RESEARCH ARTICLE

Hospitals as professional organizations and the perception of distances

Elsa Solstad1 | Inger Johanne Pettersen2 | Geraldine Robbins3

1 The School of Business and Economic, UiT – The Arctic University of Norway – Campus Harstad, Harstad, Norway
2 The Business school, NTNU Norwegian University of Science and Technology, Trondheim, Norway
3 J. E. Cairnes School of Business and Economics, National University of Ireland Galway, Galway, Ireland

Correspondence
Elsa Solstad, The School of Business and Economic, UiT The Arctic University of Norway, Campus Harstad, 9480 Harstad, Norway.
Email: Elsa.Solstad@uit.no

Abstract
Management at a distance is increasingly employed to organize hospital resources, of which professionally skilled staff is the key component. Mergers often imply distant management. The study examines the internal management aspects for two hospitals in two consecutive mergers, 5 years apart. We focus on how geographical and cognitive distances are experienced by middle managers and their followers. We find that the concept of distance plays significant and different roles in managing units in an organization with distant top management teams. Our findings indicate that hospital professionals’ positive perception of their relationship with top managers, as measured by cognitive distance, can outweigh the possible negative effects of large geographical distances between hospital units and top management teams. Our study also indicates that information systems and communication mechanisms may mitigate the possible perceived negative effects of distance. Our findings imply that politicians, policymakers, and National Health Service management should be aware of the effects of distances in implementing new collaborative management arrangements. We recognize that our study is limited in context, time, and scale. We welcome further research on comparative analyses of the complex interplay between physical and cognitive distances in other hospitals and also other types of organizations.

KEYWORDS
hospitals, management, merger, physical and cognitive distances

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INTRODUCTION

There are increasing concerns about coordination problems facing the public sector as a result of the growth in collaborative arrangements following New Public Management (NPM) reforms (Hyndman & Lapsley, 2016; Pollitt, 2016). Mergers between service-producing entities involve major organizational changes introduced with the objective of making services more efficient and effective (Bachiller & Grossi, 2012; Mussari & Ruggiero, 2017). Mergers between hospitals, resulting in larger organizational forms, are a growing trend in the United States and in most European countries (Ferreira, Marques, & Nunes, 2018; Hutchings et al., 2003; Loss et al., 2018; Preyra & Pink, 2006). These reform processes and the outcomes of mergers are also discussed in the research literature (Choi, Holmberg, Löwstedt, & Brommels, 2011; Schmitt, 2017; Solstad & Pettersen, 2010).

In the case of hospitals, a merger results in the need for coordination of hospital services between heretofore autonomous units. These coordination challenges require new forms of management control and new governance arrangements, often at a geographical distance. Earlier studies within the public sector have underlined a need to better understand how human resources are managed under such major change initiatives (Mussari & Ruggiero, 2017; Pettersen & Solstad, 2014). These studies have found that key actors participating in organizational changes are influenced by social aspects, which affect the organizations’ ability to facilitate common understandings among groups of actors. One such social aspect is identified as the physical distance between managers and followers (Clegg & Kornberger, 2006).

Face-to-face communication is undertaken in physical locations that allow people to meet directly. In tangible, physical environments, greater distance or physical space can interfere with people and their actions such as communication, social interaction, and practical actions (Oksanen & Ståhle, 2013). On patient-facing levels in hospitals, closer physical space should obviously facilitate direct coordination. However, when we focus on relations between top management and professional staff in hospitals, distance should be more broadly defined, as it can play more indirect roles. Napier and Ferris (1993) identified three aspects of distance between managers and followers: physical, structural, and psychological/cognitive. Authors within psychology fields have argued that physical distance may negatively affect how well managers work with their followers due to a potential reduction in the quality of interactions among them (Howell & Hall-Merenda, 1999; Yagil, 1998). The main argument is that managers will have less opportunity to build relationships that result in effective follower performance. Physically distant managers may also be seen as less active by followers (Antonakis & Atwater, 2002) and less capable of providing timely recognition and rewards, thus neutralizing contingent reward relationships. Within the management literature, physical space has also been discussed as contexts where people can develop mental space, which enhances collective action (Clegg & Kornberger, 2006). Physical space in this context refers to buildings and architecture, as geographical space is not directly included in these prior studies (Parker, 2016).

In general, changes in organizational structure, size, complexity, and work arrangements, as elements in hospital mergers, require that managers become responsible for managing professionals at a distance. Mergers often imply widely dispersed sites, and managers are increasingly faced with challenges of motivating and evaluating followers who reside in different locations. Mergers between hospitals often necessitate management control at a distance, as top managers most often are located in one of the merged units, geographically distant from the other hospital units. Employees may feel alienated due to the greater physical distances between them and their managers. With this background, the following exploratory research question is pursued in the paper: How do middle managers and professional staff perceive the greater geographical distance between them and their top management in a hospital merger?

