Negotiating Distance: "Presencing Work" in a Case of Remote Telenursing

Completed Research Paper

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Abstract

Telehealth services offer accessible care to distributed populations. However, it is not clear how the important caring intervention of "presence" can be enacted in distributed settings. Information Systems literature theorizes "presence" in distributed work as something to be created by technologies as a precondition for effective work to occur. Following an abductive research process, we compare extant conceptualizations of presence with an empirical case of telenursing. We find that in order to be a caring presence, telenurses must skillfully employ technology while drawing on past embodied experience, in order to balance the "dualities of distance" of nearness and farness; control and freedom. We thus recast presence as a form of skillful work with technology, not as an antecedent to, but a part of telenursing practice. Our model of "the dualities of distance in presencing work" prompts new understandings and offers new directions for future research in both HISR and IS.

Keywords: Presence, Distributed Work, Telenursing, Remote Work, Abductive Research

Introduction

Telehealth services are an efficient way of offering accessible care to a distributed population (Tuxbury, 2013). The practice of delivering nursing care either over the phone or through video conferencing is referred to as "telenursing" (Hagan, Morin, & Lépine, 2000). An important question that arises in the shift to telenursing is "how the physical separation related to telehealth use may affect the experience of *presence* among nurses during nurse-patient interactions" (Tuxbury, 2013, p. 155, emphasis added). "Presence" is a term used in both the nursing and Information Systems literature, however the word has a different meaning in the two fields. In nursing theory, presence is a care intervention that is described as "being-there-for and being-there-with" the patient, in a way that is healing and transformative for both nurse and patient (Kleiman, 2009, p. 6). In Information Systems (IS) literature, presence, or "co-presence", has been defined as the "illusion of having access to a remote or distant other that shares the same distant place, that is, being there with others" (Schultze, 2010, p. 438).

Now that nursing and other health services are being conducted remotely using Information Communication Technologies (ICTs), we argue that it is worth considering what one field can learn from the other about presence, and how the integration of healthcare with IS might benefit from a reconceptualization of presence. In this paper we follow an abductive research process (Alvesson & Sköldberg, 2009; Dubois & Gadde, 2002, 2014) to show that extant understandings of presence are not well suited to helping us make sense of our empirical case of telenursing. As such, we *problematize* the notion of presence in response to empirical material. With further insight gained from exploring alternative philosophical groundings, we develop new a model that better accounts for what is involved in becoming a caring presence for geographically distant patients. We here seek to "push the contextual envelope of IS research" (Chiasson & Davidson, 2004, p. 175) by drawing on IS and nursing research simultaneously. We develop a model of *presencing work* that will offer insights relevant to Health Information Systems Research (HISR).

We begin by briefly summarizing prominent understandings of presence in both nursing and IS literature, and demonstrate how the latter understanding is founded on a set of often taken-for-granted cognitivist, Cartesian assumptions. We then outline our research approach and an empirical case where nurses work from their homes, triaging patients solely over the phone, without video connections. In working with the case material we follow an abductive research process (Alvesson & Sköldberg, 2009; Dubois & Gadde, 2014) in which we iterate between theoretical and empirical material. This means that we will bring in new conceptual material in order to respond to our initial, and surprising case findings. This iterative process enables us to generate new insights about presence in telenursing, and our paper is organized accordingly. Throughout the text we will provide case descriptions and quotes to illustrate our theorizing.

We find that the telenursing work in our case challenges the orthodox IS conceptualization of presence, because 1) unlike the cognitivist way in which presence is conceived of in prominent IS literature, a nurse's experience and body are actively involved in creating technologically mediated presence and 2) that presence in telenursing requires skillful use of technology but is not created by it. In responding to these surprising findings, we draw more deeply on existential philosophy (Dreyfus, 2005; Dreyfus, 2002; Merleau-Ponty, 1962), which has already been influential in humanist nursing theory (Doona, Haggerty, & Chase, 1997), to create new opportunities for thinking about presence in the context of HISR.

As a result, we construct a conceptual model of *presencing work* as our main contribution to HISR literature. The model conceptualizes presencing work as an active balancing of two *dualities of distance*, which we present as nearness/farness and freedom/control. We argue that understanding presence in terms of the *work* that goes into balancing these dimensions can deepen our appreciation of the skill and work that goes into presence, and at the same time reveal presence not as an antecedent to but an integral part of telenursing work itself. Conceptualizing presence as an activity opens up new opportunities for future research. We further suggest that the model may be helpful in developing our appreciation of what is required for remote healthcare services to effectively offer *care* to a distributed population using ICTs.

The Concept of Presence in Nursing and IS Literature

The term "presence" features in a range of different research fields. We here consider how the term has been used in nursing, and then contrast this understanding with how presence has been theorized in IS

literature. We find that while the term is relevant to both nursing and IS, it is used quite differently in these two fields. We provide this background to open up the space for our research interest, which is to investigate how the term *presence* might be best understood in the hybrid context of telenursing (which brings together nursing and IS).

Presence in the nursing literature: a care intervention

The notion of presence in nursing is strongly related to the concept of "care" (Covington, 2003). Specifically, nursing presence involves a process whereby the nurse develops a caring relationship with the patient through attentiveness and availability (Covington, 2003, p. 311). Thus, nursing presence is seen "not [as] the physical proximity of the nurse" but rather as a process that is "existential and essential", because presence is only possible when "the nurse is immersed as a unique individual in a unique moment in time with another unique human being" (Doona et al., 1997, p. 13). This nursing understanding of presence is rooted in existential literature and focuses on the way in which being with another person in a caring way can positively affect their health and wellbeing (Doona et al., 1997).

The concept of presence is important to nursing practice, but it is intentionally treated with ambiguity, as a quality that is recognizable but not necessarily fully describable. This is in part because there is resistance to the very idea that presence can be standardized, measured, replicated, or even explicitly taught (Doona et al., 1997; Turner & Stokes, 2006). While this concern is understandable, the ambiguity that surrounds the concept makes it difficult for an outsider to appreciate the skill that is involved in nursing presence. It is part of our study to contribute to a better understanding of the skillfulness of nursing presence.

Although nursing presence is not *only* about physical presence, the context in which it has been examined and exercised has traditionally been co-located. Presence is nearly always discussed in the nursing literature in the context of interaction with patients in a shared *physical* healthcare setting (Covington, 2003; Doona et al., 1997; Owen-Mills, 1998). *Telenursing* therefore poses an interesting challenge for nursing theorists and practitioners interested in the concept of presence. Given that telenursing exists at the intersection of healthcare and IS, we now turn to IS literature that has theorized the notion of presence in the context of distributed work. We offer a brief summary to show that in contrast to the nursing literature, IS theories of presence are predominantly *cognitivist* and sometimes technologically deterministic.

