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Current Practices in Workplace and Organizational Learning

Revisiting the Classics and Advancing Knowledge

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Preface

The central question that guides this book's overall argument is what may be gained by revisiting learning in light of the new vocabulary on developing humans and organizations. The book explores how classical ideas of workplace learning and organizational learning can extend our understanding of and ability to accomplish organizational tasks and challenges. The idea for this book was born out of a long-lasting interest in the role and effects of learning in organizations as well as a curiosity to investigate how classical theories about learning can potentially substantiate and refine knowledge of innovation, knowledge sharing or co-creation, for instance. The authors in this collection explore different organizational tensions and challenges and their linkages to classical ideas about learning. All the chapters contribute unique, empirically grounded perspectives and insights that (based on different assumptions, backgrounds and contexts) shed light on the significance of learning in today's organizations. Overall, our ambition with the book is to advance knowledge about learning in current organizational practices by revisiting the classics of workplace and organizational learning. How can we understand current organizational challenges using classical learning theories? We hope that this approach will enable us to tease out possible alternative approaches to conceptualizing learning in organizations. It has long been argued that learning is not only a means of achieving something else (sharing knowledge or innovating procedures at work), but that it can also be seen as an integrated activity characterizing organizational work (Brown & Duguid, 1991; Orr, 1996). We believe that each chapter in this edited volume contributes an important awareness of how such an understanding of learning can be revitalized and developed. We outline the framework and overall line of argument by way of which we have assembled and structured the book below.

The central assumption that guides this book is that research and practice about learning at the workplace have lost their critical edge recently. While ideas of learning at the workplace may have had their heyday, they have indeed had an influential position. We scrutinize what has happened to workplace learning and organizational learning, and we explore what has replaced it. In addition, we discuss

the reasons why it should be revitalized. Today, themes such as co-creation, knowledge sharing, innovating, organizing and educating are apparently preferred and are referred to as theoretical fields as well as fields of organizational practice. In the chapters of this book, it is argued that the critical power of learning can be regained by engaging in a discussion on new grounds about how new fields of organizational practice can be substantiated by such issues as learning arrangements, the organization of learning, learning strategies and social worlds of learning. Hence, the aim of this book is to both advance and recapture our knowledge of learning in today's increasingly complex and digitalized world of work and organizing. We do this by revisiting classical research on workplace and organizational learning (for instance but not exclusively Argyris & Schön, 1978; Bateson, 1972; Blumer, 1969; Follett, 1995 [1949]). We discuss how insights from this body of literature evoke new meaning, set new standards and rethink present situations such as the technological intensification of care work and/or for instance organizing and co-creating new procedures for self-managing teams.

Issues of decision-making and learning have enjoyed pronounced attention in education studies and organizational studies for a long time, highlighting the notion that learning is what informs decision-making. In his book *Administrative Behavior* (1947), Herbert A. Simon asserted a long time ago that decision-making is at the heart of administration and that the vocabulary of administrative theory must be derived from the logic of human choice. By way of this argument he rejected the notion of an omniscient 'economic man' capable of making decisions that produce the greatest benefit possible, proposing instead the idea of an administrative man who 'satisfices' that is, looks for a course of action that is satisfactory. Ever since then, organization studies have chased a research strategy that takes the limits of rationality of organizational life into account. Organizational learning is a research tradition born out of this, speaking to notions of search and learning processes in the light of bounded rationality.

Organizations as well as their management and control have been subject to scrutiny. Learning comprises a concern for governance and the coordination and control of work, and still constitutes an important vessel in the movement in organization studies from rationalistic understandings of organizations towards organizations as open systems constituted by communities of practices, processes, sense-making and socio-material practices (e.g. Easterby-Smith et al., 2000; Easterby-Smith & Lyles, 2011). In addition, there are firm links from both organization studies and education studies towards more or less normative intervention, indicating that research on learning is never only descriptive but embraces powerful ambitions of making changes for the better. Over the years, there have been many suggestions about how to design and implement helpful interventions.

In particular, during the 1990s and some way into the 2000s, approaches in relation to learning were popular and were referred to a great deal by academics as well as practitioners, with approaches, concepts and methods being debated and drawn upon in many subfields (see e.g. Easterby-Smith, 1997; Easterby-Smith et al., 1998). The broad field of organizational and workplace learning has always

embraced a multiplicity of understandings of the nature and workings of learning and levels of analysis (individual, group, organization). Today, there are many indications that other approaches in theory and practice have replaced organizational learning and workplace learning. The chapters of this book explore these shifts in order to substantiate the scholarly fields and fields of organizational practice mentioned above. The overall aim is to strengthen the explanatory reach and practical relevance by tracing how these shifts variously draw on as well as add to research on workplace and organizational learning. We posit that although they are often not strongly articulated, the new types of organizational practice mentioned above comprise and engage with learning processes in various ways. In order to understand the practical use of current organizational practices, we strive for analyses, further qualification and explanatory power by revisiting and revitalizing insights from the past belonging to the fields of workplace learning and organizational learning. As mentioned above, this is a field which is highly concerned with how organizations and organization members learn to share knowledge, co-create and innovate while they solve problems, accomplish their daily work tasks and work towards some sort of a common purpose.

Our concern and argument are that classical ideas about learning at the workplace play an important and underappreciated role in much of the current work and debates among the scholars, consultants and managers who are engaged in organizational development, leadership training, change and adaptation. This, we argue, is critical not only to the fields of co-creating, knowledge sharing, innovation, organizing and educating (which is what we deal with in this book) but also to our understanding of how to design sustainable learning in organizations. The aim is to substantiate the fields of organizational practice discussed here and to move towards more sustainable modes of thinking, theorizing and practising organizational learning and workplace learning.

The chapters explore how various organizational practices link to and may become informed and enlightened by classical paradigms of learning. These organizational practices comprise self-managing teams at a library, collaborative networks across professions, the implementation of national change strategies, the adaptation of new technology among healthcare professionals, 'everyday talks-to-go' among colleagues, knowledge sharing across units, disciplines or institutions, social innovation in elderly care or the co-creation of new teaching methods and many others. In different ways, the chapters trace how the literature on workplace learning and organizational learning relates and speaks to these current emerging organizational practices. They scrutinize the dilemmas and barriers that such real-time practices in and across organizations lead to in terms of classical learning literature. Accordingly, the cases reported provide valuable empirical insights into the role and significance of learning. Drawing on diverse empirical contexts, they show us first-hand glimpses of how learning is involved in everyday work processes and activities. In this way, the chapters point out interesting pathways in order to comprehend organizational learning not only as an academic discipline and not only as a means to achieve organizational aims such as fulfilling a strategy. Instead, they show how learning can be approached as an integrated part of the day-to-day

practices of organizations – as a core activity and integrated element of what makes organizations. It is examples of the latter that the chapters in this book point out, expressed in different ways and informed in different ways by the classics.

The book is organized in five sections according to the empirical organizational practices that the chapters discuss: Co-creating, Knowledge Sharing, Innovating, Organizing and Educating. There are of course many ways to order and categorize the organizational challenges that each of the chapters articulate. However, after several readings and discussions of the chapters, we believe that the grouping of chapters into these five categories constitutes a good basis for discussing and relating to the contributions in this collection. Our guiding question for this endeavour is how classical learning literature can evoke new meanings, set new agendas and help to rethink present situations in these five organizational practices.

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Introduction of Chapters

The book is structured in five sections:

- Co-creating (Jonsson; Aakjaer and Pallesen)
- Knowledge Sharing (Elkjaer, Lotz and Nickelsen; Moeller)
- Innovating (Wegener, Stenholt and Lovring; Scheuer and Simonsen; Dupret; Rosenow-Gerhard)
- Organizing (Elmholdt and Elmholdt; Nickelsen and Rath; Yli-Kauhaluoma)
- Educating (Dahl and Irgens; Walker and Plotnikof; Stegeager and Sørensen)

The contributions are grouped below according to the fields of organizational practice that each of them addresses. In summarizing the chapters, we attempt to highlight key outcomes as well as how the chapters contribute to theory development by way of revisiting classical ideas about learning.

Co-creating

Current debates about the need for more collaboration, teamwork, partnerships, co-design, co-production, outsourcing, mergers, etc. exemplify the increasingly significant role of co-creation in organizations today. Initially, co-creation was introduced as a tool for engaging firms, customers and suppliers in joint value creation, product development and design (e.g. Prahalad & Ramaswamy, 2004). This perspective provided valuable insights into co-creation as a management strategy for facilitating value creation between firms and their customers. Subsequently, both scholars and practitioners argued that the demands for complex knowledge-based production and the ability to recombine and make new associations in order to learn and innovate called for intensified practices of co-creation both inside organizations and across various organizational settings. This view emphasized co-creation as an increasingly central principle of social organization in both

private and public sectors (e.g. Adler & Heckscher, 2006). Since then, growing attention has been paid to understanding co-creation as an organizational process involving various organizational actors engaged in their day-to-day practices getting work done (e.g. Bason, 2010; Brandsen et al., 2018; Lotz, 2009). Using co-creation as a metaphor to describe the encounters and activities by which actors create products, solutions or other processes that none of them could or would have achieved (working) alone draws attention to the micro-processes and everyday practices of co-creating among people in organizations. The first two chapters provide stories of organizational practices of co-creation in companies, among scholars and practitioners and among professionals and senior citizens. Both contributions draw on classical ideas about learning as situational, social and transactional – as 'collective making' – in order to extend and enhance knowledge about the dynamics of co-creating in the various organizational contexts under study.

Jonsson draws on her personal experiences as a scholar in organizational learning and presents a reflexive note about what she has learnt from research and practice in attempting to understand and make organizational learning work. The chapter provides a convenient overview of some of the key debates and ongoing 'confusions' within the field of knowing and learning in organizations. This field, it is argued, is characterized by too many concepts used for describing similar issues about knowledge sharing and learning in organizations. Consequently, Jonsson presents a quest for more collaborative understandings, dialogue and reflexive practices among both researchers and practitioners as to how learning unfolds in organizations. Reporting from previous case studies conducted empirically in different companies, the chapter illustrates how varying opinions on how to ensure and understand learning are at stake even within the same organization. For example, while Chinese co-workers seemed to speak about learning in general terms, in the same company Swedish co-workers preferred to talk about collaboration, co-creation or co-producing. Sometimes respondents did not even think of, or discuss, organizational learning, or even use the word 'learning', talking instead about and engaging in benchmarking, copying or collaboration, for instance. Based on these and other lessons learnt from practice about how an organization in fact does learn, Jonsson thus demonstrates that organizational learning is best understood through the analytical lens of doing things together as suggested by the practice-based perspective on learning and knowing (e.g. Gherardi, 2006). In this light, she points to a need to think and (re)learn about organizational learning – both in theory and in practice – rather than engaging in new concepts. Such an approach implies a return to the foundations of organizational learning (Argyris & Schön, 1996; Schön, 1983), where researchers observe and learn from reflective practitioners, but also involves observing and learning from reflective researchers. The chapter concludes that the ability to learn about learning in practice calls for collaborative learning grounded on reflexive dialogical practices and encounters of co-creation. Jonsson's reflexive note, and in particular her emphasis on understanding organizational learning through the lens of

doing things together, advance our knowledge of co-creation by shedding light on some fundamental links between co-creating and learning in today's organization.

Aakjaer and Pallesen scrutinize co-production within the empirical context of health-promoting services among senior citizens in a municipality in Denmark. In the Danish public-health sector, new digital solutions (e.g. telecare, digital communication platforms and self-service solutions) are increasingly being introduced to facilitate co-production between public-sector professionals and citizens. Drawing on a pragmatist-inspired learning perspective to understand processes of co-production, the chapter analyses how the introduction of a digital platform to support health-promoting activities affects and reconfigures the practices of a community for elderly people living with a chronic lung condition. The aim of the digital platform is to extend the rehabilitation practice in order to engage senior citizens of the lung community as co-producers of service. The chapter employs the concept of infrastructuring as an analytical entry point to study co-production as a socio-material learning arrangement. The argument is that infrastructuring aligns with a practice-based understanding of learning as situated, social and transactional (e.g. Brandi & Elkjaer, 2013; Gherardi, 2011). Empirically, the study shows that the introduction of a digital platform affects current practices, evokes past experiences and sparks new future aspirations as the group engages in inquiries about how the activities of the community can be expanded or renewed to include for example walks, dinners or digital training programmes. The chapter contributes by showing how this extension in commitments creates tensions and uncertainties as the socio-material and technological conditions are negotiated. It is argued that by virtue of these (creative) tensions, co-production processes constitute a potential for organizational learning. Aakjaer and Pallesen's research refines knowledge by giving importance to (and empirical accounts of) the ways in which organizational practices of co-production entail learning processes based on tensions and joint socio-material endeavours when a new technology (in this case a digital platform) is introduced.

Knowledge Sharing

The next two chapters report on organizational practices of knowledge sharing across divides of respectively cross-professional teams and formal-informal settings. While the literature on knowledge management typically focuses on knowledge sharing across boundaries as transfer or translation/transformation processes facilitated by the construction of shared commitments and the use of boundary-spanning mechanisms, these chapters revisit classical pragmatist ideas about learning and develop our understanding of knowledge sharing as entangled in everyday work tasks, exchanges and activities at work. In this way, they provide insights into how knowledge sharing as an organizational practice (and organizational resource) is fuelled by day-to-day encounters of people solving problems and dealing with challenging situations at work.

Elkjaer, Lotz and Nickelsen present findings from a case study of an intervention project aimed at developing knowledge-sharing practices through inter-professional teams in a Danish hospice. The management had organized the hospice into four professional teams of nurses and one cross-professional team comprising all other professionals. This set-up caused tension and a sense of exclusion among the nurses. The case is used to explore the discourses and practical dilemmas of inter-professional coordination and the implications for knowledge sharing across professional boundaries in a relatively small organization. The authors draw on Mary Parker Follett's (1924 [1930], 1995 [1949]) notion of coordination as integration to discuss the difficulties of knowledge sharing across the teams studied. According to Follett, coordination in organizations is about creating unity among differences through integration – not through the experience of consensus or a common ground. The integration of differences always implies a re-evaluation of interest. In a Follett-inspired perspective, knowledge sharing therefore evolves in the very process of the integration of differences. Follett introduces three factors that can facilitate coordination: (1) an understanding of integration as a method of settling differences; (2) a system of cross-functioning that allows both horizontal and vertical lines of communication within organizational hierarchies; and (3) a sense of collective responsibility for ensuring the interweaving of differences. These three 'markers' are used as a sensitizing frame to explore the conflicting interest and different claims related to the challenges of coordinating differences at the hospice. Applying this framework, the chapter highlights three recurrent dilemmas that complicate the coordination of inter-professional teams: (A) differences in tasks and time, (B) differences in sense of responsibility, and (C) knowledge hierarchies. Revisiting Follett's classical notion of coordination as integration, the chapter presents an understanding of coordination as knowledge-sharing relations across differences that involve and engage learning accomplished not only through consensus but also through tensions and conflict. In this way, the chapter offers a set of alternative ways of thinking about and working with differences in organizations – not as obstacles but as opportunities for integration and thus comprehensive knowledge sharing in organizations.

Moeller explores the potentiality of 'talks-to-go' as practices of workplace learning. Her point of departure is an ethnographic study of knowledge-sharing encounters in elderly care work and vocational education. These discussions among care workers, trainees and supervisors are different from formal organizational knowledge-sharing practices, she argues, as they are momentary, unplanned and typically triggered by colleagues asking for help ('Do you have a moment?') in hallways and coffee rooms during their daily workflow when on the move between work tasks. By focusing on these talks on the go as knowledge-sharing practices, the chapter seeks to go beyond dichotomies of informality and formality, and learning and work, by analysing them in light of pragmatist learning theory. Moeller applies an understanding of learning as a social matter of shared inquiry into uncertain situations that professionals stumble upon, leaving them in doubt and therefore triggering inquiry and a need for knowledge. In this way, she shows that 'talks-to-go' have the potential to move across and transcend formal and informal

organizational settings when professionals acknowledge the uncertainty in situations where an answer is not straightforward and engage in co-creational inquiry. The chapter offers distinctive insights into how 'talks-to-go' enable co-creational learning among organizational members. It also demonstrates that these talks have the potential to serve as 'transit spaces' that combine formal and informal experiences and can transcend formal and informal organizational divides. Her approach enables us to see that knowledge-sharing practices such as 'talks-to-go' have the capacity to transform the experience of solitude (e.g. when dealing with uncertain work situations) into a social matter of learning (i.e. spark co-creational inquiry). In this way, they have the potential to give rise to a shared development of work practices and foster workplace learning.

Innovating

In the past, conceptualizations of innovation have focused typically on macro-phenomena like the creation of economic value (e.g. Schumpeter, 1934), the development of new products and technology (e.g. Cooper, 1990) or open innovation (e.g. Chesbrough, 2003). During recent decades, increasing attention has also been given to non-R&D-based innovative forms. To improve their innovative performance, organizations have faced a need to combine knowledge from multiple sources and to decentralize responsibilities and innovative search practices to various levels and groupings which are able to respond quickly to new situations. Consequently, not only R&D units but also employees and managers at various levels of organizations have been recognized as holding the potential to engage in a distributed search for innovations. For example, when workers develop products in close collaboration with constructers in search for better technical solutions with suppliers, or find novel solutions for customers by recombining knowledge and practices in innovative ways. Employee-driven innovation (Høyrup et al., 2012; Lotz, 2018) and day-to-day innovative learning (e.g. Ellström, 2010; Fenwick, 2003; Jensen et al., 2007) are examples of such practice-based understandings of distributed innovation. The next four chapters all provide empirical accounts of practice-based forms of innovation and analyse the inherent linkages between innovation and learning at work. Exploring organizational practices of innovating such as problem-solving, tinkering with technology, gamification and innovation labs, the chapters draw attention to the incremental everyday changes of workplace activities and practices. They also shed light on the recursive learning processes that follow from employees' different ways of participation in such innovative organizational practices.

Wegener, Stenholt and Lovring investigate workplace innovation within the context of elderly care practices in Denmark. Based on qualitative fieldwork data, the chapter illustrates that the potential for workplace innovation appeared hard to realize in a new elderly care facility characterized by a great amount of innovation in

the form of new technology. Employees were busy solving problems, but this problem-solving did not seem to provide grounds for long-lasting changes for the better – neither for themselves nor the residents. Instead, problem-solving tended to drain employees, leaving them with little mental energy. While highlighted in the literature as a driver for workplace innovation, employee problem-solving resulted in the opposite: tasks that merely added to their workload. Based on this finding, the authors revisit the term 'wicked problem' (Rittel & Webber, 1973) in order to point out that problem-framing and problem-solving are one intertwined process. More-over, they show that although 'wicked problem' is a popular term often used to explain why innovation is needed, the problem-framing aspect is rarely addressed in depth. One perspective on problem-framing emphasizes that employees' experience, collaboration and learning are necessary if workplace innovation is to take place. Accordingly, the chapter suggests that in order to contribute to workplace innova-tion, employees must be involved in problem-framing and that problem-framing should be given more attention in studies of workplace innovation. Applying an understanding of workplace innovation as negotiated processes of learning and participation (e.g. Billett, 2012), the chapter enhances awareness of the importance of involvement in both problem-solving and problem-framing activities when employees are given the opportunity to innovate at work.

Scheuer and Simonsen show how Jarvis's classical model of learning (Jarvis, 2006) and the ventriloquist perspective (Cooren, 2010) supplement each other and together sharpen our understanding of the role of learning in developing technology. Empirically, they discuss an emergency department at a hospital that experiences crowding when the identified need for services exceeds available resources. As a result, the department sought help to design a software interface acting as a flow monitor. The monitor's purpose was to allow doctors and nurses to intervene in the patient flow to avoid crowding. The analysis suggests that Jarvis's model may contribute to a more sophisticated understanding of how learning is enmeshed in the making of socio-technical systems. Jarvis's model of learning offers insight into individual and collective learning understood as cognitive processes. However, the model lacks an understanding of how organizations as socio-technical systems are constructed based on such learning processes, that is how people and matter are interwoven. Cooren's ventriloquist perspective explains how socio-technical sys-tems are co-constructed through ventriloquist communication processes. Thus, Jarvis and Cooren supplement each other and together they help to enrich the understanding of technology as related to learning.

Dupret discusses gamification as learning. She does so because a growing body of evidence suggests that gamification can help us engage with complex practices in the workplace through the compression of time, through specific processes of reflection, and by mimicking difficult and taboo topics from real life. Gaming from a human-istic design approach (Deterding, 2019) gives the opportunity to take one step back and deal with dilemmas in ethical ways. Empirically, the chapter draws on analysis of a gaming session comprising a group of game developers. The focus of the discussion is what gaming means in contemporary organizational practice, and

which kinds of learning gamification may provide. The notion of 'functional equivalence' raises the question of how close or far from real-life situations gamification needs to be in order to provide productive learning. The conclusion is that gamification may create an acceleration in obtaining transparency and possibly viewing potential conflicts from multiple perspectives through the game scenarios, thereby creating a space to engage in possible solutions. Gamification may also be a good opportunity to learn about the dilemmas that organizational change generates. Gamification may also get staff quickly on board in terms of the vision, goals and output of an anticipated organizational change.