To address this question, we designed a case study comprising two hospitals that were going through two different mergers between 2002 and 2007. These two hospitals were initially part of one network with another hospital, which was established by the health authorities in Norway in order to create more efficient production of healthcare services. The top management team was physically placed in one of these two hospitals. Despite the top management team being situated in the same building as professional staff in this hospital, our study shows that all professional staff perceived large cognitive distances between them and the top management. In the second merger 5 years later, the
top management team was placed in a third, new hospital included in the merger. Now the top management was placed some 300 km away from the two other hospitals included in our study. Our study posed the same questions to the population of respondents, but now the professional staff in the two case hospitals perceived less cognitive distance between them and the top management, although the geographical distance was much larger.

We draw on the sparse relevant work published in the literature on the concept of distance (e.g., Nooteboom, 2000; Nörreklit, 2011). Further, to understand the context of this study, we include work on the role of social controls and the importance of professional legitimacy of managers in hospitals (e.g., Abernethy & Stoelwinder, 1995; Carlsson-Wall, Kraus, & Lind, 2011; Kurunmäki, 2004); this work enables us to focus on management controls in professional bureaucracies such as hospitals. The aim of this paper is to gain more knowledge about how key actors—clinical department managers (middle managers) and professional staff (doctors and nurses)—perceive distance with their top management, as we believe that top managers have important strategic functions in these organizations.

This study adds to the research on organizational behavior in the public sector, as it explicitly studies managerial challenges that emerge when larger organizational units are created with increased spans of control. Earlier research has focused on the effect of size (Chenhall, 2003) on management control and the nature of change processes in more lateral and horizontal organizations such as hospitals (Choi et al., 2011). Our study, however, shows that aspects of distance—geographical/physical and cognitive—may play significant and different roles in management control among organizational levels in merged hospitals. Our findings both extend the existing literature and have relevance for practitioners, insofar as research to date on mergers has not problematized these broader dimensions of distance.

The paper is structured as follows. First, the theoretical framework is presented. The concept of distance is explained. This is followed by a short outline of coordination in hospitals as professional organizations and a discussion of the important role of information in the coordination communication processes. A discussion of information media richness follows to understand more about how information media may relate to employees’ perception of management at a distance. Thereafter, we give an outline of the research setting and explanation of the approach and research methods adopted. The main empirical findings are then presented, analyzed, and discussed. Finally, the conclusions, contribution of the study, and suggestions for further research are presented.

2 | THEORETICAL DIMENSIONS

We consider a merger as a major organizational transaction in which two or more organizations combine most or all of their assets and competencies to create a third entity—the merged unit. A merger implies a major change in governance arrangements for all organizational units involved. These changes introduce new lines of authority, which may induce longer lines of command between top management and professional staff. Our theoretical framework includes a broad definition of distance, and we draw on this concept in interpreting professional staff’s attitudes toward their top managers when the geographical distances are changed. Finally, we discuss how information communicated through indirect media may hamper managerial communication at a distance in these organizations.

2.1 | The concept of distance

Distance is a contextual determinant when it comes to managerial tasks such as coordination and management control (Chenhall, 2003). In previous studies, the geophysical aspect of distance was the only aspect of distance considered relevant in the study of hospital mergers (Barros & Martinez-Giralt, 2013; Harrison, 2006, 2011). However, when the organizational context changes, this may also change relationships between managers and employees in the merged hospitals, and a broader concept of distance can be studied.

Physical distance makes it difficult to manage large organizations (Malhotra & Gaur, 2014) because increased geographical distance between top managers and operational middle managers challenges vertical and horizontal management due to the potential reduction in the quality of direct interactions between them. Professionals may interpret
signals and actions differently than top managers given the difference in their actions. Interpretations inform actions and therefore resultant performance. Actions are interpreted in contexts that make certain changes legitimate and accepted, while others face resistance. In this sense, physical distance may be too narrow a concept to explain how actors perceive distance. Other dimensions, such as cognitive distance, may explain important aspects of distance.

Cognitive distance includes differences in both the knowledge (Nooteboom, 2000) and the set of basic values and norms of different groups in a collaborative arrangement (Muscio & Pozzali, 2013; Nørreklit, 2011). Cognitive distance refers to people's beliefs about distance that may not be visible to each other and includes socially shared professional knowledge and taken-for-granted assumptions that are widely shared by a given group in a given domain. Such shared knowledge and assumptions within professional domains shape how organizational members identify, categorize, and interpret information and actions (Scott, 2001).

The cognitive aspects of distance have not been explored in the case of hospital mergers in the public sector. Our study extends earlier studies by focusing on the concepts of physical and cognitive distance to analyze the experience of professionals—doctors and nurses and also middle managers who have significant clinical department administrative roles.

2.2 Coordination in professional organizations

The existing literature on coordination in public sector organizations has primarily focused on administrative controls, and much less attention has been paid to social controls and self-controls (Carlsson-Wall et al., 2011). In their seminal work on the role of professional control in the management of complex organizations, Abernethy and Stoelwinder (1995) noted that the legitimacy of managers in hospitals, as professional organizations, is heavily dependent on the superiors' professional background. When “the authority for supervision of professional work comes from professional expertise, it is likely to be seen as an acceptable means of control” (Abernethy & Stoelwinder, 1995, p. 13). This research indicates that professional clinical staff in hospitals are more likely to express a positive attitude toward managers with a medical professional background than superiors with administrative, business, and other backgrounds.

This point has been reaffirmed in later studies (Doolin, 2002; Hartley & Kautsch, 2014; Kitchener, 2000; Waring & Currie, 2009), and there is evidence of greater participation of clinicians in management globally together with cognizance of their increased accountability (Fulop & Day, 2010; Kelly, Doyle, & O’Donohoe, 2015; Wikström & Dellite, 2009). Early research on public sector organizations such as hospitals has concluded that there can exist a decoupling of service delivery by professionals such as doctors and managerial activity (Meyer & Scott, 1992; Scott & Meyer, 1994). A more recent study developed this picture further, looking at the core element of management within the healthcare professions and the accounting profession (Kurunmäki, 2004). One implication from this study is that the relations between managers and professional staff are dependent on several external elements. In our study, distance is included as one of these explanatory elements.

Later studies of management in hospitals have concluded that professionals’ own social and self-controls are core factors in motivating high performance (Carlsson-Wall et al., 2011). Social controls are derived from interaction with colleagues, formal education, and group norms, whereas self-controls are based on personal values that motivate action. Consequently, we need to move beyond the formal, vertical lines of control when we study professional staff’s perceptions of management. Management by social controls and self-controls is heavily reliant on the cognitive distance perceived by employees (Bay, 2011; Nörreklit, 2011). The professionals in our case perceived their relationships with their top management based on their professional norms (cognitive distance), which in hospital settings are fundamental to guiding actions. It may be that hospital professionals’ positive perception of their relationship with top managers, as measured by cognitive distance, can outweigh the possible negative effects of large geographical distances between professionals and top management.

Activities near the patients on a day-to-day basis in clinical departments are most often managed in a lateral manner among professional colleagues (Choi et al., 2011; Grafton, Abernethy, & Lillis, 2011; Pettersen & Solstad, 2014), due to the need for active interaction in care teams. As shown above, research indicates that due to their strong professional
norms and training, professional staff in hospitals tend to have closer cognitive relationships with managers who have a professional background from their own healthcare discipline. Consequently, in organizational structures that involve large geographical distances, where vertical and formal authority lines are managed from afar, it is to be expected that there will be increased cognitive distance with professional staff when managers also have nonmedical backgrounds.

2.3 Distances and information

The role of physical distance is associated with the situation that managers will have less opportunity to build direct relationships with their followers, and physically distant managers may also be seen as less active by followers (Antonakis & Atwater, 2002) and less capable of providing timely recognition and rewards, thus neutralizing contingent reward relationships. Consequently, distant management is expected to meet more resistance and decoupling from their professional staff when implementing strategic decisions affecting these staff. Physical distance between top managers and professional staff has the potential to reduce the quality of information and communication between the parties. The main argument is that managers have insufficient communication media for interacting with their followers. Although social media is at hand, physical distance hampers face-to-face interaction and reduces timely action and reaction between the parties. A flow of information is necessary to underpin the integration of professional staff in collaborative networks (Loss et al., 2018). However, geographical distances hamper vertical communication and control such as that required in networks, as most communication has to be indirect (video conferencing, telephone, social media, and email). Distance also hampers horizontal coordination between units because it is not possible to have regular face-to-face cooperation.

Greater geographical distance between top management and middle management implies that top managers become more dependent on indirect communication with their employees. In our study, communication with top management—mostly located at a distance from middle managers—was facilitated by indirect media such as an intranet, email, and telephone calls. When this indirect communication is the only communication’s medium for interaction, employees may perceive a greater distance with their managers.

Our arguments above are based on Daft and Lengel’s (1986) seminal work on information media richness. Their framework described a communication medium’s ability to reproduce the information sent over it. Daft and Lengel’s framework has been used to rank and evaluate the richness of communication media, such as phone call, video conferencing, and email. A phone call cannot reproduce visual social cues such as gestures, which makes it a less rich medium than video conferencing, which facilitates the transmission and interpretation of body language. Richer, personal communication media are generally more effective for communicating equivocal issues than are leaner, less rich media (Daft & Lengel, 1986).

Hospitals are complex organizations composed of a wide range of challenging tasks, technologies, and professions. Divergent interpretations of contexts, tasks, values, and goals are expected to exist as a result of cognitive distances, and these may generate disagreement, ambiguity, and uncertainty. At the clinical, day-to-day level in hospitals, tasks are generally characterized by interdependencies at the horizontal level, requiring responsiveness in the coordination and delivery of care and treatment (Kurunmäki, 2004). Middle managers need to be on hand in hospital clinics to communicate with professional staff and to coordinate activities. In terms of vertical control, there will also be a need for coordination—in this case between top management and middle managers—in the individual hospital units. This implies that appropriate information should be communicated both to and from middle managers to reduce uncertainty resulting from geographical distances, as they are at the nexus of horizontal and vertical control in the delivery of clinical services.

Daft and Lengel (1986) argued that the exchange of information is critical to developing clear, workable, well-defined conceptual schemata for middle managers and organizational participants. We applied this framework to study the perception of distance as contexts change, recognizing that the quality of information exchange between management and staff is affected by the distance between the actors. In our study, top management’s ability to process information of appropriate richness, to reduce uncertainty, and to clarify ambiguity within the merged units can be
considered a crucial managerial task. In summary, our point of departure is to examine in two collaborative arrangements how distance—geographical and cognitive—is perceived by middle managers and professional staff.

3 | THE EMPIRICAL SETTING AND RESEARCH APPROACH

3.1 | The setting

Like most other countries in Europe, the hospital sector in Norway has been reorganized continuously during the last 20 years (Byrkjeflot & Neby, 2008; Lægreid & Neby, 2016). Political pressure for larger hospital entities, motivated by a desire for increased efficiency, has led to the most recent comprehensive reorganization of hospitals. In 2002, a hospital enterprise law was implemented as one of several reform initiatives to develop more efficient organizational management forms (Pettersen & Solstad, 2014). This reform changed hospitals into autonomous legal bodies, governed by the state through formal contracts with four regional health authorities that now govern Norwegian hospitals. Responsibility for hospital administration rests with managers at three levels: at the regional level, the hospital level, and in clinical departments. These managers report either to the board of the regional health authority or to hospital boards. Many mergers took place within a few years of the introduction of the hospital enterprise reform, aimed at increased efficiency in service production. These mergers often implied large geographical distances between the merged hospital units.

This study is based on two case hospitals that went through two mergers with different hospitals in 2002 and 2007. The study focuses on the experience of professionals—doctors and nurses—in these two hospitals. The fieldwork began with the gathering of documents during the first merger in late 2002, when the regional health authority decided that the largest hospital in our study (H1) should be merged with two other independent hospitals in the region (H2, medium sized, and H3, significantly smaller). The newly merged hospital enterprise (see Figure 1) had approximately 1,500 employees. The hospital units were situated geographically distant from each other (H1 and H2 were 120 km apart). After this first merger, the merged hospital’s top management was located at H1. The CEO had no previous managerial experience in healthcare organizations, as his background was from private business and the army.

Increasing financial deficits, high turnover of CEOs, frequent instances of doctors resigning from their positions, and sustained intraorganizational conflict between the top management and the operational levels led to abandonment of this merged hospital enterprise in 2007. The regional health authority then decided that the large- and medium-sized hospital (H1 and H2) should be merged with the largest university hospital in this region, Uni H (see Figure 2). In this merged hospital enterprise, the top managerial team was located at Uni H. The top manager (CEO) was a medical specialist, but prior to the merger he held a middle-level administrative managerial position in Uni H. This newly merged hospital enterprise had approximately 6,000 employees.

A main point here is that this new merger involved even greater geographical distances among the three hospitals: H1 is situated 300 km, and H2 249 km, from Uni H. As noted above, the focus in this study was on H1 and H2 because these two hospitals were part of both mergers, and not on H3 and Uni H, as these hospitals were part of only one
merger. We studied the perceptions of H1 and H2 hospital staff of management and controls in the first and second merger, as distance between top management and the staff increased in the latter one.

3.2 | Research approach and methods

We conducted a quantitative and a qualitative study to gain a deeper insight into staff’s perceptions. Because we visited the two case hospitals after the mergers, we were able to observe respondents at their workplaces and speak formally and informally with them. Data gathering involved two preliminary interviews to discuss facilitation of the study, two surveys, and two phases of semistructured interviews in 2005 (3 years after the first merger) and in 2014 (7 years after the second merger). We recognize that the difference in periods of time to embed merger reform efforts, before we examined them, may have had an impact on our results. We recognize also that the two hospitals differed in size and number of staff and that the absolute number of responses in H1 was approximately twice that of H2, the smaller hospital. Our motivation was not to make generalizations to other merger organizations or to conduct a comparative study, but to use the theoretical lens adopted in this study to understand the empirical responses of clinical staff, from both surveys and the interviews, to managerial controls in the context of two mandated mergers.

A survey instrument was administered in 2005 and again in 2014 in the two case hospitals with clinical staff. This facilitated capturing the perceptions of a wide group of hospital professional employees in H1 and H2 on their views about geographical distance, coordination, information, and top management of the merged hospital enterprises. The survey questions were organized as statements, based on closed alternatives, with options from strongly agree to strongly disagree. We pretested the survey by working through the questions with three clinicians.

Clinical staffs in hospitals are difficult to access and have many competing demands on their time. Despite this, the response rate from our surveys was 38% in 2005 and 16% in 2014. As approximately 6–10% of hospital staff are away from the hospital at any time, the actual response rate was higher. The reality of declining survey response rates since the early 1990s has been recognized as a challenge for researchers (Groves, 2011). We acknowledge that poor survey participation rates may contribute to bias, in particular where survey data are the only source of data from which information is extracted by researchers. Recognizing this, the main analysis we draw from this survey data is descriptive statistics, which offers insights into clinical staff’s perception on a range of management characteristics of the merged entities. The same survey was used in both phases to facilitate comparison between the statistics. In Tables 1 and 2, the responses are presented and divided into agree/partly agree and disagree/partly disagree for the purpose of analysis.

Upon completion of each of the surveys, we conducted semistructured interviews to deepen our understanding of the research context. Undertaking these semistructured interviews offered us a balance between the focus of a structured ethnographic survey and the flexibility of open-ended interviews. Interviewees were selected based on their seniority (they had worked for many years in the hospitals and in their clinical positions) in clinical departments and the expectation (which was confirmed in interviews) that heads of clinical departments would be required to engage with top management of the merged hospital entity. The main themes in the interviews were consistent with those in the survey outlined above and included a focus on coordination, information flows, the perceived relationships between
middle managers and top management, and how geographical distance was considered to affect work and working conditions. While interviewees held administrative/managerial roles, they all also had a clinical role.

Semistructured interviews were carried out with 10 long-standing clinical middle managers in H1 and H2 in 2005. In spring 2014, a further eight middle managers were interviewed in H1 and H2, based on the same interview guide. The interviews were taped and transcribed in Norwegian, and sent to all interviewees for validation. Quotations are translated into English, which we acknowledge may cause some validation problems. A thematic analysis, structured around the semistructured interview guide—itself guided by the literature review and conceptual framing of this paper—was performed on the empirical data.

### 4 | EMPIRICAL FINDINGS

The clinical middle managers interviewed in 2005 and 2014 confirmed that hospital management control practices were in both instances based on vertical communication lines, whereby the hospital top management was seen as representatives of the regional health authority. The respondents perceived the geographical location of the top management to be an important contextual condition for managing the merged hospital, and we provide survey and individual interview evidence to support this.

In 2005, the top manager and his team were located in H1, whereas in 2014, after the second merger, the top manager and his team were located in the university hospital, located geographically distant from both H1 and H2.
second merger, the respondents in H1 were concerned about the location of hospital top management, which changed from being on site to being located 300 km away. In the surveys and interviews, respondents expressed their perceptions of distance, coordination, and information (see Tables 1 and 2).

Based on our data, we find that geographical distance is a challenge for increased coordination. Furthermore, we find that professional staff interpret management controls based largely on their professional background, and that positively perceived cognitive distance, in this case, could outweigh the possible negative effects of geographical distance.

### 4.1 Geographical distance and coordination challenges

Geographical distance was considered by hospital staff to pose problems for coordination in the merged hospitals. In 2005, 52% of respondents in H1 and 65% in H2 indicated that geographical distances were a barrier to daily cooperation between units. Seven years later, when the geographical distances between the hospitals were increased, 75% of respondents in H1 and 66% in H2 considered geographical distance a problem for cooperation. Consequently, geographical distance is perceived as a managerial challenge when services are coordinated across units spread out over large geographical areas.

When top management was located at H1 after the first merger, 82% of staff respondents in the more geographically distant H2 believed that other units were favored when budgets were decided upon. Furthermore, only 40% of

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**Table 2** Survey hospital 2, 2005 and 2014

<table>
<thead>
<tr>
<th>Item</th>
<th>2005 n = 62</th>
<th>2014 n = 70</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Strongly agree/partly agree (%)</td>
<td>Neither agree nor disagree (%)</td>
</tr>
<tr>
<td>I think no local hospital in the enterprise is favored when decisions are made</td>
<td>5.0</td>
<td>13.1</td>
</tr>
<tr>
<td>I mostly agree with the decisions that the administrative top leaders take</td>
<td>8.2</td>
<td>19.7</td>
</tr>
<tr>
<td>I am well informed about key decisions made by the administrative top leaders and the board</td>
<td>24.2</td>
<td>17.7</td>
</tr>
<tr>
<td>The administrative top leaders are “visible” in their positions</td>
<td>14.5</td>
<td>16.1</td>
</tr>
<tr>
<td>The administrative top leaders have a good dialogue with the professional employees in the Hospital Enterprise</td>
<td>3.2</td>
<td>14.8</td>
</tr>
<tr>
<td>The communication between the administrative top leaders and us as professional employees is good</td>
<td>1.6</td>
<td>16.4</td>
</tr>
<tr>
<td>Geographical distance poses a problem for working together</td>
<td>64.5</td>
<td>19.4</td>
</tr>
</tbody>
</table>
respondents in H1 were of the same opinion. This number now changed for H2 to 63%, but the rating deteriorated for H1 after the second merger, when 77% of H1 respondents considered that the other units were prioritized in budget decisions. This was also confirmed in interviews.

*Had the clinical manager (senior director at Uni H) had an office out here, we would have had a completely different outcome. A better one, of course. There is no doubt.* (Informant 1, H1, 2014)

*Yes, it's a problem that you only have a few meeting opportunities where you can meet [face-to-face] to discuss things with people at the same level. I miss that. I feel they have more resources in the Uni H: Everyone who works here says the same.* (Informant 6, H2, 2014)

The interview data above indicate that geographical distance matters when it comes to management controls. When the distances increased, the survey findings also indicate that respondents believed that these distances caused coordination problems. Here, distance is also associated with perceived imbalanced power relations between the administrative top management (in Uni H) and the two smaller units H1 and H2 located 300 and 249 km away from top management after the second merger. In 2005, less than 50% of respondents in H1, housing the top management, felt that the other hospital units were favored when it came to decisions about resources. Seven years later, when the top management was placed at a distance in Uni H, almost 80% of the respondents in H1 were of that opinion. The changes were less obvious for H2, which had not housed the top management previously. Our data support the observation that geographical distance is associated with a sense of disenfranchisement by managers in the more distant hospitals.

### 4.2 Professionals’ perception of top management at distance

In 2005, after the first merger, when the top management team was located in the same building as H1, survey respondents (78% in H1) reported that they often disagreed with the top managers’ decisions. This response was similar (72%) with H2, although H2 was geographically distant from that top management. In 2005, the merged hospital was led by a top manager with a background from business and from the army. Interestingly, in the case of the second merger, respondents in H1 disagreed less (51%) with the top managers’ decisions, although the top management team was now more geographically much more distant from them (300 km). Also, respondents in H2 disagreed less with decisions of top managers, although they were still located geographically distant from top management (in Uni H).

A possible explanation of these findings might be the fact that the top manager of the merged hospitals (located at Uni H) in the case of the second merger was an experienced clinician and medical specialist. Research in this field (Abernethy & Stoelwinder, 1995; Doolin, 2002; Hartley & Kautsch, 2014; Wikström & Dellve, 2009) has found that the legitimacy of managers in hospitals, as professional organizations, depends heavily on the superiors’ professional background. Accordingly, our data support the claim that professional staff in hospitals are likely to have more positive attitudes toward managers with a medical professional background than superiors with other backgrounds. These findings are also supported by data from the interviews. Professionals—doctors and nurses—perceived top management in the first merger to have weak legitimacy, which we understand as large cognitive distance:

*I do not trust the administrative top leaders.* (Informant 3, H1, 2005)

*I have a feeling that the administrative top managers have not taken the professionals seriously enough.* (Informant 5, H1, 2005)

*I don’t think the top managers know that we exist in the system. They live their own lives, and we live our lives here. I don’t know what happens up there.* (Informant 7, H2, 2005).
We notice here a large cognitive distance experienced by professional groups within the two hospitals in the first merger. This distance was observed to create excessive tension and gaps between clinicians and the hospital top administrative management. Although the physical distance was large in the second merger, interview data indicate that the legitimate standing of the manager and his team increased. The cognitive distance as interpreted in 2014 was less after the second merger, with the top management placed at the third and biggest hospital (the Uni H):

*I have to say that it feels reassuring to know that decisions now are not only taken with a focus on the bottom line, but also on patient safety—that the patient is in the center. The new top manager is good in talking about patients …[he] has many of the qualities that were lacking in previous regimes.* (Informant 4, H1, 2014)

These statements indicate that the manager’s background and standing appear to count more than the physical distance in this hospital merger:

*Maybe the top manager has more legitimacy because he is a doctor, and as such, he understands what is going on here.* (Informant 3, H1, 2014)

*He [the top manager] is a competent leader, he has the expertise, and he runs the hospital as a professional organization and recognizes that the employees have high competence.* (Informant 2, H1, 2014)

*They [top management] are actually far away, but we have had several meetings during the time we have been part of the university hospital…. We have experienced good co-operation.* (Informant 6, H2, 2014)

We notice that physical distance is not the main element in understanding the perception of vertical coordination between top managers and professionals. Cognitive distances appear to matter more than the physical distance when professional staff evaluate management control exerted by top management within these hospital environments. The following citation clearly underlines this point about legitimacy:

*He [the CEO] has more legitimacy because he is a doctor, and in a sense understands what’s going on.* (Informant 8, H2, 2014)

However, we also found indications of a hands-off management style experienced by two senior managers interviewed in H1 in 2014, who noted that they did not have “any direct experience” with the top manager and that the top manager and his staff were quite distant from the professionals’ daily work in terms of influencing it.

*We do what we have always done.* (Informant 1, H1, 2014)

*I’m not dependent on the top managers in my daily work.* (Informant 4, H1, 2014)

These middle managers seem to decouple their perception of top management from their delegated decision space in their daily clinical work. This decoupling might imply that perceptions of top managers exist in a vacuum alongside their daily work in the hospital. Top managers in large organizations can easily be judged as invisible, due to few face-to-face meeting points with their employees.

When respondents were asked about the visibility of the top management, our findings are somewhat surprising. In the first survey (in 2005), most staff in both hospitals felt that top management was invisible in the organization (85% in H1 and 69% in H2). Although the top management members were physically located in H1, we find that the majority of the respondents in that hospital (H1) judged the top management team to be invisible, although they were located
in the same building. Despite the larger physical distance after the second merger in 2014, H1 being 300 km and H2 249 km away from the top management, only 30% of respondents in H1 and 30% of respondents in H2 now considered top management to be invisible. As stated earlier, the merged hospital entity resulting from the second merger is led by a clinician with substantial medical experience. The explanation for the difference in responses is most likely related in part to the top manager being a healthcare professional, as were all staff surveyed and all staff interviewed.

A similar picture emerged in the interviews with middle managers (clinical department managers) in H1 and H2 in both mergers. When we asked the focus of top management’s attention when coordinating activities in the merged hospitals, in 2005 interviewees noted that top management focused primarily vertically upward to communicate with the regional health authority.

*In my opinion, the administrative top managers work for the regional health authority—they do not communicate with us.* (Informant 5, H1, 2005)

*They [the regional health authority] hired people who think the same as themselves, and so they [the top management] decouple from what their employees say.* (Informant 2, H1, 2005)

In the first merger, H1 was the site of the top management team. However, there was little difference in the responses of H1 staff (physically close) and H2 staff (physically distant) in their perceptions of top management on a range of issues. Respondents in both semistructured interviews and the survey after the second merger indicated the existence of a common understanding—a socially shared professional knowledge that shapes how organizational members identify and interpret information and actions (Scott, 2001).

### 4.3 Information richness: A possible means to reduce distance

We have shown above that hospital professionals’ positive perception of their relationships with top management, due to reduced cognitive distance, can offset some of the negative effects of geographical distance. We discuss below the expressed needs of staff in H1 and H2 to be able to process information to reduce uncertainty and ambiguity within the hospital units and the failure of top management to be able to reduce the negative consequences of distance.

The respondents in H1 in the 2005 survey stated that they were not well informed about key decisions (70%), although at that time they were physically located at the same site as the top management. Respondents in H2—distant from the top management—were also dissatisfied with the information supplied by top management about key decisions, albeit to a lesser degree (58%). However, after the second merger, when both hospitals were now geographically distant from the top management (in Uni H), the level of dissatisfaction expressed by respondents with information from top management about key decisions was—strikingly—reduced (to 43% for H1 and 42% for H2).

We found that the respondents think that communication between the top management and hospital staff improved after the second merger. Of our respondents, 95% from H1 disagreed that communication was good after the first merger, and this disagreement reduced to 49% after the second merger, despite the larger geographical distance. The same tendency is observed among respondents in H2, as 82% of staff disagreed that communication was good after the first merger, whereas only 37% were of this opinion after the second merger. A similar picture is observed when respondents in both hospitals in 2005 (after the first merger) stated that the top manager did “not have a good dialogue with professional employees.” Strikingly, 95% of the respondents in H1 and 82% in H2 judged the communication between top management and professionals as poor at that time.

### 4.4 Less geographical but larger cognitive distance

The survey data above are supported by interview data with the middle managers in both hospitals when examining communication between top management and themselves:
There has been communication, but it has not been two-way communication. (Informant 4, H1, 2005)

It is such a top-down attitude all of the time. (Informant 3, H1, 2005)

These quotations indicate dissatisfaction with top-down, vertical communication and with little mutual, lateral interaction. Interviewees expressed their views that there was little interaction between the top and the middle managers in the first merger:

The top managers work to their own agenda. Changes are introduced, but not connected with the changes that we make in daily clinical work. We do not gain sympathy from the top managerial team. (Informant 8, H2, 2005).

The most important information I need, I get from talking personally with people here in the hospital. When I talk to them [the top management], they do not understand. They do not trust us—they show it so clearly. (Informant 5, H1, 2005).

We notice above a decoupling between the top management and the clinical world in H1 after the first merger, not caused by geographical distance (as top management was located at the H1 site) but by weak communication. When it comes to how information is communicated between the top management and the middle managers, the interviewees stated the following:

Very little information goes out from the management team. (Informant 1, H1, 2005).

There is no information about important issues. (Informant 9, H2, 2005).

These statements indicate little direct face-to-face exchange of information and also very little information through indirect media.

4.5 Larger geographical but less cognitive distance

Both the survey and interview data indicate that professional staff were less negative about the quality of the dialogue between them and top managers after the 2007 merger, despite top management being more geographically distant than in the first merger. After the second merger, interviewees judged both communication and information exchanges to have improved. However, information is primarily through indirect media. In particular, a view was expressed that although information is now provided by top management, middle managers feel they have insufficient time to access the information provided on an electronic platform after the second merger.

Well, maybe I’m not so good at getting information and looking it up on the internet. They do not send out information to each of us. It is a general information channel. It is up to us to look it up. And I’m not good at that. (Informant 7, H2, 2014)

And I just have to say that there may be a lot on the intranet page that will give me good information, but I simply do not have the time to keep myself updated. . . . I do not have time to sit down and get information on the intranet. . . . I have a hundred unread emails at all times. (Informant 3, H1, 2014)

We notice a change between the first and the second merger, as informants said that they got very little information in the first merger, whereas in the second merger they get general information, but they did not give priority to looking
up and reading this information. These statements indicate a greater supply of information after the second merger, but mostly through indirect media. After the second merger, top management is perceived as having put little effort into developing well-defined platforms to supply middle managers with information pertinent to their day-to-day operations. Our data indicate the existence of vertical and general information systems where information processes are top down and primarily indirect. In organizational contexts involving large distances—geographically and cognitive—information processes may be usefully applied as a mechanism to mediate and reduce distance (Daft & Lengel, 1986).

5 | CONCLUSION AND IMPLICATIONS

This paper aimed to explore how middle managers and professional staff perceived the larger geographical distance between themselves and their top management after a substantial contextual change involving two mergers. Specifically, we examined in two collaborative arrangements how distance—geographical and cognitive—is interpreted by middle managers and clinical staff. One main finding is that physical and cognitive distances play significant and different roles in managing an organization with distant top management teams. This insight into staff perceptions of distant management is increasingly relevant as organizations are becoming larger and being spread out over large geographical areas.

Mergers involving distant management affect the relationships between top management and—in our case—middle managers and hospital front-line staff. The perceived larger distance may hamper coordination within large and service-producing organizations such as hospitals. However, our findings indicate that hospital professionals’ positive perception of their relationship with top managers, as measured by cognitive distance, can outweigh the possible negative effects of large geographical distances between hospital units and top management. Following this aspect and also based on earlier research into hospitals as professional organizations, our findings suggest that when there is vertical and formal management from afar, it is to be expected that there will be increased cognitive distance with professional staff when managers also have nonmedical backgrounds.

5.1 | The effect of physical and cognitive distance

This study reveals how administrative controls implemented by the top management team in a hospital, either at a physical distance or close by, were perceived as inadequate when the top manager did not have a professional medical background. In the second merger analyzed in this study, when the top manager was a doctor, the substantially larger geographical distance, although not welcomed by professionals, was partly offset by a reduced cognitive distance experienced by professionals in both hospitals (H1 and H2). In the second merger, we find that professional staff’s experience of the vertical coordination with top management was viewed in a more positive light, because staff accepted the legitimate standing of the top manager. In this case, acceptance of legitimate standing is understood as involving less cognitive distance.

Our finding supports prior research underlining the importance of actively including medical professionals in management processes to support increased coordination, although the starting point of this research is quite different (Abernethy & Stoelwinder, 1995; Choi et al., 2011; Pettersen & Solstad, 2014). Management from a physical distance, as organizations become larger, may challenge and usurp social controls and self-controls, both important controls in hospital contexts. Our findings in this study are also in line with earlier research showing that increased physical distance between top managers and operational middle managers poses problems for working together and challenges vertical and horizontal management controls in organizations (Chenhall, 2003; Choi et al., 2011).

5.2 | Management controls as perceived by professional groups

The professionals in our case perceive their relations with top management based on their professional norms (cognitive distance), which in hospital settings is fundamental to guiding actions (Bay, 2011; Nørreklit, 2011). Consequently,
physical distance is too narrow a concept to explain how professionals perceive distance. The legitimate standing of
the top manager, in terms of having a professional background, has a strong influence on the perception of vertical line
managers (staff) in assessing the relationship between top managers and staff in hospitals (Doolin, 2002; Fulop & Day,

We find that cognitive distance, as determined by shared education, training, and experience within professional
domains, largely shapes how professionals recognize and interpret management behavior and actions. In this case,
our research extends the literature on professional and knowledge-intensive organizations by showing how cognitive
distance may interact with physical distance.

5.3 | Less information media richness and increased distances

We noticed a change between the first and the second merger, as informants stated that they did not get any infor-
mation in the first merger, whereas in the second merger they got general information, via indirect media, but they did
not give priority to familiarizing themselves with this information. Even after the second merger, top management was
perceived as putting little effort into developing well-defined platforms for communicating with middle managers.

In organizational changes such as mergers, information processes categorized by Daft and Lengel (1986) could be
developed to reduce larger geographical and cognitive distances. Choosing the correct medium to compensate for large
geographical and cognitive distances is a challenge for network managers. Richer, personal communication media are
generally more effective for communicating equivocal issues than are leaner, less rich media (Daft & Lengel, 1986).

Our study reveals that in the two case hospitals, which participated in two different mergers, information between
top management and their middle managers was (mostly) based on indirect and less rich media. In this respect, our
findings indicate the potential for richer and more direct communication between top management teams and middle
managers to reduce or overcome negative effects of larger distances, both cognitive and geographical.

5.4 | Implications

Our findings imply that where professionals identify positively with top managers in terms of shared understandings
and values, indicating closer cognitive distance, this can help overcome negative aspects of governing from physical dis-
tances in the case of hospitals. This highlights the need for policymakers to be more aware of the impact of increased
coordination efforts in managing large hospital entities. Poor information processes and the use of indirect media in
managing large and geographically dispersed units may lead to decoupling between organizational structural changes
and coordination practices in hospitals as managed professional organizations. Management at a distance is increas-
ingly employed to organize hospital resources, of which professionally skilled staff are the key component. Therefore,
staff perceptions of new organizational arrangements—positive or negative—are critical to support change initiatives.

Our findings imply that politicians, policymakers, and National Health Service’ management should be aware of the
effects of distances, both physical and cognitive, in implementing new collaborative management arrangements. We
recognize that our study is limited in context, time, and scale. Therefore, we welcome further research on comparative
analyses of the complex interplay between physical and cognitive distances in other hospitals and also in other types
of organizations.

DATA AVAILABILITY

The data that support the findings of this study are available from the corresponding author upon reasonable request.

CONFLICT OF INTEREST

The authors declare no conflict of interest.
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