Presence in information systems literature: an illusion caused by technology

In IS and related literature, such as Computer Supported Collaborative Work (CSCW), presence in ICT-mediated communications is often said to happen when an "illusion" occurs. In this sense, presence between distributed team members happens when technology's role in bringing people together is suppressed from sensory awareness, resulting in the "perceptual illusion of nonmediation" (Lee, 2004; Lombard, 2000, p. 77). In such a conceptualization of presence, the mind is "tricked" into ignoring the physical realities of the body's "actual" place, as opposed to its perceived (but not "real") position in the virtual. The implicit assumption here is, we argue, that technology can create an illusion in which the "virtual" and the "real" are confused by the mind, so that a person can be made to experience a simulated or "virtual" situation *as if* they were there.

The aim here is for technology to connect people but for its role not to be noticed. As a result, this strand of literature on technologically mediated presence tends to focus on how technologies and routines can be designed and implemented to *create* presence. For example, in a recent study on ubiquitous video conferencing arrangements at Google, the authors describe these technological configurations ("portals") as being able to "*provide* presence and status information on par with being co-located" (Karis, Wildman, & Mané, 2016, pp. 47, emphasis added). Here, technology is regarded as being the enabler or even creator of presence. Further, the gold standard against which this technology is assessed is always physical co-location. This somewhat deterministic premise is echoed in Computer Supported Collaborative Work (CSCW) and design literature, where technologies are designed to "create" presence (for a critique see Riemer, Klein, & Frößler, 2007). For example, "virtual presence" has been defined as "presence *caused* by virtual reality technologies" (Lee, 2004, pp. 29, emphasis added; Sheridan, 1992, 1995).

The above understanding of presence in IS can thus be broadly associated with a cognitivist orientation. The term "telepresence" for example was coined in 1980 by cognitive scientist Marvin Minsky to highlight "the possibility that human operators could feel the sense of being physically transported to a remote space

via teleoperating systems" (Lee, 2004, p. 28). The concept of telepresence has since been defined as "a feeling of being in a location other than where you actually are" (Lee, 2004, p. 28), and as the "suspension of disbelief that they [users of virtual reality systems] are in a world other than where their real bodies are located" (Slater & Usoh, 1993, p. 222). These descriptions demonstrate a cognitivist orientation because they position presence as something that is experienced *in the mind* of a perceiving subject. Cognitivist science, which we argue has been influential in the distributed work literature's understanding of presence, strongly reflects a *Cartesian* worldview (Gardner, 1985 in Riemer and Johnston, 2014). Riemer and Johnston (2014) further point out that the Cartesian worldview underpins much of IS research. We now consider how this ontological grounding informs assumptions about presence in prominent IS literature.

Grounded in the philosophy of René Descartes, Cartesianism has become a powerful folk ontology that underpins much of Western thought since the enlightenment (Riemer & Johnston, 2014). In Cartesianism, the mind and body are "entirely different" (Harman, 2009, p. 35). The body is seen as a container that carries the mind. On this notion, technology thus holds the promise of freeing the mind from the shackles of the body, a metaphor that comes to the fore in explicit utopian fantasies of "uploading the mind" (Hauskeller, 2012). Cartesianism further relies on the assumption that it is possible to consider the world *objectively*, *as if from nowhere*. This disembodied theoretical stance relates strongly to a conceptualization of space as a homogenous measurable expanse in which the shape and size of bodies, and their locations, can be plotted as geographic coordinates (Malpas, 2006, p. 71). Under this dominant view, there is only one *objective* space in which all phenomena occur, and the space *between* two bodies can be measured as objective *distance*.

This Cartesian worldview informs a popular conceptualization of ICTs as "disembedding mechanisms" (Giddens, 1990). ICTs can in this view "dissociate the place of interactions (as well as tasks) from space and time" (Majchrzak & Malhotra, 2013, p. 2). ICTs can therefore facilitate relations between "absent" others (Majchrzak & Malhotra, 2013, p. 2). This understanding of ICTs as separating "social relations from (local) same-place same-time contexts" underpins much of the extant virtual collaboration scholarship (Majchrzak & Malhotra, 2013, p. 2) as well as conceptualizations of presence in IS. Viewing technology as a "disembedding mechanism" perpetuates a sense that technology enforces or facilitates a separation between where the body "is" and where the mind "is", creating an analytic spit that artificially de-emphasizes the role of the body's involvement in time and space, as well as what this involvement means for *presence*.

We have presented a brief overview of prominent IS literature on presence here, and recognize that there are other works that explore the concept with more nuance, for example from a practice perspective (Riemer et al., 2007). Schultze (2010) provides an overview and definitions of terms that are related to presence, such as *co-presence* and *social presence*. In these definitions however, technology is still treated as the key factor in creating presence as a condition for interaction, and presence in distributed contexts is still predominantly discussed in the context of an illusion that conceals a split between mind and body. In reflecting on the contrast between the nursing literature's conceptualization of presence as an interpersonal caring intervention, and the selected IS literature's conceptualization of presence as an illusion created by technology, we come to see that the two fields are not so easily brought together. In order to move past this apparent conceptual incompatibility, we will turn to an empirical example to see what we can learn from a case of telenursing. We do so in what is known as an "abductive" research process, which we now explain.

Research Approach

In the following we explain the non-linear approach (Dubois & Gadde, 2002, 2014) to case study research that we have taken in order to develop a new understanding of presence that caters to the emerging research context of telenursing. We first show that are our research aim has been to "problematize presence", by which we mean we have aimed to uncover the dominant assumptions that underpin common understandings of presence, with the view to rebuild a conceptualization of presence that is better suited to understanding findings from our empirical case and the wider research context of telenursing. We then explain how this problematization has been achieved through an abductive case study research process (Timmermans & Tavory, 2012), which has involved iterating between empirical and theoretical material (Alvesson & Kärreman, 2007) as we responded to surprising findings from the case and generated new insights subsequently. Finally, we introduce our case setting and provide background information for understanding the case context.

Problematizing "presence"

We have briefly shown that presence is an important concept in both nursing and IS literature, but that each field views this concept differently, according to dominant assumptions, as informed by deeper philosophical orientations and practical concerns. In this paper we *problematize* (Alvesson & Sandberg, 2011) the concept of presence by turning to an empirical example of telenursing. Telenursing is a significant empirical context here, because the practice of nursing over the phone is challenging to both the nursing literature's understanding of presence, as grounded in (though not synonymous with) physical interaction; and the IS understanding of presence, as an illusion that is created when technology conceals a separation of mind and body.

Problematization aims to interrogate one's own assumptions and those of the extant literature (Alvesson & Sandberg, 2011). This approach eschews "gap spotting", because identifying and filling a gap in existing literature and/or knowledge does not encourage a critique and constructive re-imagining of existing assumptions and trajectories. This strategy is therefore well suited to the research topic of how presence figures in the practice of telenursing, because, as we have shown, the current literatures are not forthcoming with a coherent way for understanding presence in the hybrid world of telenursing.

In keeping with how Alvesson and Sandberg (2011) employ problematization, we go beyond a mere *critique* of current conceptualizations of presence. We use an empirical case of telenursing first to prompt a *deconstruction* of current understandings of presence by reading our empirical observations through this prior understanding obtained, and then proceed with the *constructive* work of building a conceptual model inspired by what we have learned from our case and our engagement with additional theoretical material. In this way, problematization is used to both break down current understanding and build up new understanding, which we in turn argue might be useful for others in their investigations of telenursing and other forms of distributed caring work. The method we employ to mobilize our problematization of the concept of presence is called "abductive case study research".

Method: abductive case study research

Abductive research is an alternative approach that we argue is suited to this study's aim of problematizing current understandings of presence, in a way that will offer insight and constructive theorizing for the HISR field. In the following quote, Alvesson and Sköldberg (2009, p. 4) offer a summary of the abductive research approach that we have followed in this paper:

> Abduction starts from an empirical basis, just like induction, but does not reject theoretical preconceptions and is in that respect closer to deduction. The analysis of the empirical fact(s) may very well be combined with, or preceded by, studies of previous theory in the literature; not as a mechanical application on single cases but as a source of inspiration for the discovery of patterns that bring understanding. The research process, therefore, alternates between (previous) theory and empirical facts whereby both are successively reinterpreted in the light of each other.

Abductive research thereby acknowledges and celebrates the inter-relationship between understanding, reality, and theory. This approach does not try to conceal the constructed nature of knowledge, and the researcher is recognized as having an active role in the way in which they place empirical and theoretical material in critical dialogue (Alvesson & Sköldberg, 2009).

Rigor is pursued in abductive research through a reflexive process wherein both empirical and theoretical material are held accountable to one another, while relevance is defined by whether insights are formed that are of interest to the wider research and practitioner community (Alvesson & Sköldberg, 2009). "Empirical material" is thus seen as a critical "dialogue partner" (Alvesson & Kärreman, 2007) in the process of critical reflection. Empirical material, which is here generated through interviews, inspires us to provoke commonly held understandings and thereby helps us to develop critical, interesting, and relevant theoretical interpretations which we bring together in a conceptual model of *presencing work*. True to our abductive approach, we will weave in theoretical material as it becomes relevant, in response to the surprises that emerged from our empirical work.

The abductive research process (Alvesson & Sköldberg, 2009; Dubois & Gadde, 2014) is iterative in that what is interesting about the empirical setting emerges and is refined through careful reading and reflexive reasoning, while drawing on theoretical material. Our abductive process proceeds in three steps: 1) We derive *findings* from our case setting that present as surprising or problematic when read against prior understanding provided by the literature; 2) we then provide a *response* to these findings by reaching for alternative theoretical material, which allows us to 3) derive new *insights* from this dialogue between the empirical and the theoretical material. In what follows, the structure of the paper resembles this three-step process and results in a model of presencing work as our main contribution, derived from this abductive process.

Case setting

We draw on an illustrative case study from the Australian healthcare sector. *HealthOrg* is a pseudonym for a large Australian health services organization, which is contracted by the Australian government to provide a telenursing service to the general public. Registered nurses are employed to work from their homes. They answer calls from the public, who describe their own or their charge's medical issue verbally. The nurse uses a range of technology in guiding the patient through a triage process over the phone, at the conclusion of which the patient is advised on the appropriate action to take: stay at home, see a doctor, or go to hospital.

The government funds this contracted service in order to reduce pressure on emergency wards and thereby reduce emergency room waiting times. The nurses triage patients by drawing on their clinical training, with the assistance of an algorithmic Decision Support System (DSS). A call is referred to as an "encounter". At the conclusion of the encounter, a "disposition" is reached by the DSS, which advises patients to either monitor their medical situation, see a doctor, or attend an emergency department. In some encounters the nurse will override the disposition reached by the DSS. The nurse can also arrange an ambulance or refer the patient to other services.

Over 300 nurses work on this service from their homes using a computer, telenursing software, and headset provided by the organization. We interviewed both nurses and leaders at HealthOrg; twelve in total and some of these more than once. All except one interview were conducted over the phone. One of the researchers was also given a demonstration of the software system and listened in on a recorded de-identified call. This empirical material was then iteratively analyzed as part of the abductive process.

Initial Findings: Presence as Embodied Activity with Technology

We show in this section what we learned from our initial engagement with the case material and what was surprising to us. In particular, we were struck by how the nurses discussed their interactions with patients and their use of technology. We found that becoming present with a patient required a skillful process of communication and visualization, where the nurse drew on her[1] past experiences of nursing in a hospital and on her own embodied understanding for making sense of the encounter. We also learned about how technology was involved in this effort to become present, but that the technologies involved did not by themselves *create* presence. In doing so it became clear that the same caring presence could not have been created by a layperson using the same mix of technologies as a nurse.

The primary focus of the nurses' work is on triaging patients over the phone. Calls are allocated via a central system and a nurse will see basic details of the call they are about to take. On screen they will see where the person is calling from and will receive a whisper in their headset, which lets them know what greeting they should use, as each State and Territory has a different name for the service. The nurse then needs to balance getting basic contact details from the caller with making a quick initial assessment of what kind of situation is at hand – is this an emergency, or is there time to discuss the patient's condition? Once an initial clinical assessment is made, the nurse will open the relevant "guidelines" on their computer system and will follow a series of questions prompted by the algorithmic DSS. Though some patients expect it, the nurses are *not* permitted to *diagnose* the medical condition. The aim of the call is to quickly and safely triage the patient. The following section presents what we learned from speaking with nurses about their work.

[1] In the case, all the nurses interviewed were female, and so we use feminine pronouns throughout.

When interviewing the nurses, we were firstly interested in learning about their work practices – what the role involves and how the nurses cope with working from home. We found that for the most part the physical distance between nurse and patient was *not* a *problem* for the nurses, as they were in most instances satisfied with the way in which they could handle patients' issues over the phone. Several nurses in fact reported that the physical distance from patients was a part of what attracted them to the job, having been physically assaulted at some stage in their clinical nursing careers. These nurses did not miss the dangers and taxing physical demands of the emergency ward. Some nurses had injuries or disabilities (examples were back injuries, and PTSD, associated with nursing work). Others had caring responsibilities that were incompatible with the varied rosters of standard hospital nursing shifts. For these workers, the opportunity to nurse while sitting down in a comfortable and safe home environment was highly desirable and in some cases was the only way in which they could continue to practice nursing.

Becoming present requires work that draws on past, bodily experience

The first surprising finding was the degree to which nurses reported working hard in their efforts to get a sense of the patient, in order to "see" the "full clinical picture", and to ultimately become a caring presence with and for the patient. This work was described in terms such as "visualizing" and "thinking on your feet". We find that building a "full clinical picture" of the patient and the encounter required skillful work that drew on past nursing experience. The point we take away from this is that while nurses are no doubt reflecting on what they hear, they primarily draw on bodily sensations and a shared understanding of what it is like to be in a nursing situation in an embodied way, in coming to a reflective assessment of the encounter. We explore this finding further in the following illustrations.

One of the challenges involved in this form of telenursing is *seeing* the patient's condition using only telephone equipment, a computer, and the algorithmic DSS. Nurses reported drawing heavily on past experiences of working in emergency rooms to help them to quickly "visualize" what they were encountering:

> …you've got to visualize straight away, is this an old person who's struggling who can't even talk to me or is it a younger person who's generally in good health but this is a short-term problem? So every question you ask you've got to be visualizing what might be happening. You draw on your own experience as you're always visualizing in your own head. I've seen this before. This sounds like. This feels like. Then with it - with that thinking, you then go into one of the algorithms and start going through a process of set questions. But in that initial assessment you've got to be visualizing what could be happening. That is vital. You're thinking on your feet.