Rosenow-Gerhard scrutinizes the practice of an innovation lab which is supposed to facilitate entrepreneurial learning for public servants in Germany. In order to take a closer look at what is going on within this contemporary organizational practice, she tests Illeris's (2007) learning triangle. This analytical approach focuses on the practice of the lab in terms of content, incentive/affects and social interaction – the dimensions of Illeris's learning theory. The data was collected using semi-structured interviews and participatory observation among participants and supervisors representing both the innovation lab and their home organizations. One of the basic tenets of the innovation lab is that individual and organizational learning co-occur. The analysis unfolds a fresh perspective on what is enacted while participants strive to acquire entrepreneurial competencies. The simultaneous focus on content, incentive/affect and social interaction helps us to see multiple discourses and practices of entrepreneurial learning. When concentrating on innovation, the product is usually in focus, Gerhard proposes. Thus, she claims that there is a loss of understanding of what leads to innovation. We see more when we revert from innovation to learning, she holds. By focusing on content, incentive/affects and social interaction, we understand more of the supporting activities leading to innovation and entrepreneurial competencies.

Organizing

Karl Weick noted that it is all about organizing, not organizations – not structure, but processes: 'The word, organization, is a noun and it is also a myth. If one looks for an organization one will not find it. What will be found is that there are events, linked together, that transpire within concrete walls and these sequences, their pathways, their timing, are the forms we erroneously make into substances when we talk about an organization' (Weick, 1974 358). Ever since, Weick's work on organizing (and sense-making) has contributed significantly towards efforts in organization theory to explore organization as process. Many other efforts in organization studies have followed. The next three contributions continue this tradition. Inspired by theorists such as Bruno Latour, John Law and Silvia Gherardi, they draw attention to the processual and relational dynamics of organizational life. They explore organizational practices of organizing as collaborative learning endeavours within the

empirical context of two healthcare institutions in Denmark and a public library in Finland. From a processual and relational approach, the chapters look into how respectively the making of a temporary organization, the implementation of new telemonitoring services and the introduction of self-managing teams are organized and managed in concrete social situations, as well as how these organizational initiatives implicate situated collaborative learning relations. By way of revisiting classical social learning perspectives and zooming in on the actual interactions of organizing (in this case) networks of communities, social worlds of joint action or teams, the chapters refine understandings of the way organizing entails collaborative learning relations.

Elmholdt and Elmholdt propose that the early literature on organizational learning (Argyris & Schön, 1996) considered close links between individual and organizational learning and stressed the importance of creating shared cognitive maps of organization. While this early literature provided important insights concerning how to accomplish intra-organizational learning, it favoured a cognitive map of the organization. Thus, it downplayed the role of materialities and other organizations in organizing learning. Increasingly, this understanding has been replaced by a focus on how socio-material configurations enable learning to occur in and between organizations, or prevent it from doing so. Moving beyond cognitive understandings, Elmholdt and Elmholdt revisit the crucial question of 'what is an organization that it may learn'. They advance knowledge by adding actor network theory to early theories of learning. This sharpens the notion of organizational learning and is illustrated by the making of a performative temporary healthcare organization in support of the elderly comprising a network of actors (the hospital, the municipality and the general practitioners). Instead of a cognitive map of learning, the project organization mirrored a real-world organization of learning. Rather than a theory of action, this temporary organization embraces multiple centres speaking on behalf of the project organization. By making the learning process pluricentric, thereby refraining from reducing it to a theory of action in the heads of partners, Elmholdt and Elmholdt contribute a great deal to the development of learning theory.

Nickelsen and Rath scrutinize the implementation of chronic obstructive pulmonary disease telemonitoring services among three social worlds of healthcare – a health centre, general practitioners and an outpatient clinic. They discuss the effects of an experimental workshop in terms of developing cross-site collaboration as well as how to organize the telemonitoring service. They found inspiration in one of the classical perspectives in social psychology, symbolic interactionism. According to this approach, human agents piece action together by mutually interpreting gestures, language and objects, thereby learning by adapting to the ecology of situations. Nickelsen and Rath advance knowledge by adding a concept of learning to contemporary social world analysis. Thinking with classical interactionism about learning makes it possible to sharpen social world analysis. Not only did the authors identify a number of social worlds of care characterized by certain discourses, commitments and objects, the interactionist notion of learning also helped to open up the social worlds towards each other during the workshop. Nickelsen and Rath argue that their

participants thus learned to cope with telemonitoring as a complex and contested arena with different care values, standards and financial arrangements. By adding classical interactionist learning theory to social world analysis, Nickelsen and Rath helped the participants to reach out across social worlds and thus they enriched telemonitoring and learned collaborative practices.

Yli-Kauhaluoma examines the way in which self-managing teams learn to operate in a newly established organization, a public library in Helsinki. The chapter argues that the successful implementation and functioning of self-managing teams require the development of practices that can act as learning arrangements that prepare and support teams in their daily work activities. The chapter identifies three learning arrangements that play an important role for the working of and learning within the teams under study: appreciative communication, inclusive decision-making and mentoring. The chapter presents and discusses examples of the ways in which these learning arrangements help team members to engage fully in their daily work. Looking into what it takes to organize and maintain well-functioning self-managing teams through such learning arrangements, the chapter zooms in on the link between organizing and learning. It draws on a classical, practice-based under-standing of learning as a social activity embedded in daily activities that are initiated by joint reflection and an engagement in ongoing problem-solving (e.g. Brown & Duguid, 1991; Gherardi et al., 1998). The chapter reasons that effective self-managing teams require the facilitation of such learning practices. Yli-Kauhaluoma's study adds to the field of organizing by drawing attention to how change and the accomplishment or maintenance of new organizational structures (in this case team organization) involve ongoing learning practices initiated by people's active engagement in everyday problem-solving, decision-making and other practice-based activities at work. The study advances knowledge by pointing out how learning arrangements – that is context-specific solutions that facilitate learning processes while getting the work done – may serve as important supporting factors when it comes to organizing (team)work.

Educating

We have grouped the last three chapters under a heading called 'educating', because these chapters all address the issue of learning for organizational and management development. Educating has always been related in more or less subtle ways to organizational and workplace learning (see e.g. Elkjaer & Wahlgren, 2006), and it is fair to say that one can trace a development from a focus upon heads and cognition to bodies and participation (Brandi & Elkjaer, 2011), reflecting a development in theories of learning and learning related to work and professions (Boud & Hager, 2011; Hager, 2004). In the three chapters in this section, some form of collaboration between educational institutions, universities and university colleges and (public) organizations is at play. While the two first chapters address how political issues

around the collaborative practices between educational institutions and organizations influenced the outcome, the final chapter addresses the issue of how to change educational institutions (in case of university colleges) to be more alert to the needs of organizations through collaborative practices between partners.

Dahl and Irgens's chapter is based upon a study of a Norwegian national project on developing schools into learning organizations (LOs) in which they themselves have been involved. The project involved more than 200 schools and 15,000 teachers and was based upon a partnership between universities and university colleges all over Norway. In the chapter, Dahl and Irgens discuss why the Norwegian schools did not become LOs in spite of all the effort and money put into the project. They do so through the Norwegian tradition for collaboration between partners, management and employees, for example through dialogue conferences (e.g. Gustavsen, 2011). Dahl and Irgens see this tradition as closely related to Argyris and Schön's (Argyris & Schön, 1996) theories of organizational learning and the Deweyan concept of inquiry (Dewey, 1938 [1986]). It is through this combined lens, democratic tradition and classical theory on organizational learning that Dahl and Irgens interpret the failure of Norwegian schools to become LOs. However, they also alert readers to the contemporary so-called Pisa shock and the subsequent political demand to demonstrate strong and powerful leadership as influential for the outcome of the project. Even so, with their theoretical grounding in the classics of organizational learning theory, Dahl and Irgens demonstrate how the project of turning Norwegian schools into LOs may have benefitted from a more open-ended, situated and collective approach to inquiries into local conditions rather than a closed and fixed understanding of general knowledge about the development of LOs. Dahl and Irgens conclude that adaption was prioritized above collective inquiry and that management learning was prioritized above organizational learning.

Walker and Plotnikof's study shows how a revisit to the classical theories of organizational learning and reflection helped them to see how a management education programme (MEP) prevented double loop learning (Argyris & Schön, 1996) and an organizational space for reflection (Vince, 2002). In the chapter, Walker and Plotnikof report from a study of an MEP in which they followed students during education and in their home organization as well as including texts and other materialities inspired by theories of the communicative constitution of organization (CCO), and particularly the concept of ventriloquism (e.g. Cooren et al., 2013). They show how the content of an educational programme in which reflection was key to management education was limited to reflections on identity. Further, the application of language and positive psychology as means that were ventriloquized in reflections on managerial actions. Walker and Plotnikof thereby show how it was impossible for managerial reflections to include the wider organizational problems of reorganizing into teams. This is the background for Walker and Plotnikof's discussion of managers learning to be 'right' by being 'wrong', that is limiting reflection to questions of managerial identities rather than including wider organizational issues in reflective learning practices.

The last chapter in this educating section is a chapter by **Stegeager and Sørensen** in which they revisit a traditional concept of transfer to understand and reframe transfer in a management education programme inspired by the now classical concepts on learning first coined by Lave and Wenger (1991). Stegeager and Sørensen report from a longitudinal study on the development of a leadership programme in five municipalities in Denmark. They describe how this programme (during the first years of its existence) was run in a rather traditional way in which the municipalities bought a ready-made training programme for their managers. However, after a few years they concluded that no changes of management practices were the outcome. This led to a revision of the content through a stronger collaboration between the partners involved, primarily the municipalities, the managers and the university college. Action learning (Revans, 1978 [1998]) was applied to secure this collaboration, and it became possible to transcend discussions on curriculum in a narrow sense and to include wider issues of management and organizational learning. This experience, together with inspiration from Lave and Wenger, led Stegeager and Sørensen to revise the notion of transfer to collaborative practices rather than focusing on individual factors.

Bringing Contributions Together and Looking Forward

The aim of this edited volume is to bring together contributions that are interested in making inquiries into how classical learning literature can evoke new meanings, set new agendas and help to rethink present organizational situations and challenges. The focus is on organizational practices such as co-creating, knowledge sharing, innovating, organizing and educating. Drawing on various empirical contexts, the chapters provide rich material that generates valuable insights into the role, status and significance of learning at the workplace. How can we make sense of contemporary organizational challenges and practices by understanding them through learning theories of the past? That is the question this book poses. The chapters contribute to the development of both theory and practice in regard to these themes by shedding light not only on the past but also on present and future ways of understanding and working with learning. After having edited this volume, we can see that taken together these chapters point out several interesting pathways. These pathways are collected under three headings below.

1. The locus of learning
2. The making and matter of learning
3. The trends and normativities of workplace and organizational learning

The Locus of Learning

The chapters in this volume offer distinctive glimpses of how learning is involved in everyday organizational activities aimed at getting the work done. Many practitioners and theorists imagine learning as a matter of shaping, correcting and adjusting behaviour (Duchesne & McMaugh, 2018). To understand learning in this way is to subscribe to rational understanding, for instance aimed at making employees adhere to organizational strategies or to improve performance with regard to knowledge sharing, collaboration, etc. (Scott & Davis, 2015). This is indeed a broadly applied way of thinking and working with workplace and organizational learning. However, what we can see from the available analyses presented in this book is that learning is not necessarily a means of achieving something else. It may well be a vital activity that has its own purpose and that makes organizations what they are (Brown & Duguid, 1991; Lave & Wenger, 1991; Orr, 1996). This relates to the question of the locus of learning and where learning may be found. When we first got the idea about writing on current practices in workplace and organizational learning and revisit the classics and advance knowledge, we were less aware of the above distinction. However, when we discussed the chapters in depth, we began to understand learning as a matter of bringing people and things together, of coordinating and of doing the things together that organizations must do to continue to get work done and exist. Simply put: no learning, no workplace or organization.

Beginning to approach learning in this way does not only involve regarding learning as a matter of allotting and seeking relevant positions and relations among participants in practice. It also involves more than humans (Braidotti, 2013). In other words, workplace learning embraces a focus on relations between humans and things (technologies, objects, plans). In this perspective, learning embraces a socio-technical approach and analysis (Orlikowski & Scott, 2016). This may include (for instance) strategies for team organization in a public library in Finland in which strategies are not necessarily a goal in themselves but are a 'team-player' alongside the people involved (Chap. 11, Yli-Kauhaluoma). In Chap. 7, Dupret shows, in the same way, how gamification can help participants to learn about conflicts before they occur; and Scheuer and Simonsen (Chap. 6) argue that a joint process of developing a flow monitor makes new relations possible among groups of healthcare professionals and patients which limit peak load situations and stress. So, in the chapters of this volume, learning is to be found not in formal change programmes or in training situations, but in mundane activities and relations between humans and things, with the focus on how to get things done. Accordingly, we propose that learning processes take place in the middle of 'things' and in activities engaged in organizational practices. Instead of cultivating certain research principles, schools or rules, researchers may very well find it fruitful to stay longer in their fields of study in order to obtain a better understanding of the situatedness of learning. This proposal in regard to the locus of learning may call on an ethics of detail and specificity in workplace and organizational learning research in the future.

The Making and Matter of Learning

When learning appears to occur in the chapters and cases presented here, it seems to be closely related to frictions. Such tensions seem to be particularly at play when participants stumble upon issues that need some form of coordination with others. For instance, this is the case when Jonsson (Chap. 1) talks about 'confusions' within the field of knowing and learning as her way to move forward in her thinking and reflection. Aakjaer and Pallesen (Chap. 2) discuss how a digital platform paves the way for re-configurations of practices around healthcare and how this extension in commitments creates tensions and uncertainties. In Moeller's contribution (Chap. 4), it is uncertain situations in 'talks-to-go' that trigger learning and knowledge sharing; while in Elkjaer, Lotz and Nickelsen (Chap. 3), the disruption is actually created by an outside consultant, who proposed a new way of organizing teams. Wegener, Stenholt and Lovring (Chap. 5) illustrate how a step back from problem-solving to problem-framing may help innovation in a fully technologically equipped institution providing care for the elderly. Nickelsen and Rath (Chap. 10) show how in spite of crucial differences, different social worlds succeed in defining common principles of collaboration. In Dahl and Irgens's work (Chap. 12), the frictions are shown to be between national planning and control as opposed to learning as situated in inquiries arising from the local schools. Walker and Plotnikof (Chap. 13) show how an educational programme prevented participants from voicing and addressing conflicts. In light of the examples above, frictions and trouble seem to constitute learning. Tensions clearly represent an important vessel preferred by the authors to communicate and make sense of what is at stake in workplace and organizational learning. Given that trouble is crucial in the contributions of this volume, they all add to our understanding of how trouble makes learning (Dewey, 1933 [1986]; Haraway, 2016).

The Trends and Normativities of Workplace and Organizational Learning

Reading and re-reading the chapters enables us to unfold four trends and normativities pertaining to the analyses of what proponents of workplace and organizational learning should do and where the research field should or could go, that is dialogizing, complexifying, conceptualizing and mobilizing. These trends and styles of argument seem to stand for certain values pertaining to what is most important in order to promote learning and to make things cohere in organizations. We see these trends as kinds of forces and normativities that are currently pulling the research field in different directions. Thus, below, we draw up a modest landscape of styles of arguments in workplace and organizational learning research.

We will call the first trend dialogizing. This refers to a well-established approach in workplace and organizational learning arguing for the intensification of dialogue

and reflexivity (Cunliffe, 2004). Jonsson (Chap. 1), for instance, argues that the field of organizational learning is characterized by too many concepts used for describing similar issues. Thus, more dialogue among researchers and practitioners is needed to focus on how learning unfolds. By extension of this, Wegener, Stenholt and Lovring (Chap. 5) suggest that there is too much problem-solving and too little problem framing taking place in the case under study. To promote innovation, participants ought to be more clearly involved in dialogues about problem framing. Dahl and Irgens (Chap. 12) demonstrate that the national imaginaries of making Norwegian schools into learning organizations were unsuccessful because open-ended dialogue into local conditions was lacking. Instead, participants at school level were met with a fixed understanding at ministerial level of how implementation should be achieved. Thus, this group of researchers and chapters promote (one way or the other) the normativity of more dialogue to obtain better learning.

We call the second trend complexifying. This line of argument is that organizations may very well learn better from dealing with more intricacy. Moeller (Chap. 4) argues that 'talks-to-go' have the potential to transcend unwanted formal and informal divides and make more complexity (and support) available to care providers. Walker and Plotnikof (Chap. 13) show that a focus on positive psychology in a diploma in management made it impossible to adequately reflect organizational problems. Thus, they argue for the more complex use of talking and thinking. Elkjaer, Lotz and Nickelsen (Chap. 3) call for more complex organizing and to mix professional groups to promote intensified inter-professional learning. Thus, the argument presented by these researchers and chapters is that more complex organizing of the interrelations between professionals and language use may promote better knowledge sharing.

We call the third trend conceptualizing. This is a well-known approach arguing for standards and reification in order to learn and innovate. Rosenow-Gerhard (Chap. 8) argues that by building an innovation course we may understand more of the supporting activities that entail entrepreneurial competencies. Dupret (Chap. 7) argues that gamification may help to view potential conflicts from multiple perspectives through game scenarios, thereby creating a space to engage in possible solutions. Scheuer and Simonsen (Chap. 6) discuss the design of a flow monitor to allow doctors and nurses to avoid crowding. And Yli-Kauhaluoma (Chap. 11) discusses the making of self-managing teams involving active engagement by the participants in everyday problem-solving. Thus, those researchers and chapters argue that learning in organizations can be strengthened by way of concepts and prototypes.

The fourth and last trend and style of argument is mobilizing. Elmholt and Elmholdt (Chap. 9) argue that instead of a cognitive map of learning (Argyris & Schön, 1978), project organizations can enact a real-world organization of learning and practice embracing multiple centres. Stegeager and Sørensen (Chap. 14) argue that the organization of collaborative routines among five municipalities and a university college was the outcome of mutual interests to learn more on both sides. Nickelsen and Rath (Chap. 10) identify a number of social worlds of care characterized by various discourses, commitments and objects. Despite the

differences and by way of a structured workshop, the participants organized their collaboration (and learning). Thus, those researchers and chapters argue from the trend and normativity of mobilizing collaboration as real-world relations, which enable learning. The four trends and styles of argument we have lined up here, we propose, represent certain values and dominant ideas pertaining to what is most important in order to promote learning and ameliorate tensions to make people and things cohere. Together, we see these trends and normativities as a plethora of directions which currently characterize this research field. We hope the chapters in this book will inspire practitioners and researchers to further explore and develop these pathways as well as to pursue new paths and directions in order to continuously extend our understanding of and ability to work with learning in organizations.

References

Adler, P. S., & Heckscher, C. C. (2006). *The firm as a collaborative community: Reconstructing trust in the knowledge economy*. Oxford University Press.

Argyris, C., & Schön, D. A. (1978). *Organizational Learning: A theory of action perspective*. Addison-Wesley Publishing Company.

Argyris, C., & Schön, D. A. (1996). *Organizational Learning II. Theory, Method, and Practice*. Addison-Wesley Publishing Company.

Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel psychology, 41*(1), 63–105.

Bason, C. (2010). *Leading public sector innovation: Co-creating for a better society*. Policy Press.

Bateson, G. (1972). *Steps to an ecology of mind*. Ballantine Books.

Billett, S. (2012). Explaining innovation at work: A socio-personal account. In *Employee-driven innovation* (pp. 92–107). Springer.

Blumer, H. (1969). *Symbolic interactionism – Perspective and method*. University of California Press Ltd.

Boud, D., & Hager, P. (2011). Re-thinking continuing professional development through changing metaphors and location in professional practices. *Studies in Continuing Education, 34*(1), 17–30. doi:10.1080/0158037x.2011.608656

Braidotti, R. (2013). *The Posthuman* (1st ed.). Polity Press.

Brandi, U., & Elkjaer, B. (2011). Organizational learning viewed from a social learning perspective. In M. Easterby-Smith & M. A. Lyles (Eds.), *Handbook of organizational learning and knowledge management* (2nd ed., pp. 23–41). Wiley.

Brandi, U., & Elkjaer, B. (2013). Organisational learning: Knowing in organising. In M. Kelemen & N. Rumens (Eds.), *American pragmatism and organization. Issues and controversies* (pp. 147–161). Gower.

Brandsen, T., Steen, T., & Verschuere, B. (2018). *Co-production and co-creation: Engaging citizens in public services*. Taylor & Francis.

Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization Science, 2*(1), 40–57.

Chesbrough, H. W. (2003). *Open innovation: The new imperative for creating and profiting from technology*. Harvard Business Press.

Cooper, R. G. (1990). Stage-gate systems: A new tool for managing new products. *Business horizons, 33*(3), 44–54.

Cooren, F. (2010). *Action and agency in dialogue: Passion, incarnation and ventriloquism* (Vol. 6). John Benjamins Publishing.

Cooren, F., Matte, F., Benoit-Barné, C., & Brummans, B. H. (2013). Communication as ventriloquism: A grounded-in-action approach to the study of organizational tensions. *Communication Monographs, 80*(3), 255–277.

Cunliffe, A. L. (2004). On becoming a critically reflexive practitioner. *Journal of management education, 28*(4), 407–426. doi:10.1177/1052562904264440

Deterding, S. (2019). Gamification in management: Between choice architecture and humanistic design. *Journal of Management Inquiry, 28*(2), 131–136.

Dewey, J. (1933 [1986]). How we think: A restatement of the relation of reflective thinking to the educative process. In J. A. Boydston (Ed.), *The later works of John Dewey, 1925–1953* (Vol. 8, 1933, pp. 105–352). Southern Illinois University Press.

Dewey, J. (1938 [1986]). Logic. The theory of inquiry. In J. A. Boydston (Ed.), *The later works of John Dewey, 1925–1953* (Vol. 12, 1938, pp. 1–539). Southern Illinois University Press.

Duchesne, S., & McMaugh, A. (2018). *Educational psychology for learning and teaching*. Cengage AU.

Easterby-Smith, M. (1997). Disciplines of organizational learning: Contributions and Critiques. *Human Relations, 50*(9), 1085–1113.

Easterby-Smith, M., Crossan, M. M., & Nicolini, D. (2000). Organizational learning: Debates past, present and future. *Journal of Management Studies, 37*(6), 783–796.

Easterby-Smith, M., & Lyles, M. A. (2011). The evolving field of organizational learning and knowledge management. In M. Easterby-Smith & M. A. Lyles (Eds.), *Handbook of organizational learning and knowledge management* (pp. 1–20). Wiley.

Easterby-Smith, M., Snell, R., & Gherardi, S. (1998). Organizational learning: Diverging communities of practice? *Management Learning, 29*(3), 259–272.

Elkjaer, B., & Wahlgren, B. (2006). Organizational learning and workplace learning – similarities and differences. In E. Antonacopoulou, P. Jarvis, V. Andersen, B. Elkjaer, & S. Høyrup (Eds.), *Learning, working and living. Mapping the Terrain of working life learning* (pp. 15–32). Palgrave Macmillan.

Ellström, P.-E. (2010). Practice-based innovation: A learning perspective. *Journal of Workplace Learning, 22*(1/2), 27–40.

Fenwick, T. (2003). Innovation: Examining workplace learning in new enterprises. *Journal of Workplace Learning, 15*(3), 123–132.

Follett, M. P. (1924 [1930]). *Creative experience*. Longmans, Green and Co.

Follett, M. P. (1995 [1949]). Co-ordination. In P. Graham (Ed.), *Mary Parker Follett - Prophet of management. A celebration of writings from the 1920s* (pp. 183–211). Harvard Business School Press.

Gherardi, S. (2006). *Organizational knowledge: The texture of workplace learning*. Blackwell Publishing.

Gherardi, S. (2011). Organizational learning: The sociology of practice. In M. Easterby-Smith & M. A. Lyles (Eds.), *Handbook of organizational learning and knowledge management* (2nd ed., pp. 43–65). Wiley.

Gherardi, S., Nicolini, D., & Odella, F. (1998). Toward a social understanding of how people learn in organizations. The notion of situated curriculum. *Management Learning, 29*(3), 273–297.

Gustavsen, B. (2011). The Nordic model of work organization. *Journal of the Knowledge Economy, 2*(4), 463–480.

Hager, P. (2004). Conceptions of learning and understanding learning at work. *Studies in Continuing Education, 26*(1), 3–17.

Haraway, D. J. (2016). *Staying with the trouble: Making kin in the Chthulucene*. Duke University Press.

Høyrup, S., Hasse, C., Bonnafous-Boucher, M., Møller, K., & Lotz, M. (Eds.). (2012). *Employee-driven innovation: A new approach*. Palgrave Macmillan.

Illeris, K. (2007). *How we learn: Learning and non-learning in school and beyond*. Routledge.

Jarvis, P. (2006). *Towards a comprehensive theory of human learning* (Vol. 1). Psychology Press.

Jensen, M. B., Johnson, B., Lorenz, E., Lundvall, B.-Å., & Lundvall, B. (2007). Forms of knowledge and modes of innovation. *Research Policy, 36*, 680–693.

Lave, J., & Wenger, E. (1991). *Situated learning. Legitimate peripheral participation*. Cambridge University Press.

Lotz, M. (2009). *The business of co-creation – And the co-creation of business. Ph. D. Series 15.* (PhD PhD). Copenhagen Business School.

Lotz, M. (2018). Organising routines and spaces for employee-driven innovation in global work arrangements. *International Journal of Entrepreneurship and Innovation Management, 22*(4–5), 338–361.

Orlikowski, W. J., & Scott, S. V. (2016). Digital work: A research agenda. In B. Czarniawska (Ed.), *A research agenda for management and organization studies*. Edward Elgar Publishing.

Orr, J. E. (1996). *Talking about machines. An ethnography of a modern job*. Ithaca: ILR Press.

Prahalad, C. K., & Ramaswamy, V. (2004). Co-creating unique value with customers. *Strategy & Leadership, 32*(3), 4–9.

Revans, R. (1978 [1998]). *ABC of action learning*. Lemos & Crane.

Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy sciences, 4*(2), 155–169.

Schumpeter, J. A. (1934). *The theory of economic development.* Harvard University Press.

Schön, D. A. (1983). *The reflective practitioner. How professionals think in action*. Basic Books.

Scott, W. R., & Davis, G. F. (2015). *Organizations and organizing: Rational, natural and open systems perspectives.* Routledge.

Simon, H. A. (1947). *Administrative behavior: A study of decision-making processes in administrative organization*. The Free Press.

Vince, R. (2002). Organizing reflection. *Management Learning, 33*(1), 63–78.

Weick, K. E. (1974). Middle range theories of social systems. *Behavioral Science, 19*(6), 357–367.

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Chapter 1
A Researcher's Reflexive Note and Call for Collaborative Learning

Anna Jonsson

Abstract Although it is vital for organizations to learn in order to be competitive, efficient, and innovative, it is one of the profound organizational dilemmas: organizations understand and have learnt that it is important to learn and yet it is difficult to ensure organizational learning. This is a personal and reflexive note about what I have learnt from research and practice about various attempts to understand and make organizational learning work. Based on my ethnographically inspired research studies, where I take a practice-based perspective on learning and knowing, I note that there is a need for researchers and practitioners to engage in learning (more) from each other and to demystify organizational learning. Reflections and lessons are drawn from studying how IKEA, Manheimer Swartling and Zhejiang Geely Holding Group learn. I call for collaborative learning as an approach to develop an understanding of organizational learning, rather than suggesting yet a(nother) concept. I illustrate how old wisdom – with a focus on learning by doing and learning by observation – can guide both researchers and practitioners who share an interest in learning about learning. Rethinking lifelong learning for the twenty-first century relates to a need to think and (re)learn about organizational learning – both in theory and practice – rather than engaging in new concepts.

Keywords Ethnography · Organizational learning · Practice · Reflexivity · Research

Introduction

For the last 15 years, or more, I have thought about learning and why it is that despite everything that is written about organizational learning it is still difficult for organizations to learn. What is it that researchers or practitioners – or both – do not

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understand, or are missing? And why is it that there are so many different views and concepts describing more or less the same issue?

This is a reflexive note on what I have learnt about organizational learning in research and practice. I have studied how knowledge is shared and how learning takes place in many different contexts and with different research questions in mind. I have studied how knowledge is shared amongst retail co-workers in different functions within the IKEA world (Jonsson, 2007); how lawyers learn their profession and share knowledge amongst specialists within the Swedish law firm Mannheimer Swartling (Jonsson, 2013, 2015); how the owner of a Chinese local car manufacturer, Mr. Li Shufu, chairman of Zhejiang Geely Holding Group (ZGH), acquired the Swedish car company Volvo Car Corporation (VCC) to "learn about Volvo's learning" (Jonsson, 2017; Jonsson &Vahlne, forthcoming). Furthermore, I have studied learning in the context of the transformation of retail digitalization, as well as how learning takes place between research and practice in knowledge collaboration projects and how scientific knowledge is communicated to society (Hagberg et al., 2017; Jonsson & Grafström, 2021).

Because of my research I have been invited to give talks about learning in various settings, and there felt from time to time that perhaps the audience sees me as the empress without clothes – as I sometimes feel that what I present is pretty much common sense. For example, when I defended my PhD thesis and my IKEA study in early 2008, I had come to the conclusion that knowledge sharing is actually quite uncomplicated; when there is successful knowledge sharing and learning it often relates to conversations and working side by side. This was summarized by the founder himself, Ingvar Kamprad, in a handwritten letter I received just before I started my defense stating (here translated from Swedish):

> Thank you for the book. It looks OK. However, I am an old man and my English is poor. Knowledge sharing can easily be summarized as the world's most overlooked teaching method – the apprenticeship model. *(Ingvar Kamprad)*

And in the media that reported on my thesis, the headings made it sound even more simple, that "fika" was the solution and key success factor for IKEA, and the explanation for how they had managed to grow from a small company to a global retail giant – organically – in less than 60 years.

What was interesting about my findings and the timing was that in 2008 there were not many organizations that spoke of these simple solutions such as "fika" and the apprenticeship model. At that time knowledge was –in research, but especially in practice – still discussed as something that could be easily and efficiently stored and managed with advanced technology. Learning was less popular, and in some cases – both in research and practice – even neglected. However, just a few years later the emphasis on learning and the human aspect, emphasizing the need for developing "talents" and the potential of the apprenticeship model, was on the agenda. Even politicians – at least in Sweden – held up the apprenticeship model as the way forward to secure the coming generation shift and prevent the risk of losing valuable know-how. I was invited to present my research to a partly new audience, to those who were interested in developing an understanding of knowledge sharing and

learning in society. It made me reflect on the long-term provision of knowledge in society.

The aim of this chapter is to share my reflections from what I have learnt about learning – both from research and from practice. I am inspired by Ann Cunliffe's (2003, p. 999) note that "reflexive inquiry can offer valuable insights into organizational studies and practice," and especially when focusing on organizational learning, as it can stimulate "a critical exploration of how we constitute knowledge and enact our own practices as researchers." My note should also be understood as a response to the debate on meaningless research in social science (Alvesson et al., 2017; Ghohsal, 2005; Pfeffer, 2005) and their call for critical reflections about our role and responsibility as researchers – asking ourselves about our own ability to learn and share our knowledge with society and practice. I will outline a reflexive note (Cunliffe, 2003, 2009) – or confessional tale perhaps (cf. Van Maanen, 1988) – on organizational learning, addressing it from both a research and a practice perspective. Following Cunliffe's (2003) call for radical reflexivity I question whether or not we as researchers need to return to, and (re)learn, the classics in order to learn about learning. When concluding my own research studies, I often find it useful to return to, for example, Donald Schön's (1983) work on the reflective practitioner and Chris Argyris (1957) work on individual motivation to share knowledge and learn in an organization.

In this chapter I will elaborate on what I have learnt from theory, and how I understand and have approached organizational learning. I will also share what I have learnt about learning from practice. I will give examples from my research projects, which are ethnographically inspired, and in particular the case study about ZGH's acquisition of VCC, as it resulted in a joint project and can be understood as an example of knowledge development in collaboration between research and practice. It is an example of what Cunliffe (2002, p. 36) calls for, namely, how management learning might include "practical co-constructions of the learning process" through "new forms of reflexive talk and practice." She notes that the reflexive dialogue practice should be applied not only in teaching but also in research, as "critique is situated in practice and self, rather than concepts and ideologies – self-reflexivity rather than meta-reflexivity."

As this is an anthology on lifelong learning and related topics, I feel confident that the other chapters will offer valuable insights into the research field. For this reason, I will not go into an extensive theoretical discussion. Rather, I will outline a brief discussion on the different theoretical perspectives on learning in organizations, emphasizing a shifting interest for learning over the years and an epistemological understanding of knowledge (cf. Jonsson & Tell, 2013). The aim is also to illustrate the diversity of – sometimes elusive – concepts and explanations for how to understand and make learning in the workplace work, and to address some of the criticism towards the research field. The underlying argument is that while researchers have added to our understanding of organizational learning, it is problematic that there are so many concepts used to describe similar issues – and that probably do not serve practice well (e.g., Friedman et al., 2005; Tsang, 1997). However, the diversity can also be found in practice, where practitioners – including

consultants – like to construct their own concepts and solutions, often with imaginary ideas about how an organization *should* learn. I will illustrate, based on lessons learnt from practice about how an organization *does* learn, that in order to arrive "at a good theory" (Tsang, 1997, p. 86) organizational learning is best understood through the analytical lens of doing things together, as suggested by the practice-based perspective (e.g Elkjaer, 2005; Gherardi, 2006; Orlikowski, 2002).

I will conclude this reflexive, perhaps personal, note with a call for collaborative learning – both in practice and between practice and research – and the importance of engaging in reflexivity and dialogue that places learning in organizations in focus (Cunliffe, 2003, 2009; Cunliffe & Scaratti, 2017). I argue that researchers and practitioners *can* learn more about organizational learning by taking a collaborative learning approach.

Learning from Research

In order to learn about learning from previous research it is important to understand that this is a topic that has attracted researchers from many different fields, addressing different aspects of knowledge and learning as well as, and with, a great variety of suggested concepts (but seldom with a connection to previous concepts) (cf. Easterby-Smith, 1997). As noted by Friedman et al. (2005, p. 19) organizational learning is a central concept in organization theory, yet it "remains an elusive concept for researchers and managers alike" and there seems to be little agreement about what it actually means. Friedman et al. argue that the confusion, or mystifying concept, can be explained by a number of reasons, of which "continually providing new definitions" and "splitting the field into visionaries and sceptics" correspond with my observations of why it is such a slippery concept to use. As will be discussed further, the fact that related research fields also address the topic makes it even more obscure. For example, and as noted by Örtenblad (2002, p. 218), some researchers also use the terms 'organizational learning' and 'learning organization' interchangeably, although several others stress that there is a big difference in how to understand knowledge as used in practice or as something it is possible to store. Örtenblad suggests that those who understand knowledge as used in practice should use the term 'organizational learning,' meaning that the 'learning organization' is the result of that (e.g., Örtenblad, 2018).

As my learning journey started with trying to understand how knowledge is shared within the IKEA world, I was initially more interested in knowledge than in learning. The reason for this was that, at the time, knowledge was the "new black," and both researchers and practitioners were interested in how knowledge – being understood as a strategically important resource – could best be managed. Within the

international business literature, to which my PhD thesis was supposed to contribute, knowledge was discussed in terms of stocks and flows from headquarters to subsidiaries (e.g. Ambos et al., 2006; Moore & Birkinshaw, 1998).[1] Knowledge management had become a popular topic, both in research and in practice, partly because of the knowledge-based view of the firm (Grant, 1996) and the new technology that provided new opportunities to store and share knowledge. However, as later research has shown, and as stressed by one of the knowledge management gurus of that time, it was not knowledge and learning that was enabled, but rather information management:

> Unfortunately, the ideas were flawed. They were not so much wrong as misguided in their approach. Since almost all new movements build on the skeletons of earlier movements, KM looked very much like information management, and, not surprisingly, the results produced by these new KM projects were quite similar to earlier KM projects – disappointing the knowledge advocates and especially the users and clients who were expecting great things from the more effective use of knowledge within the organization. *(Larry Prusak, in Leistner 2010, p. xii)*

To this reflexive note it should be added that before joining the PhD program I worked for one year in Ernst & Young's (now EY) department for knowledge management. I was excited that I could use my knowledge about knowledge management and apply it to my research project on how retail firms internationalize their business. However, at my research proposal, only a few months after I started my thesis, I received some rather critical comments from two senior professors – one in particular, who was a professor of organizational learning. The professor asked me if my aim was to write a consultancy report or a PhD thesis. The professor made it clear that if my intention was to write about knowledge management then the university was not the place for me.

Feeling more than a little stung by the criticism, I went home and shed a few tears. I felt foolish, and worried that my supervisors, whose research domain was in marketing whereas my background was in organization, would no longer support my idea that research on knowledge sharing could contribute to research on the internationalization process. However, luckily my supervisors showed faith in me, and in retrospect I can see that their teaching method was that I should learn from my mistake – of not having enough support for my choice of literature – but also that I needed to learn how to take and learn from criticism.

Nonetheless, in order to convince the skeptics that I had identified a gap in the research on the internationalization process, I decided to borrow some of those extensive handbooks on knowledge management, to gain a better understanding of the field. Luckily enough, both Wiley and Oxford University Press had just

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[1]However, the Uppsala model (Johanson & Vahlne, 1977), which is one of the most referred to models describing the internationalization process, differs from the discussion about stocks and flow as they emphasize learning and that the more you learn about a new market, the more resources you commit and the more you learn. The model is sometimes referred to as the learning approach", and it was also the model that I chose to develop as my theoretical framework in my thesis (Jonsson, 2007).

published two books on the topic. From the titles alone I realized that knowledge management was not the only research field discussing these issues. The Blackwell text book was titled "Handbook of Organizational learning & Knowledge Management" (Easterby-Smith & Lyles, 2003), and the Oxford book "Handbook of Organizational Learning & Knowledge" (Dierkes et al., 2001). From these handbooks I realized that the four research fields that I needed to grasp were: organizational learning, organizational knowledge, organizational learning, and the learning organization. This is an example of another lesson learnt: that the format offered in scientific journals is perhaps not the best way to grasp a research field. An anthology or a textbook allows for additional perspectives, and is sometimes written in a less jargon-ridden way making it easier to understand. When thinking about how practitioners learn about learning it is also important to reflect on the format and how new research insights about organizational learning are communicated (Jonsson, 2019, 2020).

While trying to grasp the vast body of literature, I also conducted interviews with IKEA. It became clear early on that knowledge sharing within the IKEA world was closely connected to individuals sharing their knowledge and knowing; Co-workers were sent to new countries and were encouraged to try new positions in order to learn more about IKEA, as well as to share their knowledge with other colleagues. The importance of creating a learning culture emerged, with IKEA described by many as a learning organization. I realized that, because I had taken an abductive approach, my empirical data could not only be squeezed into 'knowledge management' but that it also related strongly to strategies about how to share organizational knowledge – knowledge about the IKEA way – as well as creating a learning culture that ensures a learning organization. However, I was still searching for the "sweet spot", since my empirical data did not really resonate with either of the four research fields mentioned above. So, I decided to submit papers for different conferences. My idea was to present my ideas to different communities, both to receive comments about missing literature or perspectives and to have a feeling for which communities were most interested in my research topic. In 2005 I submitted papers not only to conferences on international business, but also to OKLC and OLK.[2] The lesson learnt from that part of my theoretical journey was that even though researchers attended both conferences, there was a greater interest for my work at the OLK conference. And here I was introduced to what I was searching for, the sweet spot that corresponded with my efforts when trying to make sense of my empirical data about the IKEA case, namely the knowing in practice perspective. It corresponded with my empirical findings, emphasizing knowledge as situated and that it is not sufficient to share, or transfer, knowledge but that the learning processes also need to be taken into consideration.

Researchers within the practice field explicitly reject transfer models, which are proposed to separate knowledge from practice (cf. Elkjaer, 2005). Gherardi (2006) advocates that the practice-based perspective is necessary in order to understand how

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[2]Later these two conferences merged into OLKC.

to organize and manage knowledge in an organization. She argues that the knowledge management literature has greatly simplified an objectifying view of knowledge and how it can be managed – assuming that all knowledge results in action. However, she further criticizes the literature on organizational learning for being too descriptive and not focusing on knowledge in action. The knowing in practice perspective focuses on experiences and knowing how to do something, or how to perform a task, rather than on how to store and transfer information and knowledge. Orlikowski (2002, p. 271) explains that "sharing 'knowing how' can be seen as a process of enabling others to learn the practice that entails the 'knowing how.'" What is particularly interesting, for the purpose of this chapter and reflexivity about the knowing-doing gap, is that the knowing in practice perspective does not understand knowing and practice as separated, but rather that knowing "takes place in the flow of experiences" (Gherardi, 2006, p. 14). It is important to understand that knowing is an ongoing, not static, social accomplishment, and that it is "constituted and reconstituted as actors engage in the world in practice." Thus, it should be possible to open up this perspective to develop an understanding for how a reflexive dialogue between research and practice can overcome the knowing-doing gap. That also corresponds with Cook and Brown's (1999) argument that by adding knowing to knowledge it is possible to account for the relationship between what we know and what we do. Another reason why there is a need to take a practice-based perspective is that "people cannot talk about the specific of what they do outside of the context of actually doing it" (Barley & Kunda, 2001, p. 84).

Learning from Practice

From my Ph D study on IKEA, I learnt that to ask questions – conduct interviews – about knowledge sharing is not sufficient if the aim is to understand the how-question. Not only because, as noted by Barley and Kunda (2001), people have a hard time describing what they do outside the context of – in this case – organizational learning, but also because I need, as a researcher, to understand the context to be able to ask good questions. In order to demystify organizational learning, as a researcher I need to demystify both the organization and myself in my role as a researcher.

Based on my observations at the IKEA store in Japan I realized that knowledge sharing is best understood in practice, when co-workers are working and observing others. By that time I had come across Tina Chini's (2004) work on internationalization and knowledge flows, where she used the Nonaka (1994) framework as a basis for her questionnaire and where she had listed a number of tools and methods for the four modes for how organizational knowledge is created. It was one of the few research texts that described how to share knowledge in practice, ie., including the practical solutions. I used her list as a guide when observing and asking questions, and it was clear that the preferred methods were learning by doing and learning by observation – and, of course, to attend the "IKEA fika."

Since then, I have taken an ethnographic approach in all my research projects with focus on learning and knowledge, and spent a lot of time with the organization, and combined interviews with observations. Apart from getting closer to the source of knowledge (cf Styhre, 2003), to understand learning in an organization, i.e., the individuals, they have also got to know me and understand research better. This was especially evident in the case of Mannheimer Swartling, where I spent one year doing interviews and observations and another four months sitting in their office and writing up my research findings. This gave me the opportunity to communicate and discuss my findings with the organization, and also to validate these. I was also given – by some – the role of "the therapist" and several of the "natives" stressed that it was interesting to have me around and to reflect on the questions that I asked, and that it made them think of learning in a different way. Some even stressed that they possibly engaged even more in learning, as they reflected more about the topic than they would otherwise normally do.

My recent study on ZGH is perhaps an even more interesting example to learn from, as it resulted in a joint project that attempted to understand what learning means to co-workers within ZGH, i.e., across countries and sister organizations. Contrary to how we understand acquisitions from a western perspective – as a means to acquiring knowledge (or a brand or competitor) – Mr Li Shufu's was interested in VCC's processes for organizational learning. This radical shift from focusing on knowledge as an entity, or object, and for taking a functionalistic perspective (cf. Cook & Brown, 1999) to a focus on learning as situated and as a process, makes it an interesting case to learn from, not only for researchers, but also for practitioners. However, Mr Li Shufu's interest and focus were not initially under-stood and shared by everyone within ZGH, and, in particular, not VCC (Jonsson & Vahlne, forthcoming). For me as a researcher, who had received funding to follow and study this process, it came as a surprise that not all co-workers had picked up this focus on learning about learning. I was curious to understand how learning was understood and perceived by the different co-workers in China and Sweden, as well as those working for each of the companies; how learning about learning actually took place in practice; and what the consequences might be for VCC's learning process. As I will illustrate, talking about learning is not always the same as practicing learning. Nor it is obvious that learning is the correct term, or used in practice, when trying to improve routines in order to become more competitive.

To cut a long story short, I had been struggling with gaining access and attention for my interest within VCC for more than a year, even though I had been promised access. Although, this period of my research project was difficult and challenging, it forced me to reflect on why learning was not initially considered interesting by everyone; whether perhaps learning was the wrong word to use to interest people in my research study; and why VCC did not explicitly discuss organizational learning when their new owner had shown such a strong interest in their learning. This part of my journey provided many interesting lessons learnt, and forced me into more reflexivity than my previous research projects.

It is worth reflecting on the initial, relatively vague interest in learning – and necessary, if we (both researchers and practitioners) want to develop our

understanding of the overall and general problem of why we do not always do what we know is good for us (such as learning). This led to new questions and ideas about why there seemed to be such resistance, which led the interviews to focus on on why so few were interested in learning or trying to understand what the new owner meant by "learning about learning." The interviewees became more interested in my questions, and led me to more people I could contact and interview. At the same time, my informant who had helped me with the initial interviews and who shared my interest in learning (primarily because of a concern about VCC) had a meeting with Mr. Li and – amongst other issues – mentioned my research interest in his interest in learning and difficulties of getting access. As Mr Li was interested in the topic, and had expressed it in several official interviews, the meeting resulted in a decision to investigate not only how learning was understood within ZGH but also how learning took place. This resulted in a "Learning Culture Program" (LCP) – where I participated in the study as a researcher. My role was both to participate in the work of setting up the project, and to conduct interviews and observations in order to capture both perceptions about learning and lessons learnt within the group.

From the LCP study, I learnt that even though learning seemed intuitive and unproblematic to most, it was difficult to talk about learning and lessons learnt in more general terms and even when relating it to various processes and tasks. In my case study of Mannheimer Swartling, which was a professional service firm, it was less difficult. The explanation for why some found it hard in the ZGH-VCC case was that they either thought that learning was something that someone else was responsible for, like the HR department, or the opposite: that it was so natural for them to share and learn that they had not reflected on their own process for learning. Another explanation was that for engineers, problem-solving is part of the profession, which of course relates to learning but is neither discussed nor understood as learning. To Mr Li Shufu, learning was unproblematic and natural, but still more explicit and should be viewed as part of the human being:

> The culture of the human being is actually how we should learn from each other. Not only knowledge but also in practice as well. That is how a human being can improve itself, that is how we could grow. And similarly, it also applies in commercial cases, for corporations. For enterprises the learning corporate culture is also a foundation, an example how a business can grow and develop further. *(Li Shufu)*

The word "learning," however, seemed "woolly" or abstract to others within the group, who made it clear that I was conducting interviews with co-workers in the car industry and not education:

> Look, we are managers, not philosophers. However, we recently had a discussion about it. [. . .] I'm in the beginning but in favor of collaborative projects. Because conceptual programs of learning do not lead to anything. I don't like woolly. I like tangible results. [. . .] And with [our owner], you have to be careful about the translation. Learning does not always mean learning – it is not always clear. He is clearly interested in collaboration, in strong collaboration. Interestingly he doesn't want to force it, he wants to encourage it." *(Board member, ZGH)*

While there were varying opinions on how to ensure learning, both at an individual and organizational level, there were also varying understandings of

what word actually described learning in practice. Apart from emphasizing collaboration, many references were made to "the Chinese way of learning" and "the Swedish way of learning." However, when trying to understand what was meant by these, it was less clear what the different ways were. Nonetheless, while the Chinese co-workers seemed to speak more about learning in general terms, the Swedish co-workers preferred to talk about cooperation or collaboration, co-creation or co-producing. When elaborating on these co-words, two additional words popped up in the discussion; copying and competition. While some stressed that copying is not learning, and that competition is a poor incentive for learning, some Swedish managers started to reflect on the meaning of copying, and what is learning and what is not learning:

> We say copying is bad, it is the worst form of sin. At the same time we say that learning is the best way ... We have such an incredible difference here. Imagine explaining to a Chinese person that learning is just like learning from others. We also like to learn from others and think it is good, but perhaps you don't learn – perhaps you are only copying. Because really, what's the difference? We copy others – but we call it learning from others. You are copying the concept. [...] It's not so easy. We think we are so great and that we are not copying. But we learn from others as well and 'copy' is just a concept. [...] It's not easy for them to understand the difference. (*Manager, VCC*)

The discussion about copying is interesting and turned up in many interviews, and is an example of why it is important to discuss and elaborate on different understandings of learning. To some, copying was seen in a negative sense, to others it could easily be replaced with a more positive word, namely benchmark. From a Swedish perspective, there was a fear that Chinese colleagues would copy their solutions, and that IP rights would not be respected. Later in the interviews, Chinese co-workers stressed that they were aware of this perception, but explained that "copying" in China is understood as "benchmark learning," and that the stereotype argument that "the Chinese only copy, they don't develop their own products" was simply not good enough in order to succeed, even on the Chinese market. This is interesting, as different words, perhaps describing similar processes, have different meanings not only in theory but also in practice – and also in different cultures.

My experience from the LCP study can be seen as an example of a reflexive dialogue that resulted in collaborative learning between myself and the interviewees; a dialogue that not only implied insights about organizational learning within ZGH, but also theoretical insights about how to ensure global learning and reflections about how we – researchers and practitioners – can learn from each other and how we actually learn about learning.

A Story About Learning About Learning

The general argument for why researchers and practitioners are keen to learn about learning is that it is necessary to learn in order to be able to use and benefit from knowledge. It is a recognized fact that there must be an efficient exchange of

knowledge within an organization in order to succeed, to be efficient, or to survive competition. The reason, it is argued, is that knowledge is widely considered to be the resource that explains competitive advantage, as it is difficult to imitate, but, first and foremost, that knowledge – as opposed to all other scarce resources – increases while it is being used (Adler, 2001; Itami & Roehl, 1987). At the same time, it is becoming increasingly important to be able to collaborate, share knowledge and learn from other organizations. The reason for this is that, because individuals and organizations have become more specialized, following the idea about division of labor, we have also become more differentiated (cf. Lawrence & Lorsch, 1967). The term "knowledge silo" is often used to emphasize the need for collaborating and learning from others, as silo thinking is not sufficient to meet challenges with a more complex and competitive environment.

Based on what I have learnt from both research and practice, I believe that the silo argument goes both ways. Even if it is a recognized fact that learning is imperative for long-term survival, provision of knowledge and sustainable success, the need to understand learning and how to ensure learning seems to be inexhaustible. Both for individual organizations and for society. As noted by Friedman et al. (2005, p. 19), although organizational learning has been discussed amongst researchers and practitioners for a long time, it remains something of a mystery. Their explanation is that research and practice are divided and that "[. . . .] organizational learning [therefore] remains an elusive concept for researchers and managers alike." They further argue that the great interest in learning has led both practitioners – including consultants – and researchers to develop new concepts, but with little consensus and conceptual clarity. Further, the interest in the topic has attracted both advocates and skeptics, which makes organizational learning even more difficult to grasp.

For more than a decade, almost two now, I have been trying to grasp the literature on knowledge sharing and learning – and still feel that I have more to learn. There are days when I doubt my cognitive abilities and wonder if I am in the right position to do research (perhaps still stung by the critical professor asking if the university was the right place for me). However, the number of review articles is constantly increasing, which I have chosen to understand as a sign of a shared feeling that there are others too who see a need to try to grasp and summarize the field. And, fortunately, there are also good days, when I feel excited about the fact that there are so many different aspects when it comes to knowledge and learning that I need to learn more about, to collect and tell stories about so that others can learn from what I have learned. As has been stressed, and illustrated above, new ideas, concepts, and perspectives arise when we try to understand how learning takes place in practice. As a consequence, although it is at times hard to tell what is the chicken and what is the egg, the number of theoretical explanations, concepts, and perspectives is also rising. It is natural that this is an evolving and dynamic field. However, I still find it problematic that there are so many different research streams and concepts circulating that describe the essence of organizational learning. This becomes especially evident when meeting and discussing learning with practitioners, and especially those who want to understand how to think about learning but at the same time how

to practice learning. For them it is not self-evident how different concepts and perspectives add to their understanding of how to make organizational learning work.

Furthermore and as illustrated above, practitioners do not necessarily think of, or discuss, organizational learning, or related concepts and understandings of, for instance, how to explore and exploit, how to share and disseminate knowledge – or even use the word 'learning.' In the case of ZGH, some of the respondents were more interested in benchmarking, even in copying (although there were varying views as to whether that was seen as a noble way of learning) and in collaborating – rather than spending time on learning, which was often understood as a teaching situation. Individual learning and organizational learning are also often used – or understood – as interchangeable in practice. Another issue is that while some of these reflections from practice resonate with thinking about organizational routines and efforts for how to improve efficiency, innovativeness, and competitive advantage, others relate more to ideas about pedagogy and training. When practitioners go into Google – as most do when trying to grasp a topic, and I have been told in interviews – and search for 'learning,' it is likely that they will end up at Wikipedia or a commercial website discussing learning techniques at an individual level. Those who are more well-informed and search for 'organizational learning' will find both good and bad examples and reviews, but might find it hard to translate the key lessons learnt to their own context and organization. The reason for that is that it is not always clear how to connect 'organizational learning' to other concepts such as knowledge sharing, innovation and performance (since learning and knowledge are concepts that are difficult to define and measure). And those who are still stuck with the rhetoric that "knowledge is power," will most likely end up with literature on knowledge management – where there is perhaps little knowledge about how to learn from shared knowledge.

The literature on knowledge and learning within organizations now spans different fields such as organization theory, institutional theory, organizational learning, knowledge management, and strategic management (Dierkes et al., 2001; Easterby-Smith & Lyles, 2003, 2011). During the last twenty years, as a result of the knowledge-based view of the firm (Grant, 1996), the discussion – both in research and practice – has mainly focused on knowledge management and has quickly become an umbrella term for other research fields addressing knowledge and learning in organizations. Gherardi (2006) describes the transition as a shift from psychology and learning to a focus on economics and efficiency. The high level of interest for knowledge management led to a diversified research field, partly because of an eagerness to contribute to – or to criticize – the popular concept. So, rather than trying to look into synergies or previous research, such as the literature on organizational learning, these streams developed in isolation (Dierkes et al., 2001; Easterby-Smith & Lyles, 2003, 2011). As a consequence, both researchers and practitioners were left with an inconsistent view of how to think of knowledge and learning within an organization. However, as noted by Gherardi (2001, p. 132):

> Learning cannot be compartmentalized into levels and divided up among different scientific disciplines to produce areas of individual, group, organizational and inter-organizational learning.

This is why a number of researchers, myself included, have chosen to adopt a 'knowing in practice' perspective.

The aim of this reflexive note on organizational learning – that perhaps turned out as a memoir and a story about learning – was to demystify the concept and develop an understanding of one of the most profound organizational dilemmas: the knowing-doing gap about learning in organizations (Pfeffer & Sutton, 1999, 2000). Because even though organizations understand that learning is important, this does not always correspond with the doing. Although it is vital for organizations – as well as for society – to learn in order to be competitive, efficient, and innovative, it is a concern to many, and even neglected by some. Or, in the words of Pfeffer and Sutton (1999, p. 136), "[. . .] there is no shortage of know-how. But all too often, even with all the knowledge floating around, nothing happens. There's no doing." However, the question that we as researchers need to ask ourselves, and which I have tried to set as an example in this text, is whether this knowing-doing gap exists because practitioners do not understand how to use their know-how about learning, or whether researchers have failed to study and explain knowledge and learning in organizations. Because, despite extensive research on the topic – including my own attempts – and on developing explanations for why, who, where, and when questions (Gherardi, 2001), it is difficult for practitioners to understand and ensure organizational learning.

Concluding Remarks: A Call for Collaborative Learning

If we take lifelong learning seriously, we – researchers and practitioners – need to learn more from and about each other. As researchers we therefore, need to ask ourselves whether we have developed theories that help practitioners, or whether we have developed bad management theories that destroy good management practices – to use the words of Sumantra Ghoshal (2005). Ghoshal criticized business schools for constructing "bad theories" as most of them were developed based on economically rational ideals, which he claimed had taken over much of management and organizational research. The idea of, and faith in, the "economic man" is perhaps another explanation for why "the logic of human choice" has not received enough attention in "the vocabulary of administrative theory" by Herbert Simon (1947), as stressed in the call for this anthology. According to Ghoshal (2005) "bad theories" are the reason why "good practices" are destroyed, and an explanation for the continuous need for new ways of understanding – or explaining – failures, bad behavior, or various organizational scandals. Jeffrey Pfeffer (2005) adds to Ghohal's reflections about "bad theories," stressing that researchers have been more interested in emphasizing and confirming their own theories and concepts than in what is

happening in practice. When reflecting on the consequences of "bad theories" destroying "good practices," it is not a big surprise that literature – produced by both researchers and consultants – that offers a "recipe for success" is growing, but leaves the organizations to solve the key question themselves, namely *how* does an organization learn? While it is inherent in their business model for consultants not to provide a full answer to that question (but to offer additional consultancy), we within the research community need to critically reflect on our role and responsibility in this.

I believe that both researchers and managers who want to develop a better understanding of organizational learning and how learning can be improved need to create a common understanding not only of what is good practice but also of what is good theory. By being more transparent about our research process and engaging in reflexive dialogues, not only can practitioners learn more about and from researchers but also more about themselves (cf. Corlett, 2013). Following the aim of this chapter, I adhere to Cunliffe's (2002) call for a reflexive dialogical practice and the need for researchers and practitioners to learn more from and about each other. We need to replace today's sometimes un-reflected way of reasoning around learning in organizations, i.e., single-loop and double-loop learning, and engage more in learning about learning at work, understood as learning-in-organizing, and in what might be referred to as deutero-loop learning (cf Argyris & Schön, 1978). By doing so, I believe we can advance our knowledge about learning about learning and develop a collaborative understanding of how to close the knowing-doing gap, or in the words of Cunliffe (2002, p. 57):

> Reflexive dialogical practice can enhance learning by helping us connect tacit knowing and explicit knowledge and become more aware of how we create the imagined from the imaginary. This involves engaging in dialogue (spoken and written) with self/others/other to highlight the tacit assumptions and ideologies that subsist un our ways of talking, and explaining how our own actions, conversational practice, and ways of making sense (as managers, educators, and learners) may create and be sustained by particular ways of relating and by implicit or explicit power relationships. [....] By questioning at many levels; self, others, theory, language, knowledge, reality, ideology, we may become more critical and responsive practitioners – better able to be 'actively engaged in the much-needed search for fundamental alternatives to current ways of organizing and "doing things".

Rethinking lifelong learning for the twenty-first century relates to a need to think and (re)learn about organizational learning – both in theory and practice – rather than engaging in new concepts. The ability to learn about learning in practice calls for collaborative learning. However, a call to engage in collaborative learning should not be understood as yet another concept, but rather as an approach and a way of thinking about learning. It is an approach that returns to the foundations of organizational learning, where researchers observe and learn from reflective practitioners (Schön, 1983) but also one that calls for observing and learning from reflective researchers.

In order to develop our understanding of organizational learning – and the more popular concepts, such as talent, innovation, co- creation, and knowledge sharing,

that go with the term – we need not additional concepts, but rather reflection and reflexivity (Cunliffe, 2002, p. 38):

> So, whereas reflection is often seen as a systematic thought process concerned with simplifying experience by searching for patterns, logic, and order, reflexivity means complexifying thinking or experience by exposing contradictions, doubts, dilemmas, and possibilities.

To engage in complexifying thinking and experience is to learn. If we take lifelong learning seriously, perhaps collaborative learning is what we need to engage in, by doing and learning from each other.

References

Adler, P. S. (2001). Market, hierarchy, and trust: The knowledge economy and the future of capitalism. *Organization Science, 12*(2), 215–234.

Alvesson, M., Gabriel, Y., & Paulsen, R. (2017). *Return to meaning – A social science with something to say*. Oxford University Press.

Ambos, T. C., Ambos, B., & Schlegelmilch, B. B. (2006). Learning from foreign subsidiaries: An empirical investigation of headquarters' benefits from reverse knowledge transfers. *International Business Review, 15*(3), 294–312.

Argyris, C. (1957). *Personality and organization: The conflict between system and the individual*. Harper & Row.

Argyris, C., & Schön, D. A. (1978). *Organizational learning: A theory of action perspective*. Addison-Wesley.

Barley, S. R., & Kunda, G. (2001). Bringing work back in. *Organization Science, 12*(1), 76–95.

Chini, T. (2004). *Effective knowledge transfer in multinational corporations*. Palgrave Macmillan.

Cook, S. D. N., & Brown, J. S. (1999). Bridging epistemologies: The generative dance between organizational knowledge and organizational knowing. *Organization Science, 10*(14), 381–400.

Corlett, S. (2013). Participant learning in and through research as reflexive dialogue: Being 'struck' and the effects of recall. *Management Learning, 44*(5), 453–469.

Cunliffe, A. L. (2002). Reflexive dialogical practice in management learning. *Management Learning, 33*(1), 35–61.

Cunliffe, A. L. (2003). Reflexive inquiry in organizational research: Questions and possibilities. *Human Relations, 56*(8), 983–1003.

Cunliffe, A. L. (2009). The philosopher leader: On relationalism, ethics and reflexivity: A critical perspective on teaching leadership. *Management Learning, 40*(1), 87–101.

Cunliffe, A. L., & Scaratti, G. (2017). Embedding impact in engaged research: Developing socially useful knowledge through dialogical sensemaking. *British Journal of Management, 28*(1), 29–44.

Dierkes, M., Berthoin Antal, A., Child, J., & Nonka, I. (2001). *Handbook of organizational learning and knowledge*. Oxford University Press.

Easterby-Smith, M. (1997). Disciplines of organizational learning: Contributions and critiques. *Human Relations, 50*, 1085–1114.

Easterby-Smith, M., & Lyles, M. L. (2003). *The Blackwell handbook of organizational learning and knowledge management*. Blackwell Publishing.

Easterby-Smith, M., & Lyles, M. L. (2011). *Handbook of organizational learning and knowledge management* (2nd ed.). Wiley.

Elkjaer, B. (2005). From digital administration to organizational learning. *Journal of Workplace Learning, 17*(8), 533–544.

Friedman, V. J., Lipshitz, R., & Popper, M. (2005). The mystification of organizational learning. *Journal of Management Inquiry, 14*(1), 19–30.

Gherardi, S. (2001). From organizational learning to practice-based knowing. *Human Relations, 54*(1), 131–139.

Gherardi, S. (2006). *Organizational knowledge*. Blackwell Publishing.

Ghoshal, S. (2005). Bad management theories are destroying good management practices. *Academy of Management Learning & Education, 4*(1), 75–91.

Grant, R. M. (1996). Toward a knowledge-based theory of the firm. *Strategic Management Journal, 17*(Winter special issue), 109–122.

Hagberg, J., Jonsson, A., & Egels-Zandén, N. (2017). Retail digitalization: Implications for physical stores. *Journal of Retailing and Consumer Services, 39*(November), 264–269.

Itami, H., & Roehl, T. W. (1987). *Mobilizing invisible assets*. Harvard University Press.

Jonsson, A. (2007). *Knowledge sharing across borders: A study in the IKEA world* (Lund studies in economics and management, 97). Lund University Press.

Jonsson, A. (2013). *True partnership as true learning: Knowledge sharing within Mannheimer Swartling*. Iustus Förlag.

Jonsson, A. (2015). Beyond knowledge management – Understanding how to share knowledge through logic and practice. *Knowledge Management Research & Practice, 13*, 45–58.

Jonsson, A. (2017). Dragons with horsepower: Learning about the internationalization process of emerging market firms. In S. Marinova, J. Larimo, & N. Nummela (Eds.), *Value creation in international business*. Palgrave Macmillan. https://doi.org/10.1007/978-3-319-30803-6_13

Jonsson, A. (2019). Samverkansjakten: Kanske är vi bara kloka tillsammans. In A. Brechensbauer, M. Grafström, A. Jonsson, & M. Klintman (Eds.), *Kampen om kunskap: Akademi och praktik* (pp. 41–49). Santerus Förlag.

Jonsson, A. (2020). Samverkan: Om konsten att veta och skapa tillsammans. In H. Rahm, D. Dunér, S. Hidal, & B. Jonsson (Eds.), *I Pallas Athenas huvud: Hundra år av humaniora* (pp. 171–178). Makadam förlag.

Jonsson, A., & Grafström, M. (2021). Rethinking science communication: Reflections on what happens when science meets comic art. *JCOM, 20*(2), Y01. https://doi.org/10.22323/2.20020401

Jonsson, A., & Tell, F. (2013). Knowledge Management. In L. Strannegård & A. Styhre (Eds.), *Management – An advanced introduction* (pp. 75–106). Studentlitteratur.

Jonsson, A., & Vahlne, J. E. (forthcoming). Complexity offering opportunity: Mutual learning between Zhejiang Geely Holding Group and Volvo Cars in the post-acquisition process. *Global Strategy Journal*, Special Issue "Complexity and multinationals".

Johanson, J., & Vahlne, J.-E. (1977). The internationalization process of the firm: A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies, 8*(1), 23–32.

Lawrence, P. R., & Lorsch, J. W. (1967). Differentiation and integration in complex organizations. *Administrative Science Quarterly, 12*(1), 1–47.

Moore, K., & Birkinshaw, J. (1998). Managing knowledge in global service firms: Centers of excellence. *Academy of Management Executive, 12*(4), 81–92.

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science, 5*(1), 14–37.

Orlikowski, W. J. (2002). Knowing in practice: Enacting a collective capability in distributed organizing. *Organization Science, 13*(3), 249–273.

Örtenblad, A. (2002). A typology of the idea of learning organization. *Management Learning, 33*(2), 215–230.

Örtenblad, A. (2018). Editorial: What does 'learning organization' mean? *The Learning Organization, 25*(3), 150–158.

Pfeffer, J. (2005). Why do bad management theories persist? A comment on Ghoshal. *Academy of Management Learning & Education, 4*(1), 96–100.

Pfeffer, J., & Sutton, R. (1999). The smart-talk trap. *Harvard Business Review*, May–June, 134–142.

Pfeffer, J., & Sutton, R. (2000). *The knowing–doing gap: How smart companies turn knowledge into action*. Harvard Business School Press.

Schön, D. (1983). *The reflective practitioner*. Basic Books.

Simon, H. A. (1947/1997). *Administrative behavior: A study of decision-making processes in administrative organization* (4th ed.). Free Press.

Styhre, A. (2003). *Understanding knowledge management*. Liber.

Tsang, E. W. K. (1997). Organizational learning and the learning organization: A dichotomy between descriptive and prescriptive research. *Human Relations, 50*(1), 73–89.

Van Maanen, J. (1988). *Tales of the field: On writing ethnography*. University of Chicago Press.

Chapter 2
Infrastructuring for Co-production: A Learning Perspective on Health Promoting Services Among Senior Citizens

Marie Aakjær and Eva Pallesen

Abstract This chapter examines organisational learning that took place in a Danish case about co-production of rehabilitation activities in the 'Lung Network', a network involving a municipality employee, a digital communication platform, and a group of senior citizens, who live with various lung conditions such as Chronic Obstructive Pulmonary Disease. Co-production is presently gaining a foothold in research as well as in practice and has become a key term in the Danish public sector. Currently, initiatives have been undertaken to support local communities as means to realise healthcare policies. In these endeavours, co-production takes place at the intersection of professionals' and citizens' commitments. Despite the increased interest in co-production, however, opportunities for organisational learning in co-production is sparsely accounted for in the literature. Drawing upon pragmatist theorizing on organisational learning, this study attempts to mitigate this lack. We examine tensions and processes of negotiation that arise from citizens' and new technology's participation in the municipality's organisation of rehabilitation services. Inspired by the concept of infrastructuring, the analysis focuses on how sociomaterial re-arrangements are enacted and imagined in the case. The analysis shows how the potential temporal-spatial extension of the Lung Network, enabled by the platform, affects participants' commitments to their joint practice in three respects: (1) how activities in the Lung Network are organised; (2) the content of activities; and (3) the purpose of the Lung network. The chapter contributes by empirically showing how this extension in commitments creates tensions and uncertainties as the sociomaterial and technological conditions are negotiated, and argues that by virtue of these (creative) tensions, co-production processes pose a potential for organisational learning.

Keywords Co-production · Co-creation · Rehabilitation · Organisational learning · Infrastructuring

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Introduction

This chapter explores organisational learning in a Danish case about co-production of rehabilitation activities among a municipality-employed physiotherapist and senior citizens living with a lung condition. Co-production and related concepts of co-creation and social innovation are presently gaining footholds not only in research but also in practice (Aakjær et al., 2020; Durose, et al., 2017; Tuurnas, 2016). However, the potentially conflicting commitments to activities and goals amongst professionals and citizens are sparsely accounted for in the literature, leaving undescribed the tensions as well as opportunities for organisational learning that arise when citizens are involved in co-production. This chapter intends to mitigate this lack by applying a conceptualisation of organisational learning as processes of collaborative inquiry at intersecting worlds (Brandi & Ekjaer, 2013).

Co-production has become a key term in the Danish public sector, where initiatives are undertaken to further accelerate and conceptualise innovation efforts that involve citizens as co-producers of welfare (Bason, 2016; Sørensen & Torfing, 2018; Tortzen, 2019). Within the same line of thought, new digital platforms have been introduced as a means for facilitating co-production of welfare, e.g. technologically mediated self-service in public administration, telecare solutions, or SMS-services between the police and local communities in order to co-produce security (van Eijk, 2017). More recently, digital platforms have been activated to facilitate local communities with the aim of supporting health-promoting behaviour and thereby linking national healthcare policies to local communities (Pallesen & Aakjær, 2020). These initiatives aim to establish communities among citizens or to strengthen existing local communities, e.g. local walking groups and meeting places for elderly men (Malmborg, 2017), or communities formed in relation to a shared diagnosis (Aakjær & Pallesen, 2020). In these endeavours, co-production takes place at the intersection of professionals' and citizens' commitments to certain activities and opens opportunities for a processual re-ordering of which resources are involved or shared, what goals to commit to, and which norms and ideas guide these efforts.

Concepts of co-creation and co-production are often used interchangeably in literature and practice (Tuurnas, 2016). Arguably, however, they address different aspects: while co-production addresses how (public) services are produced in a collaborative manner by public sector professionals and citizens, co-creation addresses how new, innovative practices emerge (ibid.). Co-production was first coined to describe how informal collaboration of public sector providers and citizens can improve the quality of public services (Ostrom, 1996), but the term has increasingly developed into strategy and policy matters (Boyle, 1989; Voorberg et al., 2015), involving citizens and third-sector actors as co-providers of welfare (Brandsen & Pestoff, 2006). As in the case described here, this involves an increase in formalisation of relations, commitments, and goals among professionals and citizens.

The interest in co-production calls for a focus on public service professionals' possibilities for learning and development (Tuurnas, 2015). However, until now, this has primarily been explored within fields of administration and management studies (Durose et al., 2017; Tuurnas, 2015, 2016; Voorberg et al., 2015). Still, the potentially conflicting commitments are sparsely accounted for, leaving undescribed the opportunities for organisational learning in co-production, when citizens are regarded as participants in processes of inquiry.

This chapter aims to contribute, with empirically based insights, potentials for organisational learning through co-production. In the studied case, we follow the Lung Network: a group of senior citizens living with various lung conditions (here amongst Chronic Obstructive Pulmonary Disease (COPD)), who meet on a weekly basis at the municipality activity centre. A digital platform was tried out to strengthen the community. By making communication, sharing information, and staying in touch easier, the platform was supposed to support the citizens in maintaining an active way of life, inspiring each other to train and exercise, and in sharing life experiences to support and encourage one another. During the period of this study, the use of the platform remained very limited, despite several attempts from the physiotherapist to instruct, support, and inspire the senior citizens in how the platform worked and could be of use for them. Despite the unsuccessful implementation of the platform, the process of trying out the platform initiated changes in how participants interacted and imagined their joint activity. It hence, makes an interesting case for studying the opportunities for organisational learning through co-production.

In Strauss' concept of social worlds (Strauss, 1978, Clarke, 1991), organisations are arenas of coordinated activities, and social worlds emerge as a result of commitments to these same activities. Brandi & Elkjaer (2011, 2013) show how the organising of work influences possibilities for organisational learning, as the content, purpose, and organisation of work is changed in interactions and negotiations of changing social worlds. With this understanding, the case of the Lung Network can be regarded as a process of negotiation between intersecting social worlds of municipal employees and citizens.

In the chapter we explore the Lung Network's potential extension in time and space in the context of a digital platform being introduced and how, in this process, uncertainties and tensions arise. We draw on a pragmatist, social learning perspective in which learning arises in and via a practice as actors find themselves in uncertain situations and strive to infuse new meaning to find new ways for action (Brandi & Elkjaer, 2011; Elkjaer & Simpson, 2011). In this perspective, organisational learning is a transformative process in which an uncertain organisational situation is transformed into a more settled situation (Brandi & Elkjaer, 2013, p. 149) as actors create and employ knowledge, which may eventually change existing organisational practices (ibid.).

Building on this notion of organisational learning, we add the concept of infrastructuring (Star & Ruhleder, 1996; Karasti, et al., 2018) to emphasise the

focus on the sociomaterial reconfigurations that follow the introduction of the digital platform and how this changes conditions (Strauss, 1978) and influences commitments and knowing (Brandi & Elkjaer, 2011, 2013). We examine how tensions and negotiations arise, as commitments across social worlds are contested and potentially changed. Infrastructuring informs the analysis by drawing attention to the sociomaterial reconfigurations and the involved negotiations of commitments and knowing in practice. The chapter contributes to the understanding of organisational learning through co-production as a joint sociomaterial endeavour. By activating the concept of infrastructuring, the analysis shows how the temporal-spatial extension of the Lung Network, enabled by the digital platform, potentially expands the scope of commitment with regard to (1) the organisation of activities in the Lung Network (how and by whom activities are arranged), (2) the actual types of activities (what is the content of activities), and (3) the purpose of the Lung Network's practice (why actors engage in this). This potential expansion of commitments creates tensions amongst participants and initiates a process in which the physiotherapist and citizens negotiate and inquire into possibilities for developing what the practice of the Lung Network as a co-produced rehabilitation practice *could be*.

The Lung Network: Empirical Case and Data

The chapter is based on empirical material from a sub-project (WP3) in MATURE, that, according to the project description, aimed 'to investigate how resources of "active agers" can be utilized in a local exchange of care and services in Denmark' by 'develop[ing] and evaluat[ing] a social innovation, drawing upon the concept of sharing economy' (MATURE, 2016). The introduction of a digital platform was supposed to enable new practices of co-production: 'With older adults as co-creators [...] we develop, test, and evaluate a simple technological platform allowing older adults to request and offer services' (MATURE, 2016). The project took place in a Danish municipality that already made (off-line) efforts to connect senior citizens with chronic lung conditions. Over the duration of the project, 10–25 citizens with an average age of 65 years and mixed in terms of gender attended the Lung Network. Several participants had previously been referred to clinical treatment and rehabilitation programs related to their lung condition. A few had taken part in telecare-consultations and ICT-based rehabilitation and lung training. Most participants had vocational backgrounds and a few were still employed.

The participants were asked to volunteer in trying out what a digital platform might do to support their community. The platform – which is technically speaking an app – was designed for a target group of elderly people as a closed, secure system, where access to a profile was given through a license and no data was shared with third parties. The platform gave access to a limited group of other profiles, orchestrated by an administrator. The platform/app worked on smartphones, computers, and tablets and included a small number of functions: A direct (private) text message function, a video-chat function, an address book with profile photos, and shared photo album, calendar, and noteboard for the group to share ideas, activities, or memories, etc. The platform was activated in collaboration with a researcher (first author) and the physiotherapist as administrator of the group.

Generation of Data from the Lung Network

The empirical material presented below is generated through data production methods from the ethnographic field that emphasise 'being there' in the middle of things (Binder et al., 2011; Halse, 2013). In this case 'being there' was twofold: being there in digital space meant having access to the platform as well as having access to a physical gathering of people in the community. The empirical material was produced throughout a period of 1 year (September 2017–September 2018), in which 11 citizens had access to the digital platform. After 7 months, a workshop was arranged for a larger group of citizens, discussing their experiences with the platform. The empirical material encompasses 11 semi-structured interviews, informal conversations, one home visit including two participants trying out the platform from home, transcripts from the workshop, observations from citizens' physical gatherings at the municipality centre (in total 21 interviews/observations), as well as quantitative data on interactions on the platform. Interviews and the workshop were audio-recorded and afterwards transcribed verbatim. Observations of network activities and informal conversations were systematically recorded in a logbook. The bulk of the data used in the analysis is drawn from interviews, transcription of the workshop, as well as observation notes, and translations by the authors.

Theoretical Framework and Analytical Approach

We propose to explore co-production as a learning arrangement and to do so, we take a theoretical outset in the organising of (work) activities as a potential source of organisational learning, inspired by Brandi and Elkjaer (Brandi & Elkjaer, 2011, 2013). Based on a pragmatist philosophy and Strauss' theory of social worlds/arenas

(Clarke, 1991; Clarke & Star, 2008; Strauss, 1978), they argue that organisations can be regarded as social worlds defined as:

> Groups with shared commitments to certain activities, sharing resources of many kinds to achieve their goals, and building shared ideologies about how to go about their business. (Clarke, 1991, p. 131)

The Lung Network can be regarded as residing at the intersection of social worlds of the municipality physiotherapist and citizens: its organising is essentially connected to how actors are committed to collective action. The organising of work influences possibilities for organisational learning (Brandi & Elkjaer, 2011, 2013) as the content, purpose, and organisation of work develop in interactions and negotiations of changing social worlds. The introduction of the platform to spur co-production in the Lung Network posed a series of uncertain situations for the involved and hence provides a case of a learning arrangement in which actors from different social worlds engage in collaborative inquiry. Taking a pragmatic, social learning perspective, organisational learning is regarded as both individual and social, since these are mutually constitutive (Brandi & Elkjaer, 2011; Elkjaer & Simpson, 2011). Learning takes place as a process of inquiry, intrinsically bound to actors' contextual experience and how they create meaning in transactions with the material and technological settings of situations. Organisational learning arises in and via practice as actors find themselves in uncertain organisational situations and strive to infuse new meaning to find new ways for action (Brandi & Elkjaer, 2013). When actors of the Lung Network create and employ knowledge this may eventually change existing organisational practices.

In the analysis, we combine the conceptualisation of organising and organisational learning from Brandi and Elkjaer (2011, 2013) with the concept of infrastructuring (Karasti, et al., 2018). We do so to further emphasise focus on the sociomaterial reconfigurations that follow the introduction of the digital platform, to see how this influences the conditions, commitments, and knowing of the intersecting social worlds in the Lung Network and how this matters in the emergence of learning opportunities.

Analytical Approach

According to Star (1999) 'infrastructural inversion' is the process of attending to the 'singularly unexciting', mundane details of situations. This means attuning ourselves to the things that do not immediately stand out from the background of everyday life – and these gradually became more important to our analysis. We drew maps using quotes, events, places, and material objects to bring together the elements of the studied situations and examine their arising connectedness or tensions (Clarke, 2003). We tentatively, and in an abductive manner (Alvesson & Sköldberg, 2009), started to relate these maps with the notion of infrastructuring. Abduction, as a way of reasoning, takes off in the empirical material and seeks to construct explanatory

models grounded in everyday activities. Infrastructuring focused our attention on the unfolding of activities and reconfigurations of place, time, commitments, and knowing in practice.

The structure of the analysis is as follows: First, the analysis takes off in Star and Ruhleder's (1996, p. 5) point that "infrastructure has reach beyond single events and one-sited practice". This draws attention to changes in temporal-spatial relations that condition the organising of activities. The potential alternations in 'reach and scope' of the temporal-spatial conditions of the Lung Network's activities – that follow the introduction of a digital platform – give rise to new dialogues and inquiries across the social worlds of the involved. It opens up to negotiations about how activities can potentially be organised and carried out, what activities to include and why.

In the second part of the analysis, we draw on Brandi and Elkjaer's (2011, 2013) conceptualisation of organisational learning as processes of collaborative inquiry at intersecting worlds, and draw attention to tensions and negotiations of knowing and commitment that arise from new uncertainties. This is not simply a discursive exchange, but is deeply entangled with bodily experiences of landscapes, weather conditions, emotions, limited lung capacity, lack of air, or reduced access for ambulances.

Analysis

Expanding Reach and Scope of Community Practice

We start by zooming in on an interview with the physiotherapist who organises the activities for the citizens, i.e., physical training sessions and social cafés. Originally, it was supposed to be a volunteer who coordinates activities. Over time the physiotherapist should try to get one or two citizens to take over.

> My primary task is to support this group to maintain the [physical-mental/health] function they have and maybe improve it, depending on their own efforts. So, my job is to help some very weak citizens in the municipality to get better and postpone re-admissions or hospitalizations, get something social up and running for them so they avoid isolation, where they sit at home and get nothing done. (Physiotherapist in interview)

Being located within the context of the public organisation, the physiotherapist's engagement is conditioned by his commitment to the means and goals of the municipality. Still, the imperative of co-production and the provisional arrangement of his tasks implies that the physiotherapist's role is vaguely defined. He must commit to the goals of the municipality (*avoiding or postponing hospitalisation*) while striving to meet the aspirations of the local community. The physiotherapist is the primary driver in initiating and sustaining the community for a number of citizens, who do not know each other beforehand or share any obligations or duties. His task (to *maintain* or *improve the [physical-mental/health] function*) is directed at the ends of decreasing public spending (*avoiding or postponing hospitalisation*) by

means of keeping citizens active and mentally/physically well-functioning (by facilitating *'something social'*, thereby '*avoiding isolation'*).

Thus, the content, organisation of activities, tasks, and goals of the physiotherapist are interconnected to, and dependent on the commitment of citizens (*their own efforts*) as active co-producers: The rehabilitation activities (or services) can only emerge as a joint collaborative practice and thus involves more than the commitment, knowledge, and experience of the professional physiotherapist. That is essential to co-production. This necessitates joint commitment across the social worlds of the various participants, and raises questions on how the activities, sociomaterialities, and knowledge that go into the practice of the Lung Network are changed or stabilized across of the heterogeneous group of participants. Still, the municipal rehabilitation policies and the political agendas condition the configuration of the community by providing the contextual, material, and situated conditions of the joint activities in the Lung Network. However, these conditions are potentially altered by the introduction of the digital platform.

When asked what the physiotherapist reckons to be the point of bringing in the new platform, he states:

> I think there's a great potential [in using the platform for them] to arrange some things [that are] in addition to the things that I engage in. [It] could be everyday stuff such as arranging some dinner or a walk or something; something they arrange themselves. Because then they could meet, besides only coming here once a week. (Physiotherapist in interview)

The goals of the municipality (*preventing hospitalisation, increasing well-being*) are envisioned to be reached by expanding activities of the community to involve citizens' private life activities (*everyday stuff, a dinner, a walk*). It is a potential change in how rehabilitational activities may be organised, by whom and where activities may take place. The physiotherapist makes sense of the platform as a means for mounting how rehabilitation activities can take place beyond the physical, geographical conditions of the municipal activity centre by connecting and providing access to facilities beyond the activity centre such as private homes, public outdoor spaces, etc. Also, the platform potentially provides an expansion of the reach of the Lung Network in clock-time beyond public opening hours. It potentially expands the frequency from single events *'once a week'* to as often or 'anytime they like'.

However, making sense of the platform in use, implies negotiation of the physiotherapists' and the citizens' commitments to the things they do. For the citizens in the Lung Network, a shared sense of commitment seems to revolve around physical training and coffee drinking: When asked what is essential to the community, drinking coffee and sharing stories is emphasised recurrently by the citizens and *"it was over coffee we decided to have a barbeque party"*. They accentuate the sense of community as something that emerges when they *'spend time together'* and *'share life experiences'*. Trying out the platform in the Lung Network sparks new ideas of shared activities:

Sonja: Well I could think of [the platform] – if one day, maybe one Sunday afternoon and the weather is good, and I would like to go for a little walk. Maybe there was someone I could draw with me? Or someone could draw me up?

Interviewer: You could reach a few others?

Sonja: yes. Or if there is someone who hasn't been here in a long time: just write to them 'hey, how are you?' 'is it really bad or are you just on vacation?' (Excerpt from workshop)

As the platform enters the community, new hopes surface and new ideas emerge for future possibilities to expand not only the types of activities from the physiotherapist's training sessions to include a walk or a chat outside the physical meetings, something that they do not do already. But also the purpose of the community, including new commitments (*to reach others, someone could draw me up*). Another participant suggests that she could use the platform to share photos and send greetings from her holiday in Austria. In the quote, Sonja suggests an expansion of their activities that could intensify a sense of belonging: to care for others and to receive care and interest.

Hence, including the platform does not only involve a potential reconfiguration of temporal-spatial dimensions of the Lung Network's activities; i.e., how activities are organised, by whom, where activities take place, when or how often. Also, it implies a potential expansion of the content and purpose of communal activities: The platform potentially facilitates an expansion of what they do to include more types of activities in the community. Suggestions put forward by the physiotherapist as well as the citizens, imply that what is shared in the community could expand beyond the existing municipal framing of the community and what it is about (physical training for people with a lung condition).

Table 2.1 summarizes changes in commitments that arise in dialogues and actions as the temporal-spatial relations that condition the organising of the Lung Network's practice, change when the digital platform is introduced. In the discussion section, we return to this as a process of infrastructuring.

Reconfigurations of the Sense of Community

In the second part of the analysis, we focus on how the identified temporal-spatial changes provoked uncertainties, tensions, and negotiations of knowing and commitment in the Lung Network's practice.

The physiotherapist asks if anybody saw the television program about COPD. He has shared the link on the platform. Dorthe says that now she is excluded; she cannot access the platform, and now everything will happen there. She has a brain injury, and cannot remember from one moment to the next the instructions she is given on how to get access. She has thrown out the computer. *Once you got pictures of grandchildren on paper, but now everything is on the phone or the computer,* she says. The physiotherapist says that she will not be excluded. *We will still meet physically*, he adds. (Excerpt from observation notes, training session)

Table 2.1 Potential changes in commitments due to changes in the temporal-spatial relations that condition organising

Commitments to. . .	Physiotherapist	Citizens
How (the **organising** and carrying out of activities)	From: weekly arranging training session at the municipality facilities at the activity center as a free, professional service to citizens To: assisting and inspiring citizens to arrange walks, dinners, or other social activities as often or any time they like via the digital platform + arrange training sessions	From: participating in training sessions at the municipality activity center one time a week To: arranging social activities (walks, dinner, or other social activities) or sharing information, photos, etc. via the digital platform as often or anytime they like in private homes or public outdoor spaces
Why (the **purpose** of activities)	From: to prevent or postpone hospitalization To: prevent hospitalization more effectively by drawing in the everyday life outside the rehabilitation centre's open hours	From: to exercise, to share life experiences To: to exercise, to share life experiences and to make friends, to care for others and be cared for outside the rehabilitation centre's open hours
What (the **content** of activities)	From: physical training, social coffees and lectures To: social activities and training	From: exercise and coffee drinking To: social activities (walks, dinners, chatting online or over coffee, etc), sharing of inspiration, ideas, photos from vacation, etc.
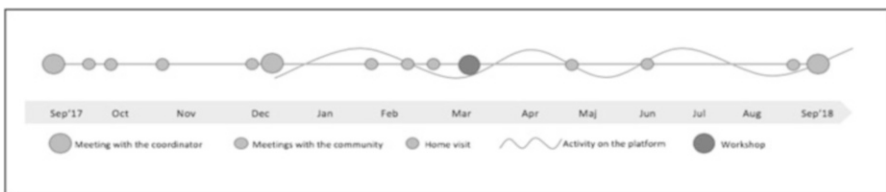
Fig. 2.1 Overview of research process and field visits

The physiotherapist tries to inspire and share information via the platform, which adds an extension to the time-space of the physical meetings at the activity centre. However, this creates uncertainties of what it takes to participate in the Lung Network and challenges what otherwise appeared to be a shared sense of commitment: that everyone is included. This implies negotiation of which kind of things, technologies, places/geographies that can be meaningfully part of their activities. At the workshop, one participant suggests they arrange and share walking routes via the platform:

> Marta: We could easily share some routes [via the platform]. Then you could make some suggestions of different lengths and so on. For example, I walk on the reef a lot –
> Laila: [interrupts] Well there! – I dare not go anywhere at all where there is no access for an ambulance or where I can't get help if I have problems. It is completely out of the

question for me! [several voices 'there's also the fort', 'or just a walk on the beach or…']. (Excerpt from workshop)

Just as the process of trying out the platform propels dreams and hopes for expanding what they do together, the new suggestions give rise to anxiety and tensions. As the idea to arrange a walk at the reef comes up, this instantaneously re-evokes past experiences with limited lung functionality or lack of air and actualizes the sense that it may not be safe to take part in future network activities. Experiences, aspirations, and dreams are nested within the sociomateriality of situations. The inclusion of the platform is entangled with, and re-accentuates past experiences, just like it initiates new ways of envisioning of the future.

In Marta and Laila's conversation as well as in Dorthe's reaction, we are reminded of the tensions: while the process may produce a sense of possibility of something that is yet to come, it may also produce a fear of being cut off, not only from specific activities in a situation, but from an emergent future practice (*where everything will happen*). The possibilities that are imagined need to be aligned with the sense of commitment to what they do as a community. This is, however, complicated since negotiations take place across different social worlds and a new practice must gain accountability to the experiences of multiple actors.

One citizen strives to make new, meaningful connections across the available technological-material conditions in ways that may support their shared activities:

Sonja: I'm thinking – there is the list of phone numbers. If only we got that phone-list all together.
Lone/Dorthe: Yes, that would be a good idea.
Sonja: Right? Also, because then we could always call each other. I could call you if I see something on Facebook. Now there is something – an event – that might interest us. Then I could call and say 'would you like to go?' That's why I think we should all have that phone list. And then I would like if we were still on Facebook or the [platform]. (Excerpt from workshop)

Sonja suggests an opportunity for combining more components (phone numbers and platforms) in order to connect more easily and thereby to expand the possible activities and ways of staying connected in the community without excluding anyone. While the municipal physiotherapist tries to push forward information on COPD and instructions for exercises on the digital platform, it does not easily 'plug into' existing practices of the community; neither do suggestions of new shared walking routes on the reef.

The uncertainties that emerge in the process initiate participants' inquiries into how joint practice may be developed. However, there are tensions amongst participants' ideas of what a future practice might include: which technologies to use in order to communicate and connect (*platforms and telephones lists*), or which locations are suitable for the group to meet at (*the reef, the beach, the activity centre*). This is not simply a discursive exchange, but is deeply entangled with bodily experiences of landscapes, weather conditions, emotions, limited lung capacity, lack of air, or reduced access for ambulances.

The process of trying out the platform to support co-production of activities induces conflicting elements of knowing and negotiations of commitments to

practice. Altering the conditions potentially expands or restricts what the community does, which inevitably reconfigures the sense of meaning and experience of the community: The process spurs negotiations of what the community is about (the activities they share), what it means to people (their aspiration), and what it takes to participate (what experience goes into their practice).

Discussion

Infrastructuring for Co-production

In the studied case, the aim was to extend the rehabilitational activities of the municipality to also include activities arranged by citizens as co-producers. In the reasoning of the project description, the process was one of developing or strengthening engagement of a local community and this was to be facilitated by including a digital platform as a new communication infrastructure. In this chapter, we are particularly interested in understanding organisational learning in co-production from a perspective that considers learning to be initiated when actors find themselves in uncertain situations where tensions arise, and to follow how processes of negotiation and inquiry unfold within the sociomaterial conditions as these conditions are changed. In the following, we discuss this as a process of infrastructuring for co-production.

Infrastructures, such as the internet or water pipes, are most often invisible, embedded, or 'sunk into the background' (Star & Ruhleder, 1996, p. 5), residing inside other structures, social arrangements, and technologies. Star's concept of infrastructure (Star & Ruhleder, 1996) dislocates attention from the platform/technology as an entity (thing or object) to the constitutional entanglement of temporal, relational aspects in which infrastructure comes into being. Infrastructure sustains and enables social life and consists of various parts – buildings, artifacts, and ways of working – to which actors ascribe meaning as part of (everyday) practices. Infrastructure emerges *in situ*, for people in practice, and in connection with activities. Hence, an infrastructure is learned as part of membership of a social group or community (ibid.).

Ehn, Karasti, and others (Ehn, 2008; Karasti & Syrjänen, 2004) suggested moving the concept to the gerund 'infrastructuring'. A move from a 'fixed ontology' to a 'process ontology' (Karasti et al., 2018, p. 2) yields an even stronger emphasis on what Star and Bowker (2002) termed 'to infrastructure'. As an analytical view, this vantage point shifts the focus to the "extended periods of time during which infrastructuring unfolds" (Karasti et al., 2018), which in this case meant that we analysed a series of situations, across the one-year period of data production.

With infrastructuring, we can understand the sociomaterial reconfigurations that happen in the context of the platform being introduced in a way that takes into account the change in time-space relations of the community and how it matters in the emergence of learning opportunities: The idea of including the digital platform

means that there is now an ever-present potential of extending the community in time (*outside opening ours, evenings, Sundays, etc.*) and space (*the home, the reef, the beach, etc.*). This gives rise to – not only ideas and hopes from the municipal employee about reaching goals in relation to the network's effect on rehabilitation – but also to new and diverse dreams and hopes – as well as fears – for the future of the citizens. However, meanings of situations and objects in the present moments are nested in sociomaterial transactions and are inseparable from the continuity of experience (Elkjaer & Simpson, 2011). The analysis shows how previous experiences (e.g., walking in an isolated area, caring for others, pictures of grandkids disappearing into a digital world, out of reach) gain new meaning and significance in relation to the potentially changed sociomateriality of the network. These tensions amongst experiences and commitments initiate (creative) negotiation that hold a potential for learning across employees' and citizens' social worlds. Hence, as an analytical lens, infrastructuring also directs attention to the temporal-spatial elements of experience in the learning process, as actors, located in uncertain situations between the past and the future, strive to connect experiences of *what has been* to future aspirations of *what is (yet) to come.* The platform is not simply added as a device facilitating and making easier what is already going on in the community. Rather, it is embedded in existing sociomaterial conditions of the intersecting social worlds/arenas and, potentially, such a change in conditions can give rise to a qualitative transformation of the Lung Network-community as a whole.

The analysis illustrates how co-production is not an effort that only concerns individual learning and the alternation of the municipal physiotherapist's professional practice. Rather, by approaching this as a learning arrangement of intersecting social worlds, we see that the process potentially alternates the reach and scope of the practices in the Lung Network, including the how, where, and by whom activities are organised as well as the purpose and content to which they are committed.

This points to the possibilities for organisational learning in ICT-facilitated co-production and in co-production broadly. When regarded as a learning arrangement, the process of developing co-production of rehabilitational activities can be considered as a process of inquiry. It involves negotiating commitments to different frames of understanding and negotiation of the specific activities and values of each social world, as well as the potential goals and outcomes of the joint municipal/civil practice. The coordinator wants to push responsibility for organising activities of the community to citizens. In some situations, citizens follow this suggestion and put forward ideas and proposals of what to do, why and how to overcome challenges, including the use of new technology, novel spaces, and other times. In these processes, the goals of the Lung Network's practice expand beyond the initial municipal focus on improving physical health measures, preventing hospitalisation, and reducing costs, to encompass multiple and diverse meanings or sense of purpose, such as hopes for increasing one's number of friends and for more sunny days to come.

Conclusion: Co-production as a Sociomaterial Learning Endeavour

The purpose of studying the case in the Lung Network was to draw attention to the opportunities for organisational learning in co-production of rehabilitation activities. Co-production is a young field of practice that intends to innovate organizations or certain aspects of them. Clearly, co-production puts new demands on professionals' learning (Tuurnas, 2016), which is reflected also in our data. However, co-production hinges not solely on the professional's learning. Rather, co-production involves both professionals and citizens in a collective, sociomaterial learning endeavour, entangled with the organisational conditions and the intersections of social worlds. The concept of infrastructuring provided an analytical entry point for studying the empirical case as a learning arrangement. The analysis shows how the potential temporal-spatial extension of the Lung Network, enabled by the platform, affects participants' commitments to their joint practice in three respects: (1) how activities in the Lung Network are organised; (2) the content of activities; and (3) the purpose of the Lung Network. Professionals' and citizens' participation in the rehabilitation activities of the Lung Network are rooted in specific material settings and conditions and bound to how these heterogeneous actors commit themselves to a shared practice. The group inquires into how the activities of the Lung Network can potentially be expanded, which evokes past experiences of lack of air, loneliness, or future aspirations for fun times, a walk, or a fear of being left out, all of which contribute to learning about what might be a joint practice of the community.

The chapter contributes by empirically showing how this extension in commitments create tensions and uncertainties as the sociomaterial and technological conditions are negotiated, and argues that by virtue of these (creative) tensions, co-production processes pose a potential for organisational learning. In this perspective, knowledge creation means coming to know across social worlds/arenas. A greater attention to tensions in commitments within and between social worlds may create new avenues for organising co-production with an emphasis on including multiple commitments of public employees and citizens. This opens up new areas for research, including how to design for sustainable learning arrangements in organisations, in particular in light of imperatives of co-production in an increasingly networked and connected society.

References

Aakjær, M., & Pallesen, E. (2020). Ledelse af fællesskabelse. *Samfundslederskab i Skandinavien, 35*(1), 55–78.

Aakjær, M., Wegener, C., Willumsen, E., Husebø, A., Ødegård, A., & Storm, M. (2020). Hvad skete med innovation da den blev 'social'? In E. Willumsen & A. Ødegård (Eds.), *Samskaping. Sosial innovasjon for helse og velferd*. Universitetsforlaget AS.

Alvesson, M., & Sköldberg, K. (2009). *Reflexive methodology: New vistas for qualitative research* (2nd ed.). SAGE.

Bason, C. (2016). *Design for policy*. Routledge.

Binder, T., Brandt, E., Halse, J., Foverskov, M., Olander, S., & Yndigegn, S. L. (2011). Living the (codesign) lab. *The Nordic Design Research Conference, 1*, 1–10.

Boyle, D. N. (1989). Public services inside out. *Public Money & Management, 9*(3), 9–10. https://doi.org/10.1080/09540968909387550

Brandi, U., & Elkjaer, B. (2011). Organizational learning viewed from a social learning perspective. In M. Easterby-Smith & M. A. Lyles (Eds.), *Handbook of organizational learning and knowledge management* (2nd ed.). Wiley Ltd. Publications.

Brandi, U., & Elkjaer, B. (2013). Organisational learning: Knowing in Organising. In M. Kelemen & N. Rumens (Eds.), *American pragmatism and organization. Issues and controversies* (pp. 147–161). Gower.

Brandsen, T., & Pestoff, V. (2006). Co-production, the third sector and the delivery of public services: An introduction. *Public Management Review, 8*(4), 493–501.

Clarke, A. E. (1991). Social worlds/arenas theory as organizational theory. In D. R. Maines (Ed.), *Social organization and social process: Essays in honor of Anselm Strauss* (pp. 119–158). Aldine De Gruyter.

Clarke, A. E. (2003). Situational analyses: Grounded theory mapping after the postmodern turn. *Symbolic Interaction, 26*(4), 553–576. https://doi.org/10.1525/si.2003.26.4.553

Clarke, A. E., & Star, S. L. (2008). The social worlds framework: A theory/methods package. In *The handbook of science and technology studies* (pp. 113–137). The MIT Press. https://doi.org/10.1002/9780470377994.ch6

Durose, C., Needham, C., Mangan, C., & Rees, J. (2017). Generating "good enough" evidence for co-production. *Evidence & Policy: A Journal of Research, Debate and Practice, 13*(1), 135–151.

Ehn, P. (2008). Participation in design things. In *Conference on participatory design* (pp. 92–101). Retrieved from http://portal.acm.org/citation.cfm?id=1795248

Elkjaer, B., & Simpson, B. (2011). Pragmatism: A lived and living philosophy. What can it offer to contemporary organization theory? In *Research in the sociology of organizations* (Philosophy and organization theory) (pp. 55–84).

Halse, J. (2013). Ethnographies of the possible. In W. Gunn, T. Otto, & R. C. Smith (Eds.), *Design anthropology*. Routledge.

Karasti, H., & Syrjänen, A.-L. (2004). Artful infrastructuring in two cases of community PD. In *Proceedings of the eighth conference on participatory design: Artful integration: Interweaving media, materials and practices-volume 1* (pp. 20–30). ACM Digital Library.

Karasti, H., Botero, A., Parmiggiani, E., Baker, K., & Saad-sulonen, J. (2018). *Infrastructuring in PD – What does infrastructuring look like ? When does it look like that?*, (August). https://doi.org/10.1145/3210604.3210618.

Malmborg, L. (2017). *Give&Take project, funded under the EU AAL programme*. Retrieved September 29, 2020, from http://givetake.eu/about_2015/

MATURE. (2016). *MATURE – Meeting the challenges in population aging through innovationa and cultural adaption of welfare society*. Project description.

Ostrom, E. (1996). Crossing the great divide: Coproduction, synergy, and development. *World Development, 24*(6), 1073–1087.

Pallesen, E., & Aakjær, M. (2020). Sharing economy as a driver for innovating the welfare state. *Technology Innovation Management Review, 10*(5), 19–27. (Special issue: The sharing economy as a path to government innovation).

Sørensen, E., & Torfing, J. (2018). Den offentlige sektor som arena for samskabelse. In M. K. Fogsgaard & M. de Jongh (Eds.), *Ledelse og samskabelse i den offentlige sektor* (pp. 30–61). Dansk Psykologisk forlag.

Star, S. L. (1999). The ethnography of infrastructure. *American Behavioral Scientist, 43*(3), 377–391. https://doi.org/10.1177/00027649921955326

Star, S. L., & Bowker, G. C. (2002). How to infrastructure? In L. A. Lievrouw & S. L. Livingstone (Eds.), *The handbook of new media. Social shaping and consequences of ICTs* (pp. 151–162). Sage.

Star, S., & Ruhleder, K. (1996). Steps toward design an ecology and access of infrastructure: For large spaces information. *Information Systems Research, 7*(1), 111–134.

Strauss, A. (1978). A social world perspective. *Studies in Symbolic Interaction, 1*(1), 119–128.

Tortzen, A. (2019). *Samskabelse af velfærd. Muligheder og faldgruber*. Hans Reitzels Forlag.

Tuurnas, S. (2015). Learning to co-produce? The perspective of public service professionals. *International Journal of Public Sector Management, 28*(7), 583–598. Retrieved from https://doi.org/10.1108/IJPSM-04-2015-0073.

Tuurnas, S. (2016). *The professional side of co-production*. Tampere University Press.

van Eijk, C. J. A. (2017). *Engagement of citizens and public professionals in the co-production of public services*. Leiden University, Netherlands. Retrieved from https://openaccess.leidenuniv.nl/bitstream/handle/1887/56252/Proefschrift_Carola_van_Eijk_Universiteit_Leiden_okt_2017.pdf?sequence=2

Voorberg, W. H., Bekkers, V. J. J. M., & Tummers, L. G. (2015). A systematic review of co-creation and co-production: Embarking on the social innovation journey. *Public Management Review, 17*(9), 1333–1357. https://doi.org/10.1080/14719037.2014.930505

Chapter 3
Coordination as Integration – The Dilemmas When Organizing Inter-professional Teams at a Hospice

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Abstract This chapter presents a case involving the organization of teams for inter-professional coordination of care. We explore knowledge-sharing processes by discussing the practical dilemmas when organizing teams, drawing on interventionist research at a hospice. Management had organized the hospice into four single-professional teams of nurses and one cross-professional team comprising all other professionals. This set-up caused tension and a sense of exclusion among the nurses. Based on focus group interviews, observations and meetings during a four-month period, one of the authors proposed an alternative team organization, with inter-professional teams including nurses. However, the management rejected this proposal. We use this incident as a jumping-off point for a discussion of the dilemmas when organizing inter-professional teams. We draw on Follett's notion of coordination as integration to discuss knowledge sharing across teams. In line with Follett, we see the challenge when coordinating between different groups as a matter of integrating differences, which always implies a re-evaluation of interests. She outlines three factors that may help coordinate unity among difference: (1) an understanding of integration as a *method* of settling differences; (2) a *system* of cross-functioning that allows both horizontal and vertical lines of communication within organizational hierarchies; and (3) a *sense* of collective responsibility for ensuring the interweaving of differences. We discuss these three factors as sensitizing lenses in relation to three discourses concerning inter-professionalism identified at the hospice. This chapter's contribution is to highlight three dilemmas that may complicate the coordination of inter-professional teams: (A) differences in tasks and time, (B) a different sense of responsibility, and (C) knowledge hierarchies. Hereby, the chapter brings forward an understanding of coordination as knowledge sharing relations across differences that involve and engage learning accomplished not only through consensus, but also through tensions and conflict.

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Introduction

Learning and knowledge, as well as motivated personnel, are central means to
improve the quality of the Danish healthcare sector. One concrete initiative to help
raise service quality in the sector is to implement 'learning and quality teams'
(Ministeriet for Sundhed og Forebyggelse, 2015). Although the effectiveness of
team organization has been questioned (see e.g. Yang et al., 2016), teams and team
organization, including inter-professional teams, are central in efforts to improve
service quality and knowledge sharing in the healthcare sector (see e.g. Teräs, 2016).

Informed by interventionist research at a hospice,[1] we discuss the difficulties of
coordinating inter-professional teams and the emerging dilemmas related to differ-
ences in tasks and time, a different sense of responsibility and knowledge hierarchies
(Elkjaer & Nickelsen, 2016). We analyse the design of inter-professional teams in
light of knowledge-sharing processes at the hospice. We are inspired by Follett's
idea of coordination as integration (Follett, 1995 [1949]) and, more broadly, by the
literature on coordination in organizations addressing the need to focus on the task –
in this case, patient care. To this end, we discuss the following research question:
What are the dilemmas of inter-professional team organization, and how can
Follett's concept of coordination as integration help in understanding why knowl-
edge sharing is difficult at a hospice with team organization?

This chapter contributes to the literature on coordination as organizational prac-
tices that comprise and engage processes of knowledge sharing and learning
(Easterby-Smith & Lyles, 2011; Gordon et al., 2015; Kitto, 2011). In this body of
knowledge, coordination is examined, for example, in terms of developing and
maintaining routines (Levitt & March, 1988), culture (Cook & Yanow, 1993),
communities of practice (Wenger, 2000) and social worlds (Clarke, 1991; Strauss,
1984), as well as through the use of non-defensive communicative forms (Argyris &
Schön, 1996). Jody Gittell (2003, 2012), Gittell et al. (2013), has coined 'relational
coordination theory' as a way to design organizations in ways that support organi-
zational learning (Gittell, 2000; Gittell et al., 2013). Gittell draws upon symbolic
interactionism (Blumer, 1973; Hallett et al., 2009) with reference to the late Mary
Parker Follett (1868–1933) (Follett, 1926 [2012]). Follett's concept of coordination
as integration is likewise relational and thereby transcends the notion of individuals
practising a profession. As such, Follett's work provides useful inspiration for an
exploration of team organization amongst professionals and is the primary lens for
our discussion of the dilemmas of inter-professional coordination.

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[1] Throughout the chapter, we refer to the institution 'the hospice' to protect the anonymity of the
institution, management and employees.

Table 3.1 Team and work design at the hospice
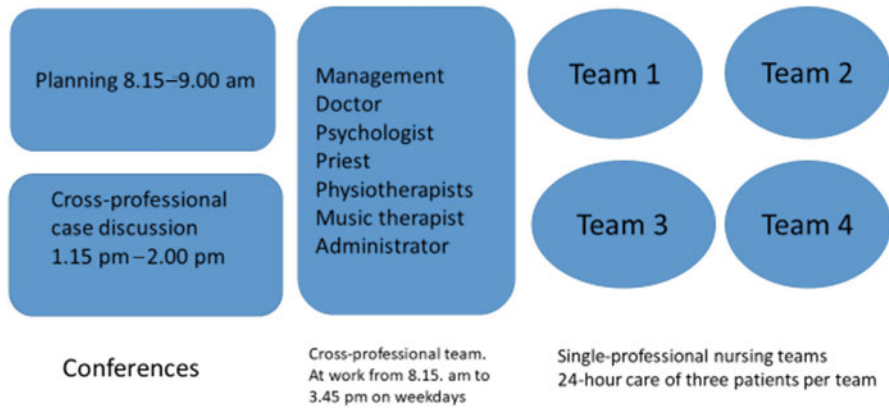
Our empirical jumping-off point is our reflections on the participation by one of the authors (NCMN) in interventionist research aimed at consolidating and further developing knowledge sharing at a hospice through inter-professional coordination. The management wanted to strengthen work relations and communication across professional groups (Nickelsen, 2011). One of the most important means to achieve this goal was to consolidate existing five teams with the explicit intention to promote new working relations that 'stimulate a sense of responsibility and innovation among the personnel in such a way that they would take an active part in the execution of relevant tasks' (Nickelsen, 2011: 71). Another means was to improve communication patterns. The management insisted on appreciative communication in meetings and both within and across teams. Four of the five teams at the hospice were composed entirely of nurses. They called the fifth team 'the cross-professional team' as detailed below (see Table 3.1), comprising non-nursing personnel. As such, in spite of the emphasis on inter-professionalism, the hospice maintained a mono-professional organization. The fifth team, which did not include any nurses, represented the hospice's nod to inter-professionalism.

NCMN soon found that this way of organizing teams had created tension and, among the nurses, a sense of being sidelined in relation to decision-making processes. The nurses found this rather strange because they were by far the largest professional group. Furthermore, they found it difficult to voice any critique as to do so would not be in keeping with the management's emphasis on appreciative communication. Aiming to remedy this organizational inexpediency, NCMN, after a period of participating in the everyday life at the hospice, proposed a new inter-professional team organization in which the nurses and members of the cross-professional team would be put together in new teams. However, the management rejected this proposal. We use the case to explore the difficulties of inter-professional

Table 3.2 Three discursive practices concerning inter-professional coordination at the hospice

	Management	Nurses	Cross-professional team
What forms does inter-professional coordination at the hospice currently take?	The current definition of each profession is too narrow	The cross-professional team needs to be more involved in the task of patient care Our work is interrupted due to a lack of responsibility on the part of the other professions	It is close to the ideal situation: 'It is in our own hands'
How can it be improved?	To main organizational responsibility, i.e. to have a realistic view of one's own contribution to the organization	Principles of mutuality and shared responsibility, meaning that all employees offer their services so that nurses are not left with residual tasks	Clarification of what each profession needs to contribute to the inter-professional collaboration
What are the barriers?	Defensive routines Certain individuals lack 'maturity'	Lack of coordination of cross-professional collaboration Unclear framework for conferences A culture of individualization	Different structural working conditions for the different professional groups in terms of how much work they have to do. The nurses are too busy
What shall we do?	Define which tasks should involve cross-professional coordination/collaboration' Organization of the afternoon conferences	Include nurses in cross-professional teams Clarification of tasks and conditions Nurses ought to 'open up' and invite the cross-professional team to take greater part in nursing tasks Organization of the afternoon conferences	Clarification of the relationship between nurses and physiotherapists Organization of the afternoon conferences

coordination and the implications for knowledge sharing across professional boundaries.

The chapter is structured as follows: First, we present the case and study design. Second, we introduce three discourses on inter-professional team collaboration that we found represented at the hospice by, respectively, the management, the nurses and the cross-professional team (see Table 3.2). Third, we present our theoretical framework for understanding coordination within workplaces characterized by a heterogeneous range of personnel. Our theoretical framework led us to revisit data regarding the discourses on inter-professional collaboration and helped us identify three dilemmas related to team organization. Fourth, we consider how these dilemmas reverberate around (1) differences in tasks and time, (2) differences in

employees' sense of responsibility, and (3) knowledge hierarchies. Fifth, we consider whether Follett's concept of coordination as integration can remedy the dilemmas when organizing inter-professional teams and knowledge sharing.

A Hospice in Denmark

The hospice is a well-run and reputable institution. There are 12 beds and 35 employees, of which most are nurses. The hospice strives to offer high quality palliative care to incurably ill patients and their relatives. The general principle for palliation is an inter-professional approach with the dying patients' well-being at the core of all tasks. The notion of 'cross-professionalism' derives from the studied hospice, where it is frequently used in reference to the existing team organization. The notion of 'inter-professionalism' is the analytical term we use to refer to collaboration across professional boundaries. The hospice's value statement states:

> The management sees it as its task to ensure that nursing and treatment are carried out based on a cross-professional and holistic consideration for the patient and his/her family and based upon as little professional division as possible (. . .). (. . .).palliation and treatment are provided in a way in which all patient encounters are documented and evaluated by the cross-professional team (the hospice's value statement, our translation).

As mentioned, the palliative care is provided by four mono-professional nursing teams and one cross-professional team. Each nursing team is responsible for roster-based 24-hour basic nursing care of three patients, whereas the cross-professional team – consisting of a doctor, a priest, a psychologist, two physiotherapists, a music therapist, an administrator and the hospice management team – are responsible for far more well-defined and specific tasks during the hours 8.15–15.45 on weekdays. However, everyday practice at the hospice demands a high level of coordination across these teams. This primarily takes place through scheduled meetings, termed 'conferences'. As such, the coordination of patient care takes place at two daily inter-professional 45-minute morning (planning) and afternoon conferences (see Table 3.1).

According to the 24-hour roster, the nurses are responsible for the basic care, personal hygiene and medication of patients, cleaning, and communication with both patients and their relatives, as well as a number of 'invisible' or 'residual' tasks lacking a clear description. The members of the cross-professional team are responsible for planned tasks, including diagnoses, prescription of medication, religious worship and group mourning, all of which take place during ordinary daytime working hours.

Study Design

During his participation at the hospice, NCMN compiled data consisting of the following elements: (1) five focus groups: A, B, each with four nurses from the same team; C, D with different members of the cross-professional team; E with the hospice management (also part of the cross-professional team). Each focus group lasted 90 minutes. Thorough summaries were written based on audio recordings. (2) Three nurses, a doctor and a physiotherapist were each shadowed for three hours or more (Czarniawska, 2008). The focus was on how they interacted with professionals from other teams. Ethnographic notes summarized the observations. (3) Interviews were conducted with three patients and two relatives. We made notes concerning each interview based on audio recordings. (4) Four 2-hour meetings in a professionally diverse group of eight people. This group discussed their reflections regarding the project. (5) Participation at a seminar with the cross-professional team at a seaside hotel. NCMN's task at this seminar was to moderate a discussion of different ways to organize inter-professional coordination. Here, the management presented their vision for inter-professional collaboration: 'That each healthcare profession can perform palliative care and contribute to the synergies that arise when different professional groups take a shared responsibility for the institution'.

Given NCMN's entwinement in the relationships being studied, some ethical consideration are necessary. From the beginning, the project embraced a duality between analysis and intervention. While the data collection, analysis and NCMN's participation were indeed seen as a development project by managers and staff, NCMN always considered it a research project. NCMN made clear to all participants his intentions to document all activities. On the condition of anonymity, all informants gave their consent that NCMN could publish a scientific text based on the project. However, not surprisingly, the interventionist design meant that NCMN struggled with issues of closeness and loyalty (Alvesson, 2003). Participation in such a project takes place as an exchange between multiple networks and occasions a number of transformations. Several factions at the hospice invited NCMN to represent their aims; thus, he had to figure out how to engage with different parties and clarify the normative commitments tied to these invitations (Bruun Jensen, 2007; Nickelsen, 2009).

NCMN submitted a report to the hospice board presenting his analysis of the challenges regarding inter-professional collaboration at the hospice. This report concluded that focusing on patient care through a more comprehensive inter-professional team organization (including all professions) would strengthen synergies. The principal idea was to dissolve the existing cross-professional and mono-professional teams and allocate all professionals working at the hospice to four truly inter-professional palliative teams. Through closer and more binding collaboration between the different professions, the goal was to facilitate and encourage knowledge sharing to benefit all aspects of care work.

The management acknowledged the potential of such a revitalization of inter-professional collaboration, but decided against its implementation: *"It would be too*

demanding and it has too many implications in terms of the practical organization of the hospice's work". Of course, the management may have good reasons for rejecting the proposal. It was certainly not a complete plan. Nevertheless, with the common call for inter-professional coordination, as promoted by the proposed reorganization, our curiosity was piqued regarding what barriers and dilemmas might hinder coordination through the integration of differences, such as tensions between professional groups and various discursive practices.

Mapping Discourses of Inter-professional Coordination

Based on the different stances towards the existing inter-professional collaboration at the hospice, we have identified three ways in which the professionals at the hospice articulate their experiences with coordination. In Table 3.2, we summarize these discourses by summarizing responses to the following questions: What forms does inter-professional coordination at the hospice currently take? How can it be improved? What are the barriers? What should we do?

(1) The management calls for 'organizational responsibility' and highlights 'defensiveness' and 'lack of maturity' as barriers to collaboration. Thus, the management indicates that some individuals do not act responsibly. Moreover, they call for a detailed specification of the tasks requiring inter-professional coordination. (2) The nurses call for principles of 'mutuality' and 'joint responsibility'. They ask that all employees help ensure that all tasks are taken care of so the nurses' work is not interrupted. Interestingly, they state that nurses ought to 'open up' and invite the cross-professional team to take part in nursing work. (3) The cross-professional team, on the other hand, draws attention to differences in working conditions, suggesting that the nurses are too busy. They also highlight the tense relationship between nurses and physiotherapists as an area that needs attention. All informants regard the twice-daily 'conferences' as important spaces for coordinating efforts and call for a clear structure that supports inter-professional collaboration.

By analysing these discourses on inter-professional coordination, we identified three dilemmas in the team organization, concerning: (1) differences in tasks and time, (2) differences in employees' sense of responsibility, and (3) knowledge hierarchies. Informed by this empirical landscape, we discuss the complexities of coordination and knowledge sharing based on the notion of coordination as integration (Follett). Before embarking on an analysis of the dilemmas hampering inter-professional collaboration at the hospice and attempts to integrate differences through teams, we will first outline the theoretical inspirations for our analysis.

Coordination and Knowledge Sharing

In the following review, we seek to develop an understanding of coordination as knowledge-sharing relations that involve and engage learning accomplished not only through consensus, but also through contestations. Firstly, we explore approaches to the coordination of shared and contested knowledge within the field of organization studies. Secondly, we discuss Follett's concept of coordination as integration (Follett, 1924 [1930]).

Coordination of Shared and Contested Knowledge

In the context of traditional hierarchical organizations, the focus has typically been on coordination mechanisms enacted through formal bureaucratic control, organizational structures and standardized routines, while knowledge sharing has been associated with formal education and training. The emergence of post-Taylorist organizational forms such as teamwork implied a shift in understandings of the locus of coordination. From that point on, interest increasingly shifted to informal groups as important vehicles for knowledge sharing, efficiency and the coordination of work (Homans, 1950 [2013]; Roethlisberger & Dickson, 1939). In addition, research has yielded important insights into the ways different patterns of task dependency call for different coordination methods (e.g. standardization, planning and mutual adjustment) (Thompson, 1967). Likewise, there was a greater focus on the control and coordination of tasks through sentient boundaries between the goal-oriented, rational organization and the real world organizational practice (Miller & Rice, 1967; Trist & Bamforth, 1951).

In the 1980s, coordination was first and foremost addressed as a question of developing the right culture (a shared meaning system) as a vehicle for internal integration and external adaptation (Peters & Waterman, 1982; Schein, 1992). Later, in the 1990s, the focus shifted to control and coordination as a single constituency, taking place through the repertoire of the community of practice at the day-to-day level of work (Brown & Duguid, 1991; Orr, 1990). Bottom-up knowledge sharing now constituted the core value-creating process for organizations. However, knowledge sharing was seen as a complicated process to coordinate due to knowledge being both explicit and tacit (Cook & Brown, 1999; Nonaka, 1994), and leaky and sticky (Brown & Duguid, 2001). Characteristic for these approaches was an understanding of coordination and knowledge sharing as processes that do not only happen through standard protocols or formal education, but also take shape through everyday informal encounters and shared practices in organizations (Herrigel, 2010; Kristensen & Lotz, 2015).

More recently, the coordination of contested knowledge has attracted interest. Many studies have provided valuable insights into the challenges of coordinating cross-boundary knowledge work and stressed the difficulties of sharing knowledge

and integrating practices among different groups across organizational divides (e.g. Adler et al., 2008; Bechky, 2003; Hargadon & Bechky, 2006). Various approaches have been proposed for dealing with these differences, including transfer mechanisms that rely on a common lexicon and standard protocols; forms of translation that create shared understandings; and transformation processes that generate integrative knowledge (Kellogg et al., 2006: 22). Much of this scholarly interest in coordination has focused on how knowledge sharing is accomplished through shared commitments (e.g. common knowledge or common ground) and boundary-spanning mechanisms (e.g. languages, stories, routines, models or other boundary objects) (Brown & Duguid, 1991; Orlikowski, 2002). For example, Orr's (1996) study of copy repair technicians (REPs) shows that coordination among contested forms of understanding may take place through self-identity, narrative and improvisation. According to Star and Griesemer (1989), boundary objects (e.g. specimens, maps, field notes and the like help coordination as they allow a reframing of an actor's local understanding in the context of a wider collective activity. While objects are typically used for different ends by different groups (Star & Griesemer, 1989: 408), they interpret them differently, but with enough immutable content to maintain integrity (Bowker & Star, 1999). A more recent example is the work of Nicolini et al. (2012). They argue that objects may be pivotal in motivating collaboration and allow inter-professional coordination because they provide the activity's fundamental infrastructure.

These approaches all propose facilitating cross-boundary coordination and knowledge sharing through the construction of shared commitment and the use of various boundary-spanning mechanisms. Developing these commitments requires building agreement around standard procedures, shared protocols or boundary objects. However, organizations that want to coordinate diverse functions need to integrate contested understandings that cannot always be united by consensus (Follett, 1924 [1930]). Consequently, Kellogg et al. (2006) question whether existing understandings of coordination apply within contemporary organizations characterized by dynamic and complex conditions and heterogeneous communities where different areas of expertise/criteria of worth (e.g. of how to best solve a problem) are continuously contested. As an example from our case, coordination between doctors, therapists and nurses at a hospice involve contested knowledge and different motivations that it may not always be possible to integrate, neither through mutual agreement nor common standards. However, knowledge is nevertheless most often able to flow and be shared across such functional divides. Kellogg et al.'s (2006) critique suggests that current approaches to understanding the coordination of contested knowledge in organizations lack explanatory power as they assume that coordination requires agreement in the form of shared commitments and boundary-spanning mechanisms. Hence, we know less about how to accomplish knowledge sharing through cross-boundary coordination of different practices where not only the experience of a common ground but also differences that are not easily reconciled by mutual agreement may be at stake. In order to contribute to the development of such a perspective, we turn to Follett's concept of coordination as integration.

Coordination as Integration

Mary Parker Follett (1868–1933) introduces a relational understanding of coordination (see e.g. Ansell, 2009; Follett, 1926 [2012]). She defines coordination as integration in the sense of transcending individuals including their worlds. Coordination in organizations is about creating unity among difference, – not by settling differences through domination (where one party gets what it wants) or through compromise (neither party gets what it wants), but through integration. Integration means finding a third way that satisfies the wishes of both parties. She explains: "Integration involves invention, the finding of a third way, and the clever thing is to recognise this and not let one's thinking stay within the boundaries of two alternatives which are mutually exclusive" (Follett, 1995 [1949]: 189). In this way, Follett's notion of coordination as integration does not assume mutual agreement and consensus prerequisite for unity. In order to integrate differences and find a 'third way', antagonistic interests, conflicting claims and constructive conflicts are necessary. She emphasizes the importance of cross-functional coordination and stresses that continuous coordination is essential for ensuring progress in any enterprise. (Ansell, 2009) (here from Armstrong, 1998; Follett, 1926 [2012]: xvi)

Follett defines coordination as the *"reciprocal relating of all the factors in a situation"* (here from Follett, 1926 [2012]: xx). For Follett, this is the first principle of organization, which is never a stationary whole but a 'whole a-making' (Follett, 1925 [2003]: 91). Follett also stresses that coordination involves more than people, stating: *"You will understand that I am simplifying when I speak of A, B, C and D adjusting themselves to one another. They are of course adjusting themselves to every other factor in the situation. Or it would be more accurate to say that all the factors in the situation are going through this process of reciprocal relating"* (here from Follett, 1926 [2012]: 133).

Apart from stressing the situation, Follett was also inspired by John Dewey (1859–1952) when defining 'experience' as encoded in habit (Ansell, 2009: 472). Experience is not a process of adjustment, *"Adjustment harmonizes the existing; it does not create. Only integration creates"* (Armstrong, 1998: 228). Integration is not just about coordination, because it is not only an interweaving of individual interests; it is an interweaving *"with the parts as well as of the parts"* (Armstrong, 1998: 50). Integration is a 'creative relation' between people and the social and material worlds of which they are a part, because it involves new ideas in order to create a new plan of action; it requires the re-evaluation of interests and, as such, integration drives progress. In a Follet-inspired perspective, knowledge sharing evolves in the process of integration.

There are three factors that can help to coordinate unity among difference: (1) An understanding of integration as a *method* of settling differences; (2) a *system* of cross-functioning that allows both horizontal and vertical lines of communication within organizational hierarchies; and (3) a *sense* of collective responsibility for ensuring the interweaving of differences (Follett, 1995 [1949]: 197, our

underlining). We use these 'markers' as sensitizing lenses to discuss the challenges of coordinating differences at the hospice.

When applying this perspective, the focus is on conflicting interests and claims and not solely on shared commitments and boundary-spanning mechanisms. This perspective along with the identified discursive practices (Table 3.2), are the background for zooming in on dilemmas regarding: (1) differences in tasks and time; (2) a different sense of responsibility; and (3) knowledge hierarchies.

Analysis of Dilemmas

We will now discuss the dilemmas of inter-professional coordination at the hospice. While the hospice's value statement, as mentioned, emphasizes the importance of inter-professional relations, the organizational structure is based on four mono-professional nursing teams and one cross-professional team. In the following, we explore the implications of this division of labour in light of Follett's concept of coordination as integration.

Dilemma 1: Differences in Tasks and Time

There are crucial differences in terms of tasks and time among the various professional groups at the hospice. The nursing teams are responsible for broad, general tasks carried out in relation to a small number of patients, whereas members of the cross-professional team are responsible for specific tasks (typically linked to their particular field of expertise, such as organizing mourning groups, administration and various forms of therapy, in relation to all the patients at the hospice.

The nurses put clothes in place in the closet, offer drinks to patients; they even clean the patients' rooms and toilets. The fact that such tasks are left to the nurses increases their sense of unfair treatment. During, the focus group, for instance, they talk about how they are expected to hire an organist for Christmas Eve and take care of gifts from relatives. Such tasks, which are not an obvious part of the job description of any of the professional groups at the hospice, become the nurses' responsibility by default' (first focus group, nurses). Consequently, the nurses are always busy. They work in shifts according to a 7-day, 24-hour roster, whereas the members of the cross-professional team work at a slower pace from 8.15 to 15.45 on weekdays (see Table 3.1). This time difference became obvious when shadowing different employees. Shadowing the nurses meant constantly running from one place to another, whereas the physiotherapists had long periods with few or no tasks.

The fact that nurses work shifts across a 24-hour day means they are less often at work during regular working hours. This excludes them from the hospice's decision-making fora and deprives them of authority. Nurses see themselves as part of a team that is jointly accountable for the patients they take care of. The members of the

cross-professional team, on the other hand, have more independent work tasks. For instance, the doctor works independently and the nurses literally follow him along the corridor to get an answer or two to questions regarding their patients. The psychologist and the priest likewise perform their respective tasks very independently.

According to the nurses, inter-professional collaboration at the hospice bears scant resemblance to the bright and rosy dawn espoused in the value statement. The nurses have a broad span of responsibilities and often find themselves alone in exhausting encounters with dying patients and their distraught relatives. While this division of labour frustrates the nurses, the members of the cross-professional team are largely satisfied (see Table 3.1).

When considering the dilemma of differences in tasks and time differences among the professional groups at the hospice through the lens of Follett's notion of coordination as integration, it is clear that the existing team organization hampers the integration of differences. Tasks that are not an obvious part of the job description of any of the professional groups i.e. invisible work (Star, 1991) seems to blur the boundaries of the nurses' professional domain. Thus, broad, general tasks and invisible work become hindrances for settling differences among the different professional groups. Applying Follett's concept, the integration of differences in tasks and time requires a system of cross-functioning relations (i.e., a system that enables people from different functional areas and levels of an organization to collaborate and achieve tasks and goals which call for the coordination of input and expertise of numerous departments/teams). Such cross-functioning relations allow the combination of horizontal and vertical lines of communication within and across teams, as well as fostering a sense of collective responsibility. This leads us to the second dilemma.

Dilemma 2: A Different Sense of Responsibility

The existing team organization creates tension. For instance, during the focus groups, nurses criticize the physiotherapists, describing them as 'passive' and uncooperative: *"The physiotherapists don't enter the patients' rooms before 9 in the morning and they never make coffee for the conferences"* (second focus group with nurses). The nurses also accuse the physiotherapists of maintaining an attitude that patients must be clean and have had something to drink before receiving physiotherapeutic treatment. The nurses tell compromising anecdotes about the physiotherapists making emergency calls to inform a nurse that the patient they are treating is thirsty and needs a glass of water. The nurses feel that the physiotherapists should instead themselves fetch some water (first focus group with nurses). Perhaps not surprisingly, this leads to tacit conflicts between the nurse teams and the cross-professional team. Later, NCMN observed a real-world reaction of a nurse to the perceived 'passivity' of physiotherapists: In a condescending tone, the nurse commands a physiotherapist to find the owner of a wheelchair left in the corridor. On

another occasion, a nurse books physiotherapeutic treatment without letting the physiotherapist know. These tensions lead to frustration, with the physiotherapists emphasizing that the poor communication can result in treatment errors. The nurses explain that they feel 'taken for granted' and not included in the inter-professional team coordination in the way their efforts and hard work deserve.

In relation to Follett's concept of coordination as integration, it is clear that the sense of collective responsibility that could otherwise support the integration of differences is lacking. Rather, the various professional groups, particularly nurses and physiotherapists, enact a number of tension-filled conflicts. This does not lead to a third way and is not at all fruitful for the integration of differences; rather, it suggests there are problems with the team structure. Not only are nurses by far the largest professional group at the hospice, the manager is a trained nurse. However, this does not help integrate the nurses. On the contrary, the manager seems to insist that the nurses should stick to their professional domain (data from group meeting). Moreover, while there is formal parity in terms of the level of qualifications of nurses and physiotherapists, the latter are firmly ensconced in the cross-professional group. Surprisingly, the existing team structure at the hospice excludes the nurses from the 'attractive' cross-professional fora.

Dilemma 3: Knowledge Hierarchies

At one of the mixed meetings we organized, the team organization was discussed using the metaphor of an 'over-group' versus a number of 'under-groups', introduced by one of the nurses. The hierarchy of 'over and under' was discussed in relation to the fact that the cross-professional team spends three days each year at a fashionable seaside hotel for training and development purposes, while the four nursing teams are offered a work day for training and development purposes and dinner at a nearby restaurant. The hospice manager maintains that the stay at the seaside hotel is a crucial annual event in terms of coordinating cross-professional collaboration (i.e. the cross-professional team, but not the nurses).

The nurses claim that, during conferences, the hospice management sometimes unfairly attributes to nurses intentions they do not necessarily have. This is part of their criticism of the hospice management, as expressed by a group of nurses during a focus group interview: *"the morning and afternoon conferences are poorly structured. You often waste your time, even though you are very busy."* This is expanded on by the statement that the hospice management equips nurses with a "*sense of being unprepared, even if that is not the case*"; and that*"the management offers privileges to the cross-professional team."* Some nurses claim they are inappropriately "*reprimanded by the management if they haven't got readymade solutions when 'their' patients are discussed at conferences.*"

This reveals a knowledge hierarchy at the hospice regarding the integration of different forms of knowledge – some forms of knowledge are worth more than others. Not only are the academics in the cross-professional group given certain

privileges; management demands that nurses respond to questions in ways they find humiliating. Rather than integrating differences in Follett's sense, this is a clear illustration of a hierarchical layering of different forms of knowledge. We believe this hierarchy undermines the establishment of collective responsibility. What we see here is that responsibility is not shared across, but maintained within, respectively, the horizontal and vertical lines of communication of the team structure. Responsibility does not cross over, resulting in non-productive everyday tension – both between teams and between the hospice management and one particular professional group. The team organization proposed by NCMN would have allowed both horizontal and vertical lines of communication within organizational hierarchies.

Discussion and Conclusion

In this chapter, we have discussed dilemmas in inter-professional coordination as an approach to supporting knowledge sharing, as stipulated in the ideas developed by the Danish National Quality Programme for the healthcare sector. One concrete initiative to help raise service quality in the sector is to implement learning and quality teams. We have scrutinized such an initiative through analysis based on an interventionist research project conducted at a Danish hospice. The hospice management stated that they wanted to improve communication among different professional groups and consolidate team organization in order to improve the coordination of patient care through knowledge sharing. An initial means to achieving these goals was to analyse existing practice in order to establish a more comprehensive approach to inter-professional task integration, with the explicit intention of strengthening inter-professional collaboration by putting the patient at the core of all activities. The hospice hereby wanted to improve its coordinating mechanisms (the inter-professional team organization). There was certainly room for improvement – the existing team structure meant that the largest professional group, the nurses, were excluded from the circuits of inter-professional coordination and, as a result, felt underappreciated and sidelined within the organization (an undergroup).

We analysed three dilemmas that we identified among teams/professional groups: (1) differences in time and tasks, (2) a difference in responsibilities, and (3) knowledge hierarchies. By addressing these dilemmas, we have untangled and discussed the complexity of inter-professional coordination.

By way of exploring 'coordination as integration' as a means for knowledge sharing, we have reviewed the literature on coordination and shown how much of this literature takes consensus for granted when it comes to knowledge sharing. We argued that tensions and conflicts may in fact promote learning, drawing particularly on the classic work by Follett and her notion of coordination as integration.

We have presented and analysed the interventionist research project at the hospice in light of Follett's work. To this end, we have pinpointed some key

differences in how the different professional groups understood the inter-professional team organization at the hospice, identifying a number of conflicts between the nurses, who were left with a lot of invisible work, and the cross-professional team, whose tasks were narrower and more precisely defined. The solution for all parties appeared to demand clearer task definitions and work plans and a clarification of internal roles in order to alleviate the tensions produced by such residual and hidden tasks. This line of argument is in keeping with ideas of more rationalization and functional divisions, as well as with consensus-driven knowledge sharing. By introducing Follett's concept of coordination as integration, it becomes clear that rationalization and task definitions may not be what is needed to improve the coordination of knowledge sharing; instead, there is a need for a method and a system supporting the development of a sense of collective responsibility. This may facilitate knowledge sharing in organizations where work tasks are cross-functional and both horizontal and vertical lines of professional discretion are less obvious due to the nature of the work (in this case, caring for dying patients and close contact with relatives). However, we also highlighted tension and a lack of communication between teams and from management to nurses as an obstacle to creating a sense of collective responsibility, preventing constructive feedback regarding the performance of everyday tasks. Discontent was expressed in more subtle ways but was nevertheless difficult to address through an integrative approach.

Our analysis illustrates the difficulty in developing a sense of collective responsibility to ensure the coordination of professional differences in a busy institution providing healthcare for the terminally ill. In terms of Follett's concept of coordination as integration, it might be said that the hospice management is seeking to implement methods (a value statement and appreciative communication), develop systems (two daily cross-professional conferences and team structure) and foster a sense of collective responsibility. However, they have only had limited success with the first two of these goals and failed miserably with the third. Despite the hospice's scheduling of daily conferences to support close collaboration and inter-professional communication and knowledge sharing, there remains little attempt to integrate differences between the various professional groups. On the contrary, the existing team structure at the hospice seems to reinforce professional boundaries and a silo mentality. However, Follett's emphasis on method, system and a sense of collective responsibility as factors that help coordinate unity among difference offers a set of alternative ways of thinking about and working with differences in organizations – not as obstacles, but as opportunities for integration and thus comprehensive knowledge sharing in organizations.

References

Adler, P. S., Kwon, S.-W., & Heckscher, C. (2008). Perspective: Professional work: The emergence of collaborative community. *Organization Science, 19*(2), 359–376. https://doi.org/10.1287/orsc.1070.0293

Alvesson, M. (2003). Beyond neopositivist, romantics, and localists: A reflexive approach to interviews in organizational research. *Academy of Management Review, 28*(1), 13–33.

Ansell, C. (2009). Mary Parker Follett and Pragmatist Organization. In P. S. Adler (Ed.), *The Oxford handbook of sociology and organization studies. Classical foundations* (pp. 464–485). Oxford University Press.

Argyris, C., & Schön, D. A. (1996). *Organizational learning II. Theory, method, and practice*. Addison-Wesley Publishing Company.

Armstrong, H. D. (1998). *A postmodern glimpse: The principles of Mary Parker Follett in a contemporary workplace*. PhD Thesis. Department of Educational Administration. University of Saskatchewan, Saskatoon, SK, Canada.

Bechky, B. A. (2003). Sharing meaning across occupational communities: The transformation of understanding on a production floor. *Organization Science, 14*(3), 312–330.

Blumer, H. (1973). A note on symbolic interactionism. *American Sociological Review, 38*(6), 797–798. https://doi.org/10.2307/2094141

Bowker, G. C., & Star, S. L. (1999). *Sorting things out. Classification and its consequences*. The MIT Press.

Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization Science, 2*(1), 40–57.

Brown, J. S., & Duguid, P. (2001). Knowledge and organization: A social-practice perspective. *Organization Science, 12*(2), 198–213.

Bruun Jensen, C. (2007). Sorting attachments: Usefulness of STS in healthcare practice and policy. *Science as Culture, 16*(3), 237–251. https://doi.org/10.1080/09505430701568636

Clarke, A. E. (1991). Social worlds/arenas theory as organizational theory. In D. R. Maines (Ed.), *Social organization and social process. Essays in the honor of Anselm Strauss* (pp. 119–158). Aldine de Gruyter.

Cook, S. D. N., & Brown, J. S. (1999). Bridging epistemologies: The generative dance between organizational knowledge and organizational knowing. *Organization Science, 10*(4), 381–400.

Cook, S. D. N., & Yanow, D. (1993). Culture and organizational learning. *Journal of Management Inquiry, 2*(4), 373–390.

Czarniawska, B. (2008). Organizing: How to study it and how to write about it. *Qualitative Research in Organizations and Management: An International Journal, 3*(1), 4–20.

Easterby-Smith, M., & Lyles, M. A. (2011). The evolving field of organizational learning and knowledge management. In M. Easterby-Smith & M. A. Lyles (Eds.), *Handbook of organizational learning and knowledge management* (pp. 1–20). Wiley.

Elkjaer, B., & Nickelsen, N. C. M. (2016). Intervention as workplace learning. *Journal of Workplace Learning, 28*(5), 266–279.

Follett, M. P. (1924 [1930]). *Creative experience*. Longmans, Green and Co..

Follett, M. P. (1925 [2003]). Business as an integrative unit. In H. C. Metcalf & L. Urwick (Eds.), *The early sociology of management and organizations. Dynamic administration. The collected papers of Mary Parker Follett* (pp. 71–94). Routledge.

Follett, M. P. (1926 [2012]). Constructive conflict. In M. Godwyn & J. H. Gittell (Eds.), *Sociology of organizations. Structures and relationships* (pp. 417–426).

Follett, M. P. (1995 [1949]). Co-ordination. In P. Graham (Ed.), *Mary Parker Follett – Prophet of management. A celebration of writings from the 1920s* (pp. 183–211). Harvard Business School Press.

Gittell, J. H. (2000). Paradox of coordination and control. *California Management Review, 42*(3), 101–117.

Gittell, J. H. (2003). A theory of relational coordination. In K. S. Cameron, J. E. Dutton, & R. E. Quinn (Eds.), *Positive organizational scholarship* (pp. 279–295). Berrett-Koehler Publishers, Inc.

Gittell, J. H. (2012). New directions for relational coordination theory. In K. S. Cameron & G. M. Spreitzer (Eds.), *The Oxford handbook of positive organizational scholarship* (pp. 400–411). Oxford University Press.

Gittell, J. H., Godfrey, M., & Thistlethwaite, J. (2013). Interprofessional collaborative practice and relational coordination: Improving healthcare through relationships. *Journal of Interprofessional Care, 27*(3), 210–213.

Gordon, S., Feldman, D., & Leonard, M. (2015). *Collaborative caring: Stories and reflections on teamwork in health care*. Cornell University Press.

Hallett, T., Shulman, D., & Fine, G. A. (2009). Peopling organizations. The promise of classic symbolic interactionism for an inhabited institutionalism. In P. S. Adler (Ed.), *The Oxford handbook of sociology and organization studies. Classical foundations* (pp. 486–509). Oxford University Press.

Hargadon, A. B., & Bechky, B. A. (2006). When collections of creatives become creative collectives: A field study of problem solving at work. *Organization Science, 17*(4), 484–500.

Herrigel, G. (2010). *Manufacturing possibilities: Creative action and industrial recomposition in the United States, Germany, and Japan*. Oxford University Press.

Homans, G. C. (1950 [2013]). *The human group* (Vol. 7). Routledge.

Kellogg, K. C., Orlikowski, W. J., & Yates, J. (2006). Life in the trading zone: Structuring coordination across boundaries in postbureaucratic organizations. *Organization Science, 17*(1), 22–44.

Kitto, S. (2011). *Sociology of interprofessional health care practice: Critical reflections and concrete solutions*. Nova Science Publishers.

Kristensen, P. H., & Lotz, M. (2015). Multinationals of industrial co-development: Co-creating new institutions of economic development. In *The changing worlds and workplaces of capitalism* (pp. 164-181): Springer.

Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology, 14*, 319–340.

Miller, E. J., & Rice, A. K. (1967). *Systems of organisation: The control of task and sentiment boundaries*. Tavistock Publ.

Ministeriet for Sundhed og Forebyggelse. (2015). Nationalt kvalitetsprogram for sundhedsområdet 2015–2018. Retrieved from https://www.sum.dk/~/media/Filer%20-%20Publikationer_i_pdf/2015/Nationalt-kvalitetsprogram-for-sundhedsomraadet/Nationalt%20kvalitetsprogram%20for%20sundhedsomr%C3%A5det%20-%20april%202015.pdf

Nickelsen, N. C. M. (2009). Rethinking interventionist research: Navigating oppositional networks in a Danish hospital. *Journal of Research Practice, 5*(2, Article M4).

Nickelsen, N. C. M. (2011). Positivitet og emotionel make-up blandt døende på hospice. In C. Elmholdt & L. Tanggaard (Eds.), *Følelser i Ledelse* (pp. 65–87). Klim.

Nicolini, D., Mengis, J., & Swan, J. (2012). Understanding the role of objects in cross-disciplinary collaboration. *Organization Science, 23*(3), 612–629. https://doi.org/10.1287/orsc.1110.0664

Nonaka, I. (1994). A dynamic theory of organizational knowledge creation. *Organization Science, 5*(1), 14–37.

Orlikowski, W. J. (2002). Knowing in practice: Enacting a collective capability in distributed organizing. *Organization Science, 13*(3), 249–273.

Orr, J. E. (1990). Sharing knowledge, celebrating identity: Community memory in a service culture. In D. Middleton & E. Derek (Eds.), *Collective remembering* (pp. 169–189). Sage Publications.

Orr, J. E. (1996). *Talking about machines. An ethnography of a modern job*. ILR Press.

Peters, T. J., & Waterman, R. H. (1982). *In search of excellence*. Harper & Row.

Roethlisberger, F. J., & Dickson, W. J. (1939). *Management and the worker. An account of a research program conducted by the Western electric company, Hawthorne works, Chicago*. Harvard University Press.

Schein, E. H. (1992). *Organizational culture and leadership* (2nd ed.). Jossey-Bass Publishers.

Star, S. L. (1991). The sociology of the invisible: The primacy of work in the writings of Anselm Strauss. In D. R. Maines (Ed.), *Social organization and social process. Essays in honor of Anselm Strauss* (pp. 265–283). Aldine de Gruyter.

Star, S. L., & Griesemer, J. R. (1989). Institutional ecology 'translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39. *Social Studies of Science, 19*(3), 387–420.

Strauss, A. L. (1984). Social worlds and their segmentation processes. In N. K. Denzin (Ed.), *Studies in symbolic interaction* (Vol. 5, pp. 123–139). JAI Press.

Teräs, M. (2016). Inter-professional working and learning: Instructional actions and boundary crossing or boundary making in oral healthcare. *Journal of Education and Work, 29*(5), 614–636.

Thompson, J. D. (1967). *Organizations in action: Social science bases of administration theory*. McGraw-Hill.

Trist, E. L., & Bamforth, K. W. (1951). Some social and psychological consequences of the longwall method of coalgetting – An examination of the psychological situation and defences of a work group in relation to the social structure and technological content of the work system. *Human Relations, 4*(1), 3–38.

Wenger, E. (2000). Communities of practice and social learning systems. *Organization, 7*(2), 225–246.

Yang, G. M., Neo, S. H.-S., Lim, S. Z. Z., & Krishna, L. K. R. (2016). Effectiveness of hospital palliative care teams for cancer inpatients: A systematic review. *Journal of Palliative Medicine, 19*(11), 1156–1165.

Chapter 4
Do You Have a Moment? "Talks-to-Go" as Practices for Workplace Learning

Britta Møller

Abstract The paper identifies momentary, unplanned 'talks-to-go' appearing in daily work routines as potential for workplace learning. Based on an empirical study and the shadowing of interactions and practices in health care education and work, the paper explores everyday conversations as they appear at a Danish vocational health care college and nursing homes in the municipal elderly care. With an aim of transcending conceptual and organizational divides in contemporary understanding of knowledge sharing and knowledge work in organizations, the paper recommends a revisit in pragmatic philosophy of knowledge and learning, based on John Dewey. From these premises, the contribution is to enhance an understanding of learning as co-creational inquiry of the uncertainty in emerging problems of everyday work. The paper suggests that a way out of privatization, individualization and solitude related to problematic work situations is to enhance and experiment with examinations of uncertain situations in practices of inquiry that are co-creational in nature. As an intelligent use of knowledge can transform uncertainty into greater certainty, talks-to-go can assist the identification of needs for knowledge to understand and handle the uncertainty. From here, the sense of solