of who knows what and how to access those people at an earlier time (Burt, 1992, 1997; Cross et al., 2001).

Fourth, given that the empirical data is from a questionnaire survey, something must be said about the limitations of survey data. The use of single respondents means that the data was essentially based on perceptual data. Several steps were taken to ensure that the respondents provided reliable answers to the questionnaire in order to minimise potential bias in the data (DeVellis, 2003; Fowler, 2002). While many of the key constructs required the use of perceptual measures, mainly because objective proxies do not exist, this is a common challenge when concepts are derived from emerging theories (see e.g. Spender & Grant, 1996 for a discussion on knowledge). To address this issue, previously used measures were used wherever possible.

Finally, the fact that this study focused on a single multinational corporation may be seen as a limitation. However, the ability to gain access to the relatively sensitive nature of the collected information is rare, and hence the insight from this global market leader in terms of their internal communication, social capital, and knowledge sharing patterns is very valuable for enhancing our understanding. Although this particular organisation was quite flat hierarchically, it should be emphasised that the issues raised in this paper may be equally relevant for all complex organisations. However, the validation of these results in other organisational settings would be advantageous and would give additional support to these research findings.

MANAGERIAL IMPLICATIONS

To conclude, the wider implication for managers and communication professionals is that an atmosphere of common cognitive ground and trust needs to be fostered and frequent communication among employees enabled – although the latter naturally within reason, since information overload is not beneficial, nor is it necessary for everyone to talk to everyone else (Evans, 1992). What these results, therefore, highlight is that interpersonal knowledge sharing is greatly influenced by social capital, and hence managers and organisations ought to pay greater attention to the social process taking place, not just focusing on technical enablers for knowledge management. This study has alluded to some interesting differences that can be observed when human behaviour in bonding and bridging relationships is studied. For example, managers tended to turn to their close colleagues more frequently for all types of knowledge, hence highlighting the important role of bonding relationships for interpersonal knowledge sharing (Newell et al., 2004; Reagans & McEvily, 2003). Therefore, managers and communication professionals should perhaps consider tailoring their messages differently for different target audiences, and utilising those relational or cognitive aspects which are important for that target audience in order to achieve more effective knowledge sharing.

The goal of this paper was to explore the role of communication in interpersonal knowledge sharing, and the results have clearly shown that the role of communication is critical. Therefore, these results will hopefully promote further research in the area, and also challenge researchers, managers, and communication professionals to view knowledge sharing from a slightly different perspective.

NOTES

1. The terms of strong ties and bonding relationships, and later weak ties and bridging relationships, are closely related and hence used somewhat interchangeably in this description. See Burt (2000) and Gabbay & Leenders (2001b) for a more thorough discussion on the nuances that exist between them.

2. The first pilot survey included the statements in a two-directional format but only one of the two measures was included in the final survey format. The reasons for that included a very high correlation (close to 1) between the two measures, concerns over the length of the survey, and the usefulness of shared (rather than received) knowledge given that it would only have been the respondent's perception of his/her colleagues' experience (see Reagans & McEvily, 2003 for further discussion on unidirectionality of knowledge sharing).

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APPENDIX 1

OPERATIONALISATION OF CONSTRUCTS

Latent Variable	Observed Variable[a]	Statement	Source
Bonding Relationships			
Communication Intensity (CI_{Bo})	Frequency (explicit knowledge)	I turn to my close group of colleagues for work-related facts or information.	Hansen, 1999, 2002; Kostova & Roth, 2003
	Frequency (tacit knowledge)	I turn to my close group of colleagues for advice or insight to work-related problems.	Hansen, 1999, 2002; Kostova & Roth, 2003
Relational-Cognitive Embeddedness (RCE_{Bo})	Closeness	I have a close working relationship with my close group of colleagues.	Hansen, 1999
	Integrity	I can rely on my close group of colleagues without fear of them taking advantage of me, even if the opportunity arises.	Tsai & Ghoshal, 1998
	Reliability	I trust my close group of colleagues to always keep the promises they make.	Tsai & Ghoshal, 1998
	Shared values	I feel that my close group of colleagues and I share the same values.	Nahapiet & Ghoshal, 1998
	Shared codes	The way my close group of colleagues and I communicate makes it easy for us to understand each other and work together.	Nahapiet & Ghoshal, 1998
	Shared goals	My close group of colleagues and I have common goals at work.	Tsai & Ghoshal, 1998
Knowledge Sharing (KS_{Bo})	Usefulness (explicit knowledge)	I receive useful work-related facts or information from my close group of colleagues.	Hansen, 1999, 2002
	Usefulness (tacit knowledge)	I receive useful advice or insight to work-related problems from my close group of colleagues.	Hansen, 1999, 2002
Bridging Relationships			
Communication Intensity (CI_{Br})	Frequency (explicit knowledge)	I turn to my other contacts for work-related facts or information.	Hansen, 1999, 2002; Kostova & Roth, 2003
	Frequency (tacit knowledge)	I turn to my other contacts for advice or insight to work-related problems.	Hansen, 1999, 2002; Kostova & Roth, 2003
Relational-Cognitive Embeddedness (RCE_{Br})	Closeness	I have a close working relationship with my other contacts.	Hansen, 1999
	Integrity	I can rely on my other contacts without fear of them taking advantage of me, even if the opportunity arises.	Tsai & Ghoshal, 1998
	Reliability	I trust my other contacts to always keep the promises they make.	Tsai & Ghoshal, 1998
	Shared values	I feel that my other contacts and I share the same values.	Nahapiet & Ghoshal, 1998
	Shared codes	The way my other contacts and I communicate makes it easy for us to understand each other and work together.	Nahapiet & Ghoshal, 1998
	Shared goals	My other contacts and I have common goals at work.	Tsai & Ghoshal, 1998
Knowledge Sharing (KS_{Br})	Usefulness (explicit knowledge)	I receive useful work-related facts or information from my other contacts.	Hansen, 1999, 2002
	Usefulness (tacit knowledge)	I receive useful advice or insight to work-related problems from my other contacts.	Hansen, 1999, 2002

a. All measured on a 5-point scale

APPENDIX 2

DESCRIPTIVE STATISTICS AND FACTOR LOADINGS OF OBSERVED VARIABLES (*N* = 749)

Latent Variable	Observed Variable	Mean	SD	Factor Loadings[a]			Communality	α[b]
Bonding Relationships				**F1**	**F2**	**F3**		
Communication Intensity (CI$_{Bo}$)	Frequency (explicit knowledge)	4.42	.81		.87		.79	.73
	Frequency (tacit knowledge)	3.71	1.00		.84		.76	
Relational-Cognitive Embeddedness (RCE$_{Bo}$)	Closeness	4.27	.66	.70			.51	.80
	Integrity	4.15	.75	.65			.52	
	Reliability	4.01	.68	.73			.58	
	Shared values	3.95	.71	.69			.51	
	Shared codes	4.10	.61	.73			.51	
	Shared goals	4.21	.72	.67			.51	
Knowledge Sharing (KS$_{Bo}$)	Usefulness (explicit knowledge)	4.32	.63			-.68	.65	.64
	Usefulness (tacit knowledge)	4.13	.66			-.88	.79	
	Eigenvalues			3.89	1.43	.80[c]		
	Variance explained			.39	.14	.08		
Bridging Relationships				**F1**	**F2**	**F3**		
Communication Intensity (CI$_{Br}$)	Frequency (explicit knowledge)	3.24	.97		.90		.81	.79
	Frequency (tacit knowledge)	2.66	1.02		.87		.78	
Relational-Cognitive Embeddedness (RCE$_{Br}$)	Closeness	3.50	.70	.65			.50	.74
	Integrity	3.58	.78	.71			.49	
	Reliability	3.46	.73	.70			.53	
	Shared values	3.53	.70	.67			.50	
	Shared codes	3.54	.72	.65			.49	
	Shared goals	3.35	.85	.53			.35	
Knowledge Sharing (KS$_{Br}$)	Usefulness (explicit knowledge)	3.96	.64			-.82	.72	.66
	Usefulness (tacit knowledge)	3.74	.66			-.83	.73	
	Eigenvalues			3.18	1.64	1.03		
	Variance explained			.32	.16	.10		

a. Rotation method is direct oblimin, and only loadings > .4 are listed.
b. Cronbach's alphas.
c. Inclusion of the eigenvalue < 1 was confirmed by a scree plot.

ESSAY 3

DIVERSITY IN THE MNC CONTEXT:

THE IMPACT OF FUNCTIONAL, GEOGRAPHIC, AND NATIONALITY DIVERSITIES ON THE FREQUENCY OF COMMUNICATION

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DIVERSITY IN THE MNC CONTEXT:

THE IMPACT OF FUNCTIONAL, GEOGRAPHIC, AND NATIONALITY DIVERSITIES ON THE FREQUENCY OF COMMUNICATION

Prior research on diversity and internal communications has been limited with findings yielding mixed results. However, given that the geographically scattered and multi-contextual nature of the multinational corporation (MNC) is a particularly challenging environment for knowledge sharing, the roles of internal communications and diversity are highlighted. Furthermore, the context of the MNC is quite unique when compared to the nature of work and relationships in other organisational environments, and warrants further research. This paper examines three forms of diversity deemed important for the functioning of the MNC, namely functional, geographic and nationality diversities, to assess what impact they have on intra-workgroup and inter-workgroup communication frequencies. Data was collected through a questionnaire survey from a leading telecoms MNC (n=749). The results show that diversity did not significantly influence the frequency of interpersonal communication in the intra-workgroup context. However, in the inter-workgroup context, diversity had a significant and positive effect on interpersonal communication frequencies. Functional diversity had the most significant role, which may be attributed to its informational diversity qualities. The theoretical and practical implications of these results are discussed and future research areas highlighted.

Keywords: *Internal communications, communication frequency, diversity, functional diversity, geographic diversity, nationality diversity, MNC.*

Multinational corporations (MNCs) function in an environment characterised by different geographical regions and national cultures in terms of the workforce, operations, markets, and customers (Bartlett & Ghoshal, 1989; Doz, Santos & Williamson, 2001; Nohria & Ghoshal, 1997; Westney, 2001). Therefore, by its very nature of dispersed assets and resources as well as global roles and responsibilities, the MNC creates diversity and internal interdependencies. Such interdependencies or linkages highlight the increasingly important role played by internal communications in most MNCs (Ghoshal, Korine & Szulanski, 1994). However, internal communications may be complicated by the fact that the multinational corporation is typically characterised by functional, geographic, and nationality diversities. Therefore, the context of the MNC is quite unique when compared to the nature of work and relationships in other organisational environments, and warrants further research. However, while diversity research has attracted increasing attention in recent years (Ancona & Caldwell, 1992; Cummings, 2004; Fine, 1996; Jehn, Northcraft & Neale, 1999; Milliken & Martins, 1996; Pelled, Eisenhardt & Xin, 1999; Smith et al., 1994; Williams & O'Reilly, 1998), it has not been studied in depth in relation to internal communications. Furthermore, relatively little business communication research has focused on the MNC (Charles & Marschan-Piekkari, 2002; Du-Babcock & Babcock, 1996; Marschan, 1996; Tucker et al., 1996), and given that much of today's business takes place in that setting, it is important to explore that context specifically. Thus, we need to try to combine the two phenomena in order to better understand how diversity influences employee communication at the interpersonal level within multinationals.

Diversity focuses on both observable and underlying attributes; observable attributes include nationality, race/ethnicity, age, and gender, while underlying attributes comprise of values, skills, knowledge, and cohort membership (Milliken & Martins, 1996).

Traditionally, diversity research in the field of communication has largely been approached from a cultural/ethnicity perspective (e.g., Fine, 1996; Grimes, 2002; Grimes & Richard, 2003; Muir, 1996), however this paper argues that also other forms of diversity are critical for the MNC. Furthermore, previous diversity studies have tended to focus on group processes (including communication), performance, or at times both. This paper, however, is particularly interested in interpersonal communication, and what impact different forms of diversity have on intra-workgroup and inter-workgroup communication frequencies. It is important to study workgroups because organisations dependent on the efficient functioning of groups as Jehn et al. (1999, p. 741) highlight: "[t]he resulting flatter, more decentralized organizational forms tend to be built around groups and depend on rich synchronous communication provided by teams and task forces." Therefore, in order to assess whether diversity enhances or hinders internal connectivity, this paper will focus on examining the impact of workgroup diversity on the frequency of interpersonal communications.

DIVERSITY AND ITS IMPACT ON COMMUNICATION

Previous research in the field of communication has addressed the relationship between diversity and communication, but not to a sufficient degree. A special issue of the Journal of Business Communication (1996, 33(4)) introduced a variety of perspectives on workplace diversity and its links to business/managerial communication. However, the discussions tended to centre around the management of diversity and increasing awareness of and sensitivity to differences among the workforce, using such vehicles as advisory panels (Hermon, 1996), mentoring (Egan, 1996; Wanguri, 1996), and approaches promoting readiness (Muir, 1996) and openness (Wanguri, 1996). Later business communication articles have focused on diversity in terms of power struggles and different organisational voices (Grimes & Richard, 2003; Kirby & Harter, 2003), and also examined the role of shared language in horizontal communication (Charles & Marschan-Piekkari, 2002). Therefore, although such research provides interesting and important insights, it does not sufficiently address the need to understand what direct implications diversity forms central to the MNC have on managerial communication patterns or frequencies. Consequently, to better understand whether groups composed of different degrees of diversity have similar or different communication patterns, this section examines the concepts of diversity and homophily. These concepts are explored in the light of three theories, followed by a discussion on the content and context of the communication studied here.

DIVERSITY AND HOMOPHILY – TWO SIDES OF THE SAME COIN

Williams & O'Reilly (1998) conduct an extensive review of research carried out in the area of demography and diversity in organisations spanning over four decades, and conclude that there are three primary theories underlying organisational diversity research: social categorization, similarity/attraction, and information/decision making. The first two theories focus mainly on diversity defined in terms of demographic attributes (e.g., gender, race, or age) and personal attributes (e.g., status, expertise, or style); while the information/decision making theory usually examines the variation in

the levels of expertise or information. Therefore, how diversity is defined depends largely on the context and the underlying theory. However, Jackson, Stone & Alvarez (1993, p. 53) give a general definition, according to which diversity refers to "situations in which the actors of interest are not alike with respect to some attribute(s)." The concept of homophily, on the other hand, refers to a "tendency to associate with people 'like' yourself" (Watts, 1999, p. 13); and most of the homophily related research is based on the similarity/attraction and social categorization theories. Consequently, diversity and homophily can really be viewed as two sides of the same coin, which may give complementary views to the same research phenomenon.

This paper will be largely based on the theories of similarity/attraction and information/decision making; however, research related to the social categorization theory is also referred to when necessary. Therefore, a brief description of each theory is now provided, and their links to communication highlighted (for a more comprehensive review and an integrated model, please see Williams & O'Reilly, 1998).

Social categorization. Social categorization theory argues that variations in the workgroup's demographic composition affect group process, of which communication is an example; and that process then in turn impacts performance. Studies based on this theory have typically concluded that diversity has a negative effect on group process and performance (Williams & O'Reilly, 1998). For example, Brass (1995, p.51) suggests that "similarity is thought to ease communication, increase predictability of behaviour, and foster trust and reciprocity." However, Jehn et al. (1999) show that diversity related to values, rather than to a social category, causes the greatest problems for group performance and morale.

Similarity/attraction. The similarity/attraction theory rests on the assumption that the similarity of attributes (which may be based on demographic or personal factors) increases interpersonal attraction and liking. To understand the background to this discussion better, we can turn to Carley's (1991) seminal work, which suggests that individual characteristics influence the formation of groups through relative similarity between individuals leading to interaction and often to the selection of interaction partners. The similarity/attraction theory is embedded in the principle of homophily, which leads to the supposition that people have a tendency to interact with similar others and that such similarity breads connection (McPherson, Smith-Lovin & Cook., 2001). More specifically, McPherson et al. (2001, p. 415) state that "[h]omophily limits people's social worlds in a way that has powerful implications for the information they receive, the attitudes they form, and the interactions they experience". Not surprisingly, the results from this stream of research confirm the negative influence of diversity on communication and performance (Williams & O'Reilly, 1998). For example, Mäkelä, Kalla & Piekkari (2006) show that similarity based on national-cultural background, organizational status and shared language increases the tendency for interaction.

Information/decision making. The information/decision making theory explores how information and decision making are affected by the heterogeneity of the group composition. This approach differs from the previous two streams by assessing the information benefits that can be achieved from diverse connections. More specifically, Williams & O'Reilly (1998, p. 86) argue that "given that there is propensity for individuals to communicate more with similar others, individuals in diverse groups may have greater access to informational networks outside their work group. This added

information may enhance group performance even as the diversity has negative impacts on group process." In support of this argument are the findings of Cummings (2004), who gives evidence of diversity, rather than similarity, enhancing inter-workgroup knowledge sharing and performance. Similarly, Ancona & Caldwell (1992) find that the greater the functional diversity, the more communication outside team boundaries takes place. Therefore, this perspective argues for the additional value diversity brings through new information. Consequently, although similarity may ease and enhance connectivity, similarity may also diminish information benefits due to failure to access and use the potentially wide range of available information (Williams & O'Reilly, 1998).

TWO DIFFERENT COMMUNICATION CONTEXTS

Communication has many roles to perform (Monge & Contractor, 2003), and it is vital in organisational life, when most employees have tasks to perform where others are involved. Furthermore, beyond the needs of the individuals, communication has been shown to enhance internal knowledge sharing (Ghoshal & Bartlett, 1988; Ghoshal et al., 1994). More specifically, Cross & Prusak (2003, p. 468) draw our attention to an interesting point, which is that "knowledge does not simply flow through an organization but is bartered, blocked, exchanged, and modified." Therefore, when applied to the MNC context, the implication is that the geographically scattered and multi-contextual nature of the MNC is a particularly challenging environment for knowledge sharing (Bartlett & Ghoshal, 1989; Nohria & Ghoshal, 1997; Doz et al., 2001). Consequently, the roles of internal communications and diversity in people's networks are highlighted.

This paper adopts an integrated view to internal communications, meaning that internal communications is seen to incorporate all formal and informal communications taking place internally at all levels of an organisation (Kalla, 2005). This means that the focus here is not to explore the differences between formal and informal communications, but instead to examine the volume or frequency of all work-related intra-workgroup and inter-workgroup communications. Frequency of communication gives a good platform for research, given Allen's (1984) findings that high performing individuals, when compared with those who were less successful, communicated more frequently with their team members and especially with other colleagues (frequency as a measure of communication has also been used by Hansen, 1999, 2002; Kostova & Roth, 2003).

Communication is essentially interaction through messages (Fiske, 1990), and this study is particularly interested in interaction relating to work-related messages. Communication is here limited to work-related messages because the goal is to understand how diversity specifically impacts such communication. Cummings (2004) further argues that demographic diversity brings additional value to a group only when it exposes members to unique sources of information related to their work. Therefore, purely social interactions relating to e.g., social activities outside the office are not included, although it is recognised that such interaction often enhances work-related communication. It is also important to note that the level of analysis is the interpersonal level, i.e. interpersonal communication between MNC employees, and not between business units or the corporate communications function and the rest of the

organisation. This relates directly back to integrated internal communications, for which a definition was given at the beginning of this section. Furthermore, this particular focus is adopted because communication between employees is essential for the effective functioning of any large multinational corporation or complex organisation, and hence warrants further study.

Interpersonal communication can be studied from many perspectives with a focus on a specific task or context. This study does not specify the type of task but does include both communication related to explicit and tacit knowledge. Communication related to explicit knowledge refers to work-related facts or information employees seek, while communication related to tacit knowledge refers to advice or insight to work-related problems (Hansen, 1999, 2002). It should also be noted that the medium of communication was not a focus of this study; hence both face-to-face and electronic communications were included.

In terms of the context, given the evidence of the somewhat contradictory benefits of diversity on the functioning of organisations, diversity will be examined in the context of two types of relationships among MNC colleagues. These two relationship contexts are contacts with one's workgroup (intra-workgroup) and contacts outside that workgroup (inter-workgroup). Intra-workgroup communication refers to the colleagues with whom one interacts most regularly and who form a team. This relates to the concepts of bonding relationships and strong ties, which refer to cohesive and frequently occurring ties that exist amongst individuals belonging to a group (Granovetter, 1973; Hansen, 1999). In the MNC context this may refer to a team working in a specific functional discipline or a task group consisting of people from different backgrounds. Inter-workgroup communication, on the other hand, refers to interactions with colleagues who are not members of that immediate team but serve as links to other teams. The concept of the inter-workgroup context relates to the work on bridging relationships and weak ties, which refer to relationships bridging an information gap and consisting of more distant and infrequent relationships (Granovetter, 1973; Hansen, 1999).

Most of the previous research has tended to focus solely on the intra-workgroup context (Jehn et al., 1999; Pelled et al., 1999; Smith et al., 1994), while only a few studies have attempted to study the intra-workgroup and inter-workgroup contexts simultaneously (Ancona & Caldwell, 1992; Cummings, 2004). This paper hence incorporates both contexts, and unlike Ancona & Caldwell (1992) also focuses on the same dimensions in both contexts in order to understand the phenomenon more comprehensively. It should also be clarified here that both intra-workgroup and inter-workgroup communication are here considered important parts of internal communications of the organisation

THREE FORMS OF DIVERSITY WITHIN THE MNC

As the previous section's brief review of diversity literature highlights, diversity has been studied in many contexts, through different theoretical frameworks, and with a focus on different attributes of dissimilarity. However, the focus of this paper is to explore three forms of diversity, which are here labelled functional, geographic, and nationality diversities (Cummings, 2004; Mäkelä et al., 2006). Furthermore, these

forms of diversity are studied in the setting of the multinational corporation, and the focus is to understand their impact on internal communication frequencies. As the following sub-sections explore the three forms of diversity, specific hypotheses are proposed at the same time. As mentioned earlier, this paper mostly draws on the similarity/attraction and information/decision making theories. The former will be used to explain the potentially negative role of diversity in the interactions with one's workgroup, while the latter will be applied to explain the benefits of diversity in interactions between workgroups.

FUNCTIONAL DIVERSITY

Functional diversity refers to the differences in people's functional backgrounds, which include research and development (R&D), marketing, sales, finance, communications, and human resources among many others. This form of diversity is an example of skills or knowledge diversity, and out of the three diversity forms examined in this paper, this is the most researched area. The strategies of most organisations today require more interaction among employees of different functional backgrounds, which has heightened our interest in research concerning functional diversity (Ancona & Caldwell, 1992; Cummings, 2004; Griffin & Hauser, 1992; Pelled et al., 1999; Pinto, Pinto & Prescott, 1993; Smith et al., 1994; Van den Bulte & Moenaert, 1998). On the one hand, Cummings (2004) summarises previous research as highlighting that functional similarity can enhance many forms of operations from quicker completion times to easier integration of knowledge. On the other hand, cross-functional teams have direct access to expertise outside their own functional areas, which may lead to decisions of higher quality; also, product transfer and cross-functional knowledge sharing may be facilitated (Ancona & Caldwell, 1992; Cummings, 2004). However, while diverse groups may make better decisions, the functioning of those groups is often more complicated with miscommunication taking place more frequently than amongst homogeneous groups (Wiersema & Bantel, 1992; Williams & O'Reilly, 1998).

Ancona & Caldwell (1992) show that functional diversity has no statistically significant impact on the group's internal process, and Smith et al. (1994) conclude that functional diversity has no effect on either internal social integration or communication. However, we can also take it a step further and propose that since dissimilarity lessens interpersonal attraction (Williams & O'Reilly, 1998), functionally diverse groups will communicate less frequently than functionally homogeneous groups. Therefore, the following hypothesis is put forward.

> *Hypothesis 1a:* The level of intra-workgroup functional diversity negatively influences the frequency of intra-workgroup communication.

When we turn our attention to inter-workgroup communication, the picture looks quite different. In fact, Ancona & Caldwell (1992) found that functional diversity increased the frequency of interaction. One possible explanation for this comes from the research by Cummings (2004), who shows that functional diversity increases external knowledge sharing; hence increased communication may be driven by the desire to access more diverse knowledge bases. Milliken & Martins (1996) also note that functionally diverse

teams may have better links to external networks, enabling them to have access to a greater range of information. Consequently, the following hypothesis is proposed.

> *Hypothesis 1b:* The level of inter-workgroup functional diversity positively influences the frequency of inter-workgroup communication.

GEOGRAPHIC DIVERSITY

Geographic diversity refers to people who do not share the same physical space in terms of their geographic location. McPherson et al. (2001) state that space is the most basic source of homophily, and that the people we are most likely to have contact with are those who are close to us in physical proximity. Furthermore, Cummings (2004, p. 362) asserts that "geographic distance makes many aspects of intragroup communication more difficult because of the reduced opportunities for informal contact." We may therefore argue that geographic diversity generally decreases the frequency of communication due to making it more difficult to accomplish.

The nature of work in organisations today is such that without communication hardly any job is possible to accomplish. This is further so within multinational corporations, where expertise and resources are spread around different functions and locations around the globe. Van den Bulte & Moenaert (1998) show that co-location increased the levels of communication between a cross-functional team, while Zahn (1991) demonstrates that increased physical distance decreased the probability of communication. Therefore, we may argue that if those colleagues that one works closely with are physically far, the frequency of communication will be less simply because the opportunity for interaction is not there. This leads to the posing of the following hypothesis.

> *Hypothesis 2a:* The level of intra-workgroup geographic diversity negatively influences the frequency of intra-workgroup communication.

In terms of the contacts outside one's workgroup, Cummings (2004) shows that if the members of a workgroup are based in different locations, then access to different sources of information through those people's unique networks may bring additional value to the team. For example, people may run into different people in the hallways or even have formal meetings with a different set of colleagues. Therefore, when inter-workgroup networks are examined, the case may be that geographic diversity increases the frequency of communication. The knowledge that one may have access to unique information sources through people based in other physical locations may therefore be a motivator overriding the ease of communication aspect mentioned in connection with one's internal workgroup. Amin & Cohendet (2004) support this view by arguing that knowledge is not fixed to particular geographical locations and the flow of knowledge depends on unique interactions. Furthermore, Monge & Contractor (2003) highlight an important point, which is that empirical research has shown that the lack of physical proximity may be addressed by increased electronic proximity. Therefore, the following hypothesis is proposed.

Hypothesis 2b: The level of inter-workgroup geographic diversity positively influences the frequency of inter-workgroup communication.

NATIONALITY DIVERSITY

Nationality diversity is an example of demographic diversity (Cummings, 2004). Demographic diversity refers to dissimilarity based on such demographic characteristics as age, gender, education, prestige, social class, tenure, and occupation, which can impact individuals' patterns of communication (McPherson et al., 2001; Mäkelä, et al., 2006; Monge & Contractor, 2003). There is very little research concerning nationality diversity, as most of the research in this general area has either tended to focus on race/ethnicity diversity or the integration of someone from culture A to culture B. In the research by Mäkelä et al. (2006), empirical data supports the arguments that the similarity of national-cultural background operated as a strong bond between people located in different units and countries, hence highlighting the role of national-cultural similarity in connecting people.

The similarity/attraction theory predicts that nationality diversity will have a negative effect on communication by decreasing interpersonal attraction, and leading to less open communication and more conflict (Williams & O'Reilly, 1998). Manev & Stevenson (2001, p. 287) suggest that "shared nationality is a basis for managers to establish and maintain strong network ties." In a similar vein, the research by Mäkelä et al. (2006) supports the view that nationality similarity leads to increased communication. Therefore, it may be argued that if one's immediate workgroup is composed of members of the same nationality, it would increase the frequency of communication and vice versa, leading to the posing of the following hypothesis.

Hypothesis 3a: The level of intra-workgroup nationality diversity negatively influences the frequency of intra-workgroup communication.

On the other hand, the information/decision making theory would argue the opposite, proposing that nationality diversity increases the access to more diverse knowledge bases. This may not be relevant within a close workgroup who share much of their information through their existing work processes/channels, but may explain why nationality diversity may enhance communication frequency outside one's immediate workgroup. Milliken & Martins (1996) highlight this view by noting that after behavioural integration has been addressed, groups may benefit from the greater variety of perspectives available within a diverse group. Furthermore, research by Manev & Stevenson (2001) shows that people of different rather than the same nationalities were more likely to form strong instrumental ties. Thus, the following hypothesis is proposed.

Hypothesis 3b: The level of inter-workgroup nationality diversity positively influences the frequency of inter-workgroup communication.

This section has described three forms of diversity, and predicted how they are connected to intra-workgroup and inter-workgroup communication frequencies, as illustrated in Figure 1. To see how these relationships can be studied empirically, data collection methods and other related topics are examined next.
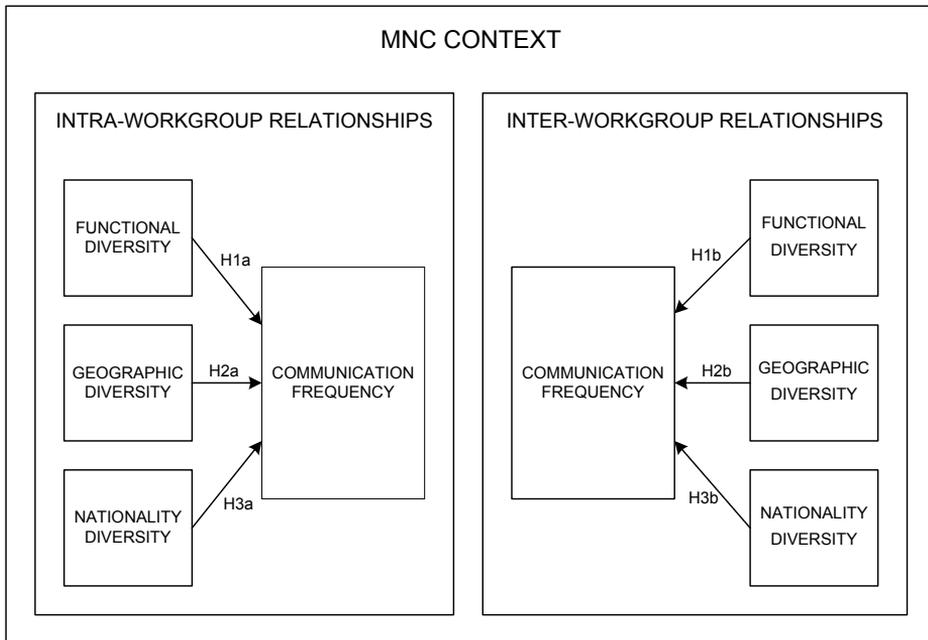

Figure 1. Studied Relationships between Diversity and Communication Frequency

METHOD

This section presents the data collection procedures and the operationalisation of the measures. On the one hand, the data collection section includes a description of the MNC context, sampling procedures of the questionnaire survey, and the sample demographics. The measures section, on the other hand, describes the operationalisation of the communication and diversity related measures.

DATA COLLECTION

MNC context. The multinational corporation that was studied here is a world-leading telecoms MNC based in Finland. At the end of 2005, the company employed over 58,000 people globally with operations in all six continents and sales in over 130 countries. For 2005, the company's net sales were EUR 34.2 billion. The MNC's global presence and matrix communication structure provided a good context for the contemporary phenomena being studied (Eisenhardt, 1989; Yin, 2003), highlighting the

role of communication and networks. Furthermore, due to the MNC being a leader in its field, we can assume that the results will be somewhat representative of best practice. Only one MNC was included to harmonise the effect of company culture, but the sample was representative of six of the most important business units, based in six strategically significant countries (USA, UK, Singapore, Germany, Finland, and Denmark).

Questionnaire Survey. This study is based on a questionnaire survey administered to a stratified sample of midlevel managers using a systematic sampling technique. Considerable time was spent on the development, testing, and fine-tuning of the survey, in order to ensure internal validity of the survey instrument (DeVellis, 2003; Edwards, Thomas, Rosenfeld & Booth-Kewley, 1997; Fowler, 2002; Punch, 2003). This included two pilot surveys: the first one was tested in a paper format in one-to-one and small group interviews (N = 15), and the second one was a larger pilot carried out on the case company Intranet (N = 60). The stratified sample was compiled with a two-step selection procedure using a database of about 6000 managers. First, all managers from the six pre-selected business groups based in the six pre-selected countries were included. Second, amongst those remaining 3000 managers, about 300 managers were selected from each business group; the 1800 managers were selected using a systematic sampling technique in order to have relatively equal representation from each business group and country. The survey was conducted on the case company Intranet, and out of the 1800 invitations sent, 50 were returned due to delivery failures. Hence, the population of potential participants was 1750, and the number of completed surveys was 767 (a response rate of about 44%). Observations with missing data were deleted, bringing the final sample size to 749. Furthermore, organisational level scores were obtained by an aggregation of the 749 individual level responses from managers.

Sample Demographics.   The participants included midlevel and upper-midlevel managers from all key business areas of the company (R&D, Marketing, Sales, Finance, Logistics, Sourcing, Operations/Manufacturing, Human Resources, and Communications to name a few). The management level was targeted due to their critical role in internal communications, but their answers also incorporated their communication patterns with non-managers. In terms of the sample demographics, the managers represented over 30 nationalities, the mean age was 41, the mean length of service was nine years, 51 percent worked in R&D, and 85 percent were male.

MEASURES

This section describes the operationalisation of the communication and diversity related measures. Furthermore, in order to build on previous findings and gain a better understanding for the impact of different forms of diversity on internal communication frequencies, diversity will be explored in intra-workgroup and inter-workgroup contexts (the exact statement wordings are provided in Appendix 1).

Dependent variable.   Internal communications was operationalised in terms of communication frequency (Allen, 1984; Hansen, 1999, 2002; Kostova & Roth, 2003) for both explicit and tacit work-related communication, and studied in intra-workgroup and inter-workgroup contexts separately. In two separate statements, respondents were

asked how frequently they turned to the colleagues in their workgroup for either work-related facts and information or advice and insight to work-related problems. The same two statements were then addressed with regards to the colleagues outside the immediate workgroup. The 5-point scale was adjusted from Hansen's 7-point scale (1 = *daily*, 2 = *a couple of times a week*, 3 = *weekly*, 4 = *monthly*, 5 = *less frequently*). The order of these answers was reversed during analysis, therefore in this paper, 1 = *less frequently than monthly* and 5 = *daily*.

Independent variables. The three measures for diversity were functional diversity, geographical diversity, and nationality diversity. The operationalisation of diversity relied upon the perceptual approach, which measures perceived demographic similarity (Riordan, 1997). This approach was chosen because data did not exist for each individual within a workgroup, and a similar approach has been previously used in diversity research (Kirchmeyer, 1995). Therefore, respondents were directly asked to indicate how similar their colleagues were. This was accomplished by asking them to indicate what proportion of their colleagues in the two groups (intra-workgroup and inter-workgroup) were based at the same site, worked in the same function, and were of the same nationality. Responses were on a 5-point scale (1 = *none*, 2 = *some*, 3 = *about half*, 4 = *most*, 5 = *all*). These scores have been transformed so that 'low diversity' incorporates answers 1 and 2, 'moderate diversity' incorporates answers 3, and 'high diversity' incorporates answers 4 and 5 (the two tail-ends of the scale were each combined into the next category due to a lack of a sufficient number of entries to keep them separate).

RESULTS

Table 1 reports the means, standard deviations, and correlations for the variables in this study. The results are presented in terms of the three forms of diversity in two contexts and their respective impacts on communication frequency, as was described in Figure 1 earlier. Based on the correlations, we can straight away see that none of the diversity variables correlate with intra-workgroup communication. However, significant correlations can be observed between all forms of diversity and inter-workgroup communication. Furthermore, although in this study the two workgroup contexts are studied separately, it is possible to observe that intra-workgroup and inter-workgroup diversities correlate at statistically very high significance levels: functional diversity (r = .54, $p \leq .001$), geographic diversity (r = .41, $p \leq .001$), and nationality diversity (r = .56, $p \leq .001$). This indicates that managers who have either high or low levels of diversity in their internal workgroups also tend to have similarly composed external workgroups.

In order to assess the differences in the communication patterns between groups who have either low, moderate or high levels of one of the three diversity forms examined in this study, analysis of variance (ANOVA) is employed as the statistical methods. ANOVA tests for mean differences among groups across a single dependent variable (Hair, Anderson, Tatham & Black, 1995). The dependent variable tested here is communication frequency, which is examined in relation to three independent variables (functional, geographic, and nationality diversities) within the contexts of intra-workgroup and inter-workgroup relationships separately. The following two sub-

sections discuss intra-workgroup and inter-workgroup diversity. First, the three forms of diversity are examined in the intra-workgroup context to understand how they contribute to intra-workgroup communication. Second, a similar examination is carried out in the inter-workgroup context.

TABLE 1: Descriptive Statistics and Correlations Between Variables for Total Sample ($N = 749$)

	Mean	SD	1	2	3	4	5	6	7
1. Intra-workgroup communication[a]	4.07	.81							
2. Inter-workgroup communication[b]	2.95	.90	.57***						
3. Intra-workgroup functional diversity[c]	4.07	.85	-.06	.17***					
4. Inter-workgroup functional diversity[c]	2.95	.89	-.00	.19***	.54***				
5. Intra-workgroup geographic diversity[c]	4.07	.84	-.05	.15***	.37***	.30***			
6. Inter-workgroup geographic diversity[c]	2.95	.79	.02	.10**	.24***	.36***	.41***		
7. Intra-workgroup nationality diversity[c]	4.07	.88	-.03	.10**	.22***	.19***	.36***	.17***	
8. Inter-workgroup nationality diversity[c]	2.95	.86	-.01	.09*	.19***	.22***	.18***	.28***	.56***

a. Cronbach's alpha for intra-workgroup communication is 0.73.
b. Cronbach's alpha for inter-workgroup communication is 0.79.
c. All diversity related items are single-item measures.
***$p \leq .001$, **$p \leq .01$, *$p \leq .05$; two-tailed tests.

INTRA-WORKGROUP DIVERSITY

To test Hypotheses 1a, 2a, and 3a, which all address internal workgroup diversity and communication, a series of ANOVA tests were performed. A non-significant effect was found for all three forms of intra-workgroup diversity, because even the one test that was slightly significant was only significant at the $p \leq .10$ level. The specific diversity forms included intra-workgroup functional diversity ($F = 2.49$, $p = .084$), intra-workgroup geographic diversity ($F = .93$, not significant), and intra-workgroup nationality diversity ($F = .62$, not significant); the univariate ANOVA tests are presented in Table 2.

These results do not provide support for Hypothesis 1a, which proposed that intra-workgroup functional diversity would negatively influence the intra-workgroup communication frequencies. Furthermore, no support was found for Hypotheses 2a and 3a either, which respectively argued that low levels of intra-workgroup geographic and nationality diversities would increase the frequency of intra-workgroup communication. Therefore, regardless of the diversity form, no statistically significant differences between the low-moderate-high groups could be identified in the data concerning the intra-workgroup relationships.

INTER-WORKGROUP DIVERSITY

To test inter-workgroup diversity, Hypotheses 1b, 2b, and 3b were tested using three one-way ANOVAs. A significant effect was found for inter-workgroup functional diversity ($F = 13.91$, $p = .000$), inter-workgroup geographic diversity ($F = 4.00$, $p = .019$), and inter-workgroup nationality diversity ($F = 4.32$, $p = .014$). The univariate ANOVA tests are presented in Table 3. Planned comparisons show that there was a consistently significant difference between the low diversity group when compared against the composite of moderate and high diversity groups (two-tailed p-values were 0.000 for functional diversity, 0.021 for geographic diversity, and 0.004 for nationality diversity); but a statistically significant differences could not be identified between the moderate and high diversity groups.

TABLE 2: Cell Means and Univariate *F* Statistics for Intra-Workgroup Communication Frequencies by Functional, Geographic, and Nationality Diversities

Intra-Workgroup Diversity	Cell Means for Diversity Levels			F Statistics		
	Low	Moderate	High	Mean	F	df
Functional Diversity	4.10	4.14	3.96	4.07	2.49†	2,746
Geographic Diversity	4.10	4.07	4.00	4.07	.93	2,746
Nationality Diversity	4.08	4.10	4.02	4.07	.62	2,746

NOTE: Cell means take the values from 1 to 5, and 5 indicates high levels of communication frequency.   *** $p \le .001$, ** $p \le .01$, * $p \le .05$, † $p \le .10$.

TABLE 3: Cell Means and Univariate *F* Statistics for Inter-Workgroup Communication Frequencies by Functional, Geographic, and Nationality Diversities

Inter-Workgroup Diversity	Cell Means for Diversity Levels			F Statistics		
	Low	Moderate	High	Mean	F	df
Functional Diversity	2.73	2.98	3.12	2.95	13.91***	2,746
Geographic Diversity	2.77	2.95	3.02	2.95	4.00*	2,746
Nationality Diversity	2.81	3.04	3.00	2.95	4.32*	2,746

NOTE: Cell means take the values from 1 to 5, and 5 indicates high levels of communication frequency.   *** $p \le .001$, ** $p \le .01$, * $p \le .05$, † $\le .10$.

These results therefore confirm Hypothesis 1b, giving strong support to the finding that high levels of inter-workgroup functional diversity result in more frequent communication than low diversity levels. Hypotheses 2b and 3b also received support, although the support is statistically speaking not as strong for inter-workgroup geographic and nationality diversities as is the support for functional diversity. However, we can conclude that with all three diversity forms, higher levels of inter-workgroup diversity resulted in more frequent inter-workgroup communication patterns.

To summarise, three factors are worth noting. First, it appears that different levels of intra-workgroup diversity do not result in different communication patterns in terms of intra-workgroup communication frequencies. Second, there is strong support for the proposition that high levels of inter-workgroup diversity result in more rather than less frequent communication with the inter-workgroup contacts. Third, there is a statistically clear difference between the effects that high and low levels of inter-workgroup diversity have on inter-workgroup communication, but the difference between moderate and high levels of inter-workgroup diversity is less clear. A table summarising whether each of the hypotheses received support is presented next.

TABLE 4: Results of the Hypotheses Testing

	Hypotheses	Results
H1a:	The level of intra-workgroup functional diversity negatively influences the frequency of intra-workgroup communication.	Not supported
H1b:	The level of inter-workgroup functional diversity positively influences the frequency of inter-workgroup communication.	Supported
H2a:	The level of intra-workgroup geographic diversity negatively influences the frequency of intra-workgroup communication.	Not supported
H2b:	The level of inter-workgroup geographic diversity positively influences the frequency of inter-workgroup communication.	Supported
H3a:	The level of intra-workgroup nationality diversity negatively influences the frequency of intra-workgroup communication.	Not supported
H3b:	The level of inter-workgroup nationality diversity positively influences the frequency of inter-workgroup communication.	Supported

DISCUSSION

This study has examined intra-workgroup and inter-workgroup diversity in the form of functional, geographic, and nationality diversities. As highlighted in the previous section, intra-workgroup diversity does not have a significant influence on communication patterns, whereas inter-workgroup diversity does. This section discusses these findings, and attempts to in part explain why the different patterns may have emerged. Intra-workgroup diversity is discussed first; that is followed by a discussion on inter-workgroup diversity with a specific look at the role of functional diversity, which came out as the statistically most significant form of inter-workgroup diversity.

By necessity, the connections employees have with their closest colleagues also involve the highest levels of interaction and information exchange. Therefore, in light of that it is perhaps understandable that diversity does not significantly influence communication in the intra-workgroup context. In other words, one often has to interact with the colleagues from one's workgroup in order to get the job done. Hence, whether it is easier to interact with someone who has a similar background is perhaps not so relevant because although one may get along better with someone from a similar background, that may not be reflected in the communication frequencies due to the interaction within a workgroup being necessary in order to accomplish a given task. It should be remembered though that this study examined the perceptions and interactions of managers with different workgroups rather than individuals. Therefore, it is possible

that if individual interactions were examined, differences would have emerged because presumably people may interact more with some individuals of the workgroup than with others.

The results of research by Cummings (2004) show that neither location nor functional background influences internal knowledge sharing, which echo the finding of this study in terms of the effect of diversity on intra-workgroup communication frequencies. Furthermore, Cummings (2004) argues that demographic diversity does not bring additional value to the group unless it exposes members to unique sources of information related to their work. Thus, this may be another explanation as to why intra-workgroup diversity has no significant impact on intra-workgroup communication frequencies. Therefore, if workgroup members have access to the same knowledge through their necessary daily interaction with one another and work on shared projects, then the differences derived from different functional, geographic, or nationality backgrounds may well not bring any additional information. It appears that neither the similarity/attraction nor the information/decision making frameworks can therefore override the pure necessity for interaction and communication dictated by the nature of the work carried out within workgroups.

However, when inter-workgroup communication frequencies are examined, we can see that all three forms of inter-workgroup diversity significantly influenced the frequency of communication between low and high diversity groups. The impact of functional diversity came out as the statistically most critical form of inter-workgroup diversity. In a similar vein, the impact of functional diversity on workgroup external communication has also been noted by previous studies (Ancona & Caldwell, 1992; Milliken & Martins, 1996). Hence, it is fruitful to examine the reasons that may explain why functional diversity plays a more significant role than geographic or nationality diversities. Jehn et al. (1999) suggest that when groups form naturally in organisations they are likely to lack diversity, hence undermining their potential access to varied information sources. They further state that organisations may try to combat this problem by forming cross-functional teams in order to enhance informational diversity available to team members. Furthermore, Pelled et al. (1999) discovered in their research that diversity-related attributes that are highly job-related are more likely to contribute to internal processes (including communication) than less job-related attributes. Therefore, when functional diversity is compared with geographic and nationality diversities, it is perhaps understandable that it could potentially offer more diverse work-related knowledge and insights than the other diversity forms.

Having focused on the role of inter-workgroup functional diversity, it should be emphasised that geographic and nationality diversities were also able to explain group differences to a lesser degree. Quantitative research on nationality diversity is sparse but previous research suggests that geographic diversity at least has a significant impact on external knowledge sharing (Cummings, 2004). Perhaps Jehn et al. (1999, p. 742) have an explanation for why nationality diversity does not have a greater impact on the communication frequency: "[n]o theory suggests that a workgroup's diversity on outward personal characteristics such as race and gender should have benefits except to the extent that diversity creates other diversity in the workgroup, such as diversity of information or perspective." Therefore, as suggested earlier, it may be that this type of diversity does not bring as many new work-related perspectives as functional diversity.

LIMITATIONS, FUTURE RESEARCH & MANAGERIAL IMPLICATIONS

In interpreting the results of this study, certain limitations must be kept in mind and potential areas for future research highlighted. First, the fact that this study focused on a single multinational corporation may be seen as a limitation. However, the ability to gain access to the relatively sensitive nature of the collected information is rare, and hence the insight from this global market leader in terms of their internal communication patterns is very valuable for enhancing our understanding. Although this particular organisation was quite flat hierarchically, it should be emphasised that the issues raised in this paper may be equally relevant for all complex organisations. However, the validation of these results in other organisational settings would be advantageous and would give additional support to these research findings.

Second, in terms of the measurement of different variables, the fact that respondents were asked to answer all the survey statements about groups of colleagues, rather than individuals, may have added some inconsistencies at the aggregate effect level in cases where there were group members from two extremes of the spectrum. However, in order to collect such a large sample and to incorporate as many different workgroups as possible, this route was chosen. Therefore, future research could see if similar results emerge when respondents answer these same statements with regards to a number of individuals, so that the researcher can aggregate the results in a more objective manner. This type of additional research would be especially beneficial in better understanding the role of intra-workgroup diversity in workgroups.

Third, this study focused solely on the frequency of communication as the dependent variable. This has given us new insight, especially since the intra-workgroup communication frequencies could be compared with those of the inter-workgroup. However, as discussed earlier, this is only one aspect on internal communication, and hence it would be useful for future studies to also incorporate other measures of communication. It would be especially interesting to compare frequency versus ease of communication in order to better understand why high levels of inter-workgroup diversity result in more frequent communications.

Fourth, according to Jehn et al. (1999), diversity associated with values, and not demographic attributes, causes not only the biggest problems but also has the greatest potential for enhancing workgroup performance. Therefore, value diversity may override other diversity factors, i.e. a colleague may prefer to collaborate with someone from a dissimilar national background, physical location or even functional group if the values those to share are more similar than the values of an employee from a similar background. Therefore the differences between demographic, informational, and value diversity attributes need to be studied further, and preferably incorporated into the same study; especially when demographic diversity can serve as informational or value diversity, or both. Consequently, if the type of diversity measured is informational diversity, it may enhance communication or performance, whereas value diversity may diminish them.

Fifth, future research should also consider incorporating different types of communication and other process variables, e.g. task and emotional conflict (Pelled et al., 1999) and goal definition and work prioritization (Ancona & Caldwell, 1992) in order to gain a better understanding for the complex and at times contradictory findings of the different diversity forms. This type of research would be particularly valuable in assessing whether teams are able to effectively use the information, knowledge, and resources obtained from those outside the group (Ancona & Caldwell, 1992).

In spite of these limitations and areas for future research, this study contributes in significant ways to previous research, especially in the field of international business communication. First, the set-up of this study was such that it was able to compare three forms of diversity in two relationship contexts. This is an important contribution because much of the previous research has focused only on either intra-workgroup or inter-workgroup communications in a single study. Therefore, the fact that we can now directly compare the results of intra-workgroup and inter-workgroup communications with regards to the three forms of diversity, gives us a much better basis for understanding how diversity impacts the frequency of interpersonal communications. Second, this study also contributes to business communication by demonstrating how internal communications in multinational corporations is influenced by diversity. As the results highlight, internal diversity had no influence on the frequency of internal workgroup communication. However, all three forms of inter-workgroup diversity, and especially functional diversity, significantly and positively influenced inter-workgroup communication. Therefore, groups with low inter-workgroup diversity communicated less frequently than groups with high inter-workgroup diversity. Consequently, this study may, in part, explain why some previous studies have found that diversity does not impact communication while others have found a significant impact.

The implications for managers of multinationals are that in order to enhance inter-workgroup communications and general connectivity, it may be strategically important to enable people from diverse demographic and functional backgrounds to come together. This may be done via the official structure in terms of task forces or cross-functional teams. Another possibility is via less direct routes, such as global training programmes that intentionally bring people together from diverse backgrounds and enable those people to build social networks that can be called upon later. However, although this research does not show any significant impact of diversity on intra-workgroup communication frequencies, intra-workgroup diversity may influence other aspects of communication or group process, as well as knowledge sharing and performance. Furthermore, it is likely that similarity of some attributes between people, whether it is shared functional background or nationality, also have the potential to enhance connectivity and knowledge sharing between individuals (Mäkelä et al., 2006).

To conclude, different compositions of individuals' skills-sets, abilities, information, contacts, and knowledge can enhance the functioning of a group, but only when those differences are managed accordingly (Ancona & Caldwell, 1992). Therefore, the success of a team or workgroup does not depend solely on its ability to carry out the task, but also on its ability to manage its internal interactions including communications. Furthermore, workplaces, and especially multinational corporations, are full of different types of diversity, whether based on demographic attributes, attitudes, values, or functional and other informational diversity driven aspects. Therefore, it is very difficult to say straight out whether diversity is good or bad, and in

exactly what conditions it enhances group processes and performance (Ancona & Caldwell, 1992; Jehn et al., 1999; Pelled et al., 1999). The results of this study, however, support the view that diversity acts as an enabler rather than a barrier in terms of the frequency of internal communications for multinationals. However, this message comes with a warning that diversity needs to be managed, it may affect other internal processes (e.g. task conflict), and that diversity for the sake of diversity is not beneficial but brings benefits only when it also creates informational diversity. Given these findings, we should perhaps consider expanding the definition of diversity in the field of communication to regularly include also other forms than just cultural diversity.

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OPERATIONALISATION OF CONSTRUCTS

Construct	Measures[a]	Statement	Source
***Intra-Workgroup Context*[b]**			
Communication Frequency	Explicit	I turn to my close group of colleagues for work-related facts or information.	Hansen, 1999, 2002; Kostova & Roth, 2003
	Tacit	I turn to my close group of colleagues for advice or insight to work-related problems.	Hansen, 1999, 2002; Kostova & Roth, 2003
Diversity	Functional	The following proportion of my close group of colleagues work in my business support function, e.g. Marketing or R&D.	Cummings, 2004; Kirchmeyer, 1995
	Geographic	The following proportion of my close group of colleagues work at my site.	Cummings, 2004; Kirchmeyer, 1995
	Nationality	The following proportion of my close group of colleagues are of my nationality.	Mäkelä et al, 2006; Kirchmeyer, 1995
***Inter-Workgroup Context*[c]**			
Communication Frequency	Explicit	I turn to my other contacts for work-related facts or information.	Hansen, 1999, 2002; Kostova & Roth, 2003
	Tacit	I turn to my other contacts for advice or insight to work-related problems.	Hansen, 1999, 2002; Kostova & Roth, 2003
Diversity	Functional	The following proportion of my other contacts work in my business function, e.g. Marketing or R&D.	Cummings, 2004; Kirchmeyer, 1995
	Geographic	The following proportion of my other contacts work at my site.	Cummings, 2004; Kirchmeyer, 1995
	Nationality	The following proportion of my other contacts are of my nationality.	Mäkelä et al, 2006; Kirchmeyer, 1995

a. All measured on a 5-point scale, but the diversity measures have been split into three categories in order to be able to study group differences (there were not enough observations for all five categories).
b. *"My close group of colleagues"* - Think of a group of colleagues who work for [Company X], and with whom you interact most frequently on work-related matters on a normal working day or week.
c. *"My other contacts"* - Think of a group of colleagues who work for [Company X] but who are not a part of your "close group of colleagues", but with whom you interact relatively regularly on work-related matters during your working week or month (they may be from other business units or functions but they serve as important sources of information).

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