While this description could be taken to reinforce the idea that presence takes place "in the mind", we locate here evidence for breaking down a conceptual mind/body division. This nurse is describing drawing on experience in an embodied way to reflect on and visualize what is happening, all the time "thinking on her feet". This practice of visualizing the caller's environment seemed to be a skill that was learned over time and was usually linked to an experience the nurse had had, either in a hospital or in their daily life. In each description, the nurse's body was very much involved in understanding what she was dealing with: "I've seen this before. This sounds like. This feels like." Her experiences attending to bodies and her own senses and bodily memories fundamentally guided the triage process.

Mostly, the patient's condition could be grasped through this process of nurse and computer working together to ascertain the best course of action. At times however it was harder to "see" what was happening, particularly when patients were suspected to be "making up" the situation they were reporting. Here, one nurse reported becoming uneasy, registering that something wasn't "right". In such instances, the nurses reportedly relied on their "gut" instincts as well as their official procedures and guidelines in responding to the incompleteness or unintelligibility of the situation. One story came from a nurse who described a troubling situation with a reportedly suicidal caller:

> I can't see what she was doing. What did she do? She rung up and she said, "I'm going to kill myself." Generally, somebody who says that are not, probably wouldn't. It doesn't usually come up. I don't know, you just know. "I'm going to jump in front of a truck. I'm on the freeway…" and I could hear

> lots of traffic in the background. "I'm going to throw myself in front of a truck." Then she put the phone down, still on, I'm still connected, and 10 minutes later it was still there.

This scenario was very difficult for the nurse to cope with. She could hear the road and felt she was with the caller yet could not intervene or trust what she was being told – she could not get a *grip* on the situation in order to direct it. Only a lack of "brakes screeching" and her background understanding that came from experiencing similar calls indicated that the caller may have been misleading the nurse. The nurse here needed to draw on her implicit sense of what was going on in her efforts to be a caring presence for the troubled caller.

There are procedures in place for reporting and debriefing after such instances, and sometimes a call can be traced and emergency services dispatched. Once the line is disconnected however, little can be done to follow up on the patient, and the nurse will likely need to move on to their next caller. This example is however the exception. In everyday encounters, the nurses are expected to be able to make sense of the situation quickly in order to direct the course of action. The nurse has to quickly and calmly grasp what is *relevant* in forming an understanding of the situation, which again is part of forming the "full clinical picture" which allows appropriately advising the patient.

We followed up by asking the nurses whether it would be easier if patients were able to send through photographs of their ailments. Patients reportedly did at times want to send through a photograph – for example of a rash - to help the triage process. This was however not desired by the nurses. This is firstly because it would take more time as it is more complex from a technical perspective. Secondly, part of the appeal of the phone line is that most people in Australia have access to a telephone, though not everyone (the elderly for example) would have access to the technology or the skills necessary to transmit a photograph or video. Thirdly, images could be misleading without a sense of context, and so skillful questioning was seen as more effective. One nurse for example explained that a picture of a wound could "look really bad, and really huge" in a picture, depending on how the picture was taken. In this example of a wound, getting a "full clinical picture" was reportedly *not* helped by visual representations. This challenges a popular notion that an image offers more (and therefore *better*) information. Without a sense of proportion, a rash could appear far worse than it was – an image would therefore not allow for the context that would be necessary to render the situation intelligible to the nurse.

Moreover, one of the researchers heard on a recorded call an example of how the nurses were able to gain a sense of proportion, by using everyday experiences and common frames of reference. While the algorithm might have prompted the question "how large was the swallowed item?" a skilled nurse instead asked "was the bead about the size of a ten cent piece?" This translation from generic language to a relatable everyday (Australian) object helped the patient quickly provide the relevant information and made it possible for the nurse to connect with the patient and become a caring presence for them. Another nurse explained how she used this linguistic device – referring to common frames of reference – in her triaging practice. She explained that she would ask:

> "…does it look extremely red like a tomato or is it mildly pink?" "So do you think it's wider than say a two-inch or five centimetre diameter, or is it just about the size of your fingernail on your little finger?" …you just work around - you find things that most of us have that we can share and identify, "yeah, it's about the size of your little fingernail" …so you can get pictures that way, which is really not such a big difference [to receiving a photograph].

In this way, carefully guided descriptions of everyday items and bodily frames of reference were considered sufficient and often preferable for getting "pictures" that facilitated the triage process. The nurses became skilled in seeing in this way and commented that photographs and video would cause more problems than they would solve – by distorting the situation, creating privacy issues, or increasing the complexity and time taken to get a handle on the patient's condition.

In conclusion, we would like to draw attention here to the strong role that the body plays in these encounters. In getting *closer* to the patient, the nurses were drawing on what was common to both patient and nurse: an embodied understanding of a common world. This background understanding, when skillfully articulated and drawn upon, provided a bridge between the nurse and patients' physical contexts and made it possible for the nurse to be a caring presence for the patient. In doing this skillfully, nurses

relied on clinical hospital experience as well as previous experiences of calls. Although the DSS in many ways provided the script for the encounter, the nurses reported constantly translating the system's prompts into language that was appropriate and relatable for the person they were interacting with. In other words, the algorithm could not have been a caring presence for the patient without the nurse, a point that we now explore with further details from the case.

Distributed presence requires technology but is not created by it

We acknowledge that without technology, the nurse and patient could not interact. Often geographically located on opposite sides of a vast country, one of the appeals of this service is that even those who live in very remote locations can have access to healthcare advice with the use of basic technology (a phone). We quickly learned however that the technologies involved in telenursing were not used in a standardized or straightforward way. By this we mean that the nurses reported taking time to adjust to the systems they were using and that they had to learn how to use the technology in building a connection with patients.

Before this skill was learned, the DSS in particular could get in the way of their attempts to become present with their patients. This was mainly because the systems in place were aimed at increasing the efficiency of calls, an imperative that at times could conflict with the nurse's efforts to care for and *be with* their patient in a caring way. We acknowledge that this conflict between efficiency versus care, which is often associated with the construct of *technology* versus care, is a familiar story in many healthcare contexts (Mol, 2008).

The unique technological setting of telenursing took some getting used to for the nurses. Adding to the stress of the role was the constant pressure to reduce "call times", which are a Key Performance Indicator (KPI) for the nurses, as the company's call time average is tied to the continuation of the contract between HealthOrg and the government. The target call time is set at approximately nine minutes. This restriction was seen as often being in conflict with the imperative to care for the patient, and nurses reported struggling with the two competing agendas – to complete the call quickly and safely, and to "be there" for lonely and troubled patients. Some nurses focused more on efficiency, and particularly on the "call control" required to achieve this. "Call control" was a phrase used to refer to a way of speaking to callers that at once reassured them while facilitating a fast and accurate assessment of their situation.

Even though the algorithmic system that accompanies the triaging process is designed to minimize call times, it could reportedly slow down the call initially and get in the way of nurse's efforts to care for their patients. Over time however, nurses reported learning to work more harmoniously with the system and their call times began to improve:

> …when you first start, your call times are quite high because you're still finding your way around the software, you've got to find all the health information for people and you're scared because you can't see the patient, so you cover everything. Then as you progress through in time, your calls become much, much quicker. Now, I do a call half as fast as I did when I first started… I think a lot of it is to do with trusting the guideline that you're using because it will cover everything.

This notion of "trusting the guideline" came up in various guises. The algorithmic DSS, which offers a number of different decision-tree "guidelines" based on the suspected condition, was often treated as somewhat of a colleague. Nurses said that it was best to trust that the right path would unfold according to the decision-tree. This did not however mean that the nurse merely read out the prompts, rather, they learned to work with and around the system as necessary. When nurse and system worked well together, the call was reportedly conducted more quickly and more safely than if the nurses were to work in isolation. In this way, technology could, with practice, support the nurse's efforts to become a caring presence with the patient.

We find therefore that in becoming present with a patient, it was necessary for the nurse, computer, headset and software to work together, with more or less ease, in their collective effort to care for the patient. There was a similar sentiment of seamlessness regarding the headset that is worn while on a shift – we asked a nurse if it seemed like part of her uniform, to which she replied:

> Yeah, the headset definitely helps. Although, I don't notice it after a while - unless my ear starts to go dead.

A sense that the technology could be a barrier to care, or a part of caring practice, emerged upon careful analysis of the interview transcripts. Technology was only really mentioned explicitly in terms of how it became a problem, such as when the headset put pressure on a nurse's ear. In most instances, the nurses had learned to "get on" with the tools and systems they were involved with and over time became skilled in knowing when to let the system "speak" and when to override it or work around it.

A consideration of balancing care and efficiency was persistently in play in the nurses' reflections. Both technological proficiency and clinical experience were considered important. New recruits described struggling with the "call control" necessary to balance efficiency and care. The nurse needed to be in control of the flow of information, so that what was relevant in coming to terms with the situation was prioritized. Overall it seemed that the nurses came to understand what was needed to care for each patient in the way that was best for them. When executed skillfully and successfully, these encounters would result in the nurse being *present* with the patient in a caring way.

We will now reflect on these findings in relation to the extant literature on presence in IS. This leads us to consider how an alternative conceptual approach that draws on existentialist literature can help us to make sense of our findings and guide new understandings and promising research directions.

Response: Reconceptualizing Presence

We note that the findings presented above raise problems for the orthodox view of presence in IS. Firstly, we have explained that presence in the IS literature has often been defined as an illusion, created by technology, which needs to also cover over its role in splitting mind and body. In our case however, we found that nurses draw on their past experiences and an embodied understanding of the world in their efforts to connect with and become present with patients. Though they do reflect on what they are feeling, and often make their "gut" feelings explicit, getting a "full clinical picture" of the encounter would not be possible without drawing on the embodied experience of *being* a nurse. The nurses draw heavily on their bodily experience coping with past situations in their nursing careers, to make sense of and act upon the bodies of their patients, for example by listening to breathing and in asking the patient to sit down using an assertive voice. These encounters are not easily reduced to mental representations or cognitive computations, rather the body is involved in different ways in how the nurses become present with their patients.

Secondly, the technology involved in calls is quite simple (unlike for example some of the virtual reality devices discussed in some presence literature), yet there still seems to be a capacity to be present with a patient using this equipment, when it is adopted into nursing and caring practice. We recognize here that the technology is necessary for the nurse to be able to become present with the patient, but that this technology is not *sufficient* for establishing presence. For example, if the phone, headset, computer and DSS guidelines were in the hands of an ordinary member of the public, the same kind of presence would clearly not be possible. Therefore, presence in the case cannot be understood as the *result* of technological features. Moreover, we suggest that there are likely different *modes* of presence, which are experienced in qualitatively different ways.

Finally, presence is sometimes positioned in CSCW literature in particular as being a starting point from which work tasks can proceed: something to be ascertained a priori (Ishii & Watanabe, 2009; Karis et al., 2016). The case however demonstrates that presence is brought about in and through the nurses' work, it is a *part of* it rather than a precursor to it. Because these points run contrary to dominant understandings of presence in IS, but are also quite new to the nursing context, our case findings thus prompt a reinvestigation more fundamentally of what it means to become present with another in the context of remote healthcare.

In the following, we continue with our problematization of the concept of presence by drawing on an alternative philosophical grounding: existentialism. We are drawn to this body of literature because, as we have already explained, nursing theory and practice has previously drawn inspiration from existentialist understandings of presence. We will then explore this conceptual basis further, and integrate what we have learned from the case and this theoretical material in order to build a new conceptual model that communicates our key insights to HISR.

Towards an existential understanding of presence for HISR theorizing

In seeking theoretical material to assist us in making sense of how presence shows up in the case, we found two related streams of relevant literature that are largely ignored in technologically-oriented and cognitivist theories of presence. These streams are *existentialist philosophy* and *holistic nursing*. As the latter is strongly influenced by the former, we focus here on how existentialist philosophers, specifically Marcel (1965) and Merleau-Ponty (1962), have dealt with issues relating to presence and thereby develop an alternative conceptualization of presence that we argue is helpful for future theorizing, both in HISR and distributed work research.

The kind of presence that we are concerned with here involves *care*. The term "care" has a diversity of meanings and philosophical connotations, particularly in Heideggerian language (Covington, 2003; Heidegger, 1927; 1962). While some of these connotations may be welcome, we specifically use caring presence here to mean a mode of being-with-others in a supportive way. This is most pronounced in and more obviously needed in asymmetrical relationships, such as nurse/patient or mentor/mentee, however, as a way of being involved with another, it is a feature of most if not all relationships and interactions.

For Marcel (1965) presence is strongly linked to the notion of *involvement*. He influenced nursing theory by arguing that presence does not imply a mere physical connection, rather it is a kind of being-with that is transformative for those involved (Marcel, 1965). In particular, Marcel (1965) dismisses the idea that physical proximity *equates* to presence. Marcel counters the notion that proximity is synonymous with presence by pointing out that we can experience *farness* with co-located others, to the extent that the interaction can feel foreign and "unreal". Conversely, someone who is geographically distant can come to feel *near* because of one's concern for and involvement with them.

This line of theorizing opens up a problematization of how *distance* itself is understood. Distance is commonly understood in research and practice based on the model of Cartesian space, as a measurable expanse between two coordinates. However, what is *near* in existential philosophy is understood in terms of what is being attended to, that is, what *matters* to a particular person (Heidegger, 1927; 1962, p. 140). *Involvement* with another is in this understanding therefore crucial to the notion of presence. This is because caring presence is seen as being *relational* – it depends on a connection that is transformative for those involved.

Marcel (1965) further points out that presence cannot be taught. While it is possible to teach the behaviors associated with presence this is not the same as teaching the skill of presence itself:

> …it would be quite chimerical to hope to instruct somebody in the art of making his presence felt: the most one could do would be to suggest that he drew attention to himself by making funny faces…teaching people to make their presence felt, is the very height of absurdity.

From this existentialist understanding of presence as skillful involvement, we can learn that presence has been conceptualized as a relational achievement that is not concerned primarily with geographical distance. Instead, *phenomenal* distance, meaning how distance is understood in terms of *nearness* and *farness* for an involved *being*, needs to be *negotiated* rather than covered over (Heidegger, 1927; 1962) in coming to be involved with another in an encounter.

Embodiment and the role of the body in presence

In existentialist philosophy, the world is always understood from somewhere, some vantage point, and it is the body that is seen as fundamental to how we come to understand and act in the world (Dreyfus, 2002; Merleau-Ponty, 1962). Past experience is therefore not an amalgamation of mental representations but rather a combination of *meaning* and *sense* that is understood in an embodied way. Similarly, experience itself is in this understanding the "intuitive coherence things have for us when we find them and cope with them in our practical circumstances" (Carman, 2012, p. 10), and not merely a mental event.

The crucial contribution here is that perception is fundamentally grounded in a bodily habitation in the world and therefore:

> To perceive is not to have inner mental states, but to be familiar with, deal with, and find our way around in an environment. Perceiving means having a body, which in turn means inhabiting a world. Intentional attitudes are not mere bundles of sensorimotor capacities, but modes of existence…By manifesting in our bodily capacities and dispositions, perception grounds the basic forms of all human experience and understanding, namely perspectival orientation and figure/ground contrast, focus and horizon. (Carman, 2012, p. 10)

This theoretical grounding demonstrates how we can move away from an understanding of the "objective" body that is locatable in geographic space towards an appreciation of the "phenomenal body" (Merleau-Ponty, 1962) as the fundamental way of being involved in the world, in terms of which the world makes *sense*. From this understanding of the phenomenal body, it becomes clearer that by focusing on where the mind *is* and where the body *is* in accounts of presence, we miss a central consideration of the embodied work that goes into becoming present in a situation in a skillful and involved way.

We have already pointed out that while presence is skillful, it cannot be explicitly taught, because to turn it into a set of procedures would negate the importance of attending to the unique situation that is unfolding between those who are *involved* in defining it. This is why presence is considered an important care intervention in nursing yet nursing scholars and professionals resist the idea that it can be codified (Doane, 2008; Nelms, 1996). Particularly objectionable is the instrumental notion that presence can be done *to* someone (Doona et al., 1997). Instead, presence is understood here as an embodied skill that depends on 1) past experience in negotiating similar situations, and 2) a genuine involvement in and concern towards the person and situation.

In beginning with an appreciation of involvement, the notion of presence as something that is worked at and experienced in terms of past experience and embodied skill becomes possible. A reconceptualization of presence becomes possible when we put aside the conventional understanding of *distance* as the gap between two geographic coordinates in Cartesian space. Instead, we can consider distance as a phenomenal quality that is negotiated in our involvements with the world. In comparison to the dualist understandings of presence as being mediated by technology, which creates an illusion of a split between mind and body, an existential understanding puts such distinctions to one side and concentrates on *involvement*: how a situation is brought into focus against the background of what *matters* to a phenomenal body. From such a grounding it is possible to appreciate how presence as an involved *process* of skillful performance is enacted with technological equipment.

Insight: The Dualities of Distance

In our telenursing case we found that distance does not show up as a matter of kilometers. Rather, nearness and farness are *negotiated* in order to build a connection with the patient, whereby *presence* between the patient and the nurse is achieved. We found that this required the nurse to be skilled in both her experience of nursing and in her use of technology. We here introduce the term *presencing work* to argue that presence is not like a switch that can be flicked: it is not constant, guaranteed, or determined by technology. Rather, presence requires careful involvement, experience, equipment, and ongoing skillful work.

This means that presence and work are not separate, and that presence is not a pre-condition for effective collaboration. Rather, *caring* presence is an *integral part* of skillful work that needs to be continuously balanced and maintained. When we consider the ongoing balancing work that goes into becoming present with another person in a caring way, it is also possible to appreciate that presence is not a homogeneous concept: different kinds or *modes* of presence are possible. In the following we discuss our conceptualization of these modes and explore the negotiations that are involved in presencing work in both practical and conceptual terms.

We do not claim to generalize the specific activities that are involved here, rather we draw attention to the *skillful nature* of *presencing work* and argue that this cannot be programmed because it depends on 1) a negotiation of near and far that involves equipment to bring *this* particular situation into focus, and 2) control over the flow of information in terms of what is *relevant* to those *involved*. It is the balancing of

these relational negotiations that we argue is important to a caring presence in distributed healthcare environments. We now introduce the *work of presencing* as a skillful balancing of two *dualities of distance*. These are *nearness and farness* and *freedom and control*.

Nearness and Farness

We have shown that the nurses draw on their past experience in helping them to build a connection with their patients. Important here is how the nurse brings the patient *closer* through an enactment of familiarity and intimacy. For example, one nurse described an encounter with a patient who had been in a farm accident. She immediately perceived the sounds of a farm based on her own background understanding, and thus was able to respond to the problem of windy background noise by anticipating the existence of a Utility Vehicle (Ute) that could act as a wind buffer to improve the quality of the call. Her familiarity with the patient's context transpired in an empathetic stance towards the patient, where she directed the situation in a way that established a *nearness* with him, to at the same time care for him.

Even though he is geographically distant, the nurse is with the patient in such a scenario, because she has through skillful embodied performance brought the patient nearer, so that she can be a caring presence for him. As with focusing a microscope or when conversing with another person however, *closer* is not always *better*. An *appropriate* stance for involvement requires a certain *farness* as well – for example, we step backwards if somebody stands *too close*; we release the pressure on the pedal if the car goes *too fast*. Similarly, as much as the nurses described working to bring about a familiar closeness with their patients, they were also involved in balancing this intimacy and nearness with a sense of separation and *farness*, in order to achieve an appropriate stance from which to have the best grasp of the situation.

In a hospital setting, the nurse's uniform is one way in which a sense of separation, or *farness*, is created and maintained. A nurse recalled that when one puts on a uniform, an important separation is instated between nurse and patient. As one nurse told us, a uniform "is a buffer between who you are and what job you're doing - what you need to do. You're not going to be crying in the corner - in scrubs." In a hospital, a nurse touches bodies in a way that would not be appropriate in an ordinary setting, and so the uniform creates the *farness* necessary for both patient and nurse to cope with such intimacy. Creating separation helps the nurse to focus on the situation in a suitable way for the overarching purpose of becoming a caring presence.

In the telenursing environment, this need for separation has to be negotiated differently. Creating a sense of separation was important for the nurses, especially for avoiding questions about their own lives and personal circumstances. The nurses discussed cultivating their "phone voice" to better negotiate the balancing of the intimacy of their calls with a separation that was necessary for the call to be effective and for the nurse to feel comfortable as well:

> I do, definitely, have a phone voice that I use. So I think that is another separation…the same as if you are nursing someone in hospital. You don't just, like, stand there with your shoulders hunched and say, "oh…" – while they're just talking at you…You kind of need to assert your presence and look interested and really be available…

The way in which nurses "asserted" their presence with their callers and patients was frequently discussed with such reference to bodily metaphors – "standing one's ground", "putting a hand on a shoulder", "being there" for and with a patient. What is second nature in the hospital environment – using the body and equipment to signal both intimacy and separation – is here translated by the nurses in a skillful way into a remote healthcare environment.

In sum, we argue that becoming present in this way requires a balancing of *nearness* and *farness*. Past experience informs how the situation shows up while the negotiation of intimacy (nearness) and separation (farness) is important for maintaining the appropriate stance from which the nurse can become a caring presence for the patient, in the best possible way.

Freedom and Control

Whereas negotiating of intimacy and separation in the balance of *nearness* and *farness* pertains to the comportment towards the patient as such, the second dimension of balancing distance refers to how the nurses "take control of the situation" for the duration of the call, in coming to grasp the "full picture" of the encounter. By this we mean that the nurse needs to both control what is disclosed while also giving the patient freedom to express what is important to them. A balance of both *control* and *freedom* are required for the nurse to become present with the patient in a caring way.

While controlling another person can go too far, being a caring presence usually requires one party taking some responsibility for another. To take an example from nursing in a hospital, giving a long-term patient the choice of whether or not to get out of bed in the morning can actually be understood as uncaring and even neglectful, because part of a nurse's role is to take responsibility for the patient (Mol, 2008). In order to be a caring presence with and for the patient then, a degree of control is necessary. However, unlike in some hospital scenarios, the patient is always taking part in this telenursing service voluntarily and can exit the encounter at any time. They are free to hang up the phone whenever they wish. This means that the nurse needs to carefully negotiate how forcefully she guides the encounter.

A nurse explained that in order to get the information that was needed to reach a disposition, it was sometimes necessary to take charge by interrupting the patient. She further elaborated on how she has learned to direct patients:

> I used to say, "oh, excuse me, ah, ah…" – and they would just, kind of, keep going on. So I really needed to interrupt them and I do interrupt people now. I do definitely get what they call "call control". So I just keep interrupting and saying, "I need to stop you there, now" - by using a clear, I guess, direct voice. Which still sounds caring.

Here the nurse describes the need to be assertive while still coming across as caring. The interruption in the statement above was also evident on the recorded call we listed to. We noted however that each time the nurse redirected the patient through statements like "I need to stop you there", the patient was given a new opportunity to offer input that was more relevant to the nurse's efforts to triage the patient.

The duality that is being balanced here is a kind of distance that can be best understood through the metaphor of *grip*. If the nurse grips the flow of the situation too tightly, by exerting too much control over what is disclosed, the patient will not have enough room to express themselves, in order to share their predicament. However, if the nurse is too relaxed in their direction of the situation, the patient would reportedly offer irrelevant information that could get in the way of effective care. In some ways, the DSS questions assisted the nurse in controlling the situation, however we were told the way in which some scripted questions were phrased could distract the patient or lead them off track. The nurse therefore translated the prompts into more nuanced questions, which enabled an appropriate, relevant flow of information to emerge.

We conclude that in a telenursing encounter, the caller is the nurse's "eyes and ears" (Aanestad, 2003, p. 18) and so they must feel appropriately free to speak willingly, while the nurse needs to direct the flow of information. We thus argue that for two people to feel they are comfortably present with one another, these intensities of freedom and control need to be balanced in response to the unfolding situation. In the recorded call we listened to, the subtle and skillful way in which the flow of the encounter was negotiated by the nurse was apparent. The nurse would carefully balance asking questions with showing concern for the patient while giving them room to speak so they could express their own version of events and what was important to them. At times, the way in which the nurse persisted with questions prompted by the DSS could seem somewhat brusque, but it kept the situation on track and made it possible for the nurse to become a caring presence for the patient.

In the following section we will show how our theorizing, brought about by the problematization of presence inspired by our case and alternative conceptual material, enabled us to derive a model that shows the *dualities of presencing work* as a balancing of *nearness/farness* and *freedom/control*. While analytically separable the model demonstrates how these dualities are fundamentally linked in practice.

A Model of Presencing Work

The conceptual model shown in Figure **1** is the result of our abductive process (Dubois & Gadde, 2014) whereby our empirical case prompted a problematization (Alvesson & Sandberg, 2011) of the assumptions that have guided our initial understanding of the concept of presence. In responding to this problematization, alternative theoretical ground was laid that informed the theoretical insights outlined in the previous section. Our insights are captured in the notion of *presencing work*, which we conceptualize as involving the balancing of two dualities of distance: *Nearness*/*Farness* and *Freedom*/*Control*. We now visualize these dualities as fundamentally connected. In doing so our model illustrates how presence is a skillful, relational activity that fundamentally requires *involvement* with another and ongoing balancing efforts.

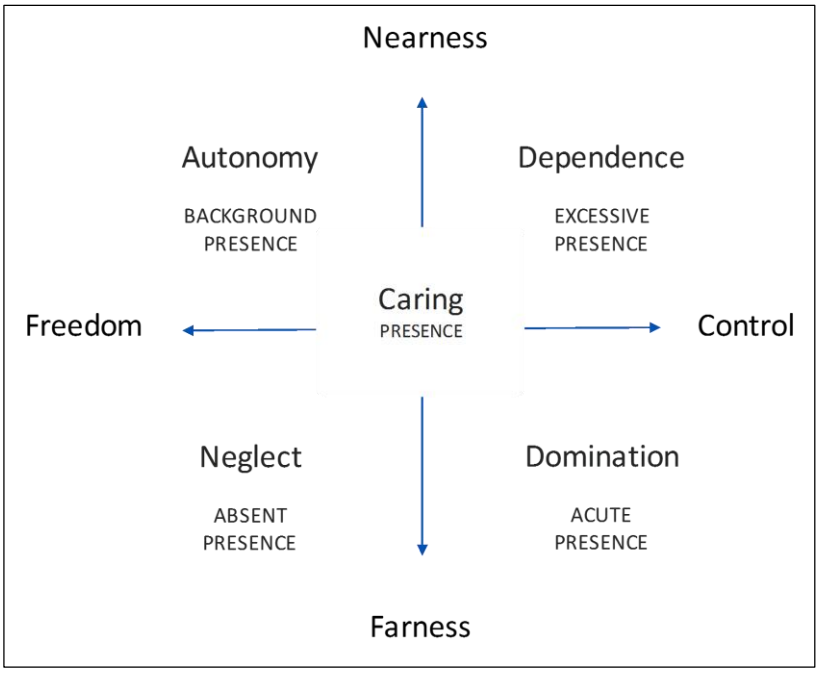

Figure 1 – The Dualities of Presencing Work

Within this model of *the dualities of presencing work*, we further argue that presence does not stand in a straightforward binary relationship to *absence*. Rather, it is possible to enact different *modes of presence*. The *ideal* mode of presence is depicted at the center of the two dualities as a *caring presence*. We depict alternate modes of presence as showing up in the relational experiences of *autonomy*, *dependence*, *domination*, and *neglect*. The divergent quadrants show the modes of presence that are enacted when balance is not maintained. We do not intend to imply that these quadrants are "bad" in any normative sense but rather that they are shades of what may be experienced in the inevitable and necessary adjustments involved in presencing work. We now explain these quadrants briefly with empirical illustrations motivated by the nursing case.

Autonomy

Where nearness is established in a relationship, for example through shared history and empathy, and where interactions offer freedom of choice, the relationship tends towards one of *autonomy*, where presence is backgrounded. In the nursing case, this would mean the patient is left to cope with situation without the guidance of the nurse. The patient may feel empowered but also frustrated, because they are left without expert attention and need to make decisions about their care themselves.

Dependence

Where nearness is enacted and control is exerted, a relationship tends towards *dependence*. In this scenario there is an intimacy between the two parties but one party is dependent on the other for direction. This involves a sense of excessive presence that may be overwhelming. For example, a patient might feel that they are being talked down to and patronized; treated like a child, and with little sense of how they might cope without the nurse.

Domination

Where a farness is exerted – a sense of separation but also control is maintained, presence appears in the form of *domination*. This is a regulatory influence that may be felt as an acute, oppressive presence. One party keeps the other at arm's length, and yet their presence exerts a defining influence on the other's activities. This may come about for example if a nurse pressures the caller in order to get the call finished as quickly as possible. The patient feels brusquely dealt with and does not have room to ask questions or express themselves fully. The patient may feel bullied or ill-treated.

Neglect

When one party is involved with another but maintains a strong sense of separation while the other is also given complete freedom, presence is experienced as a kind of absence understood as *neglect*. In taking no responsibility for the other while enacting a farness, this form of presence is palpable in its absence. This is a form of presence because it stands against an involvement – one party is important to another but is not with them in an existential sense. In the nursing case this would translate into a kind of non-performance, as operating in a way that shows disinterest towards the patient, which would likely result in the nurse's dismissal.

On distributed presencing work

The four quadrants in our model describe different *modes* of presence that are balanced in the course of presencing work. In remote work, technologies are involved in this balancing process. They become "equipment" (Riemer & Johnston, 2014; Sandberg & Dall'Alba, 2009) with which and through which presence is achieved, maintained and negotiated. The degree to which this is successful in comparison with co-located engagements depends largely on how skillfully presencing work is enacted – it is therefore in this model not practical to explain which technologies will *create* presence, rather the model is meant to assist in the exploration of how practitioners perform *presencing work* with and through the technologies that have become part of their shared practice.

We point out that what we call presencing work is largely taken-for-granted in co-located practice, to the extent that the efforts and equipment involved in these activities and negotiations may not be noticed at all (uniforms, bodily contact, shift changes, monitoring schedules, etc.). The telenursing example however provided grounds from which to see how these activities are translating into other contexts, and this new context has, we argue, highlighted the *dualities of distance* as being both conceptually and practically significant. We have argued that presencing work involves a balancing act of dualities, so that when the dualities are out of balance, the results tend towards more extreme modes of presence. It is therefore the negotiation of these dualities in response to the unique situation, according to one's involvement in it, which exemplifies the skill of presencing work.

Conclusion

We have problematized dominant conceptualizations of presence by focusing on an empirical case of telenursing, which can be thought of as a "hybrid" of two empirical contexts: nursing and distributed work. We have approached this problematization of presence through abductive case study research. We began by outlining how presence is commonly understood in nursing and IS literature. This theoretical background informed our "reading" of the case, in that certain incongruences between received wisdom and the case material stood out to us as surprising. In particular, we noted that past experience and the role of the body were important for the enactment of presence, and that technology was necessary but not

sufficient for the nurse to become present with her patient, contrary to what some IS literature stipulates. In particular, these findings counter traditional understandings of presence as being either necessarily co-located or as being created *by* technology.

In response to these surprising findings, we returned to the conceptual basis of presence in nursing. By looking more deeply at this literature, we found that in an existential philosophical orientation, distance is treated not as a geographic fact but as something that is negotiated in our involvement with others and the world from an embodied stance. This new conceptual understanding allowed us to derive novel insights from our case, which we have expressed in the form of a model of *the dualities of presencing work*. In this model, we firstly show that there are different "modes" of presence and that being a "caring presence" for another is achievable in a distributed context, but it requires skill gained through experience as well as ongoing work. Secondly we demonstrate that "presence" is not a *condition for* work to be ascertained a priori but an integral *part of* work and thus inherently characteristic of the practice of telenursing. Our model, findings, and the research process contribute to HISR, IS theory, and IS research practice in the following ways.

To the field of HISR we contribute a model of *presencing work*, which we developed by drawing on both IS and health literature in an effort to "push the contextual envelope" (Chiasson & Davidson, 2004). We suggest that this model advances our appreciation and understanding of the skillful, embodied work that goes into becoming a caring presence for patients in remote healthcare environments. This model further adds nuance to current understandings of presence, because it highlights five modes of presence that a practitioner can enact. This contribution problematizes the dominant binary model, which places presence on one side of a dichotomy against *absence*. The contribution is significant because it offers potential insight to practitioners who are reflecting on their caring practice, and also to researchers who are interested in further studying how skillful balancing of the *dualities of distance* can be learned and enacted with technologies in various healthcare settings, which occupy different positions on the co-located/distributed continuum.

To IS theory we contribute a more nuanced understanding of technology-mediated presence. We argue that presence in distributed settings requires technology, but is not created *by* technology. This contribution takes the form of a provocation to the commonly held assumption that presence is *best* achieved in a co-located, face-to-face setting. We locate this assumption in literature that seeks to *replicate* face-to-face interaction through the use of technologies that create an "illusion" of co-location by surreptitiously splitting mind and body. By reframing presence as an active, relational involvement, we shift the IS research and design focus away from a replication of certain physical arrangements and towards thinking about how technology becomes *equipment* (Riemer & Johnston, 2014) for presencing work where it constitutes and supports skillful work practices that bring about presence as a by-product.

Finally, to IS research practice we contribute an illustration of an abductive case study method. In presenting our research as a critical dialogue between a range of theoretical material and an empirical case, we have embraced the kind of hybridity that a context such as telehealth requires. In the way we have structured our paper, we show how extant literature can be held up to case material, where what is revealed is the assumptions that have underpinned current understandings of a particular concept. We then model how alternative conceptual material can be drawn on to respond to the surprising case findings, a partnering that is subsequently used to generate novel insights. In our particular case, these insights were synthesized into a conceptual model that offers a new way of thinking about the problematized concept of presence in distributed work. We therefore show how this non-linear research approach both deconstructs and constructs, and that this rebuilding can shed new light on concepts that are being increasingly challenged by technologically-infused research environments.

Our insights become relevant against the growing trend of increasingly distributed and flexible working arrangements, enabled and supported by technology. We contend that our model of presencing work is relevant to researchers who are interested in better understanding how caring relationships are maintained in this broader context of ICT-enabled remote work. For example, the presencing work efforts that we have conceptualized in the context of nursing practice may also translate to managerial relationships in distributed organizations. While the nuances of activities involved in balancing the dualities of distance will have to be contextually framed, we suggest that our model offers a starting point for further exploration into the intricacies of presencing work, in a range of organizational settings.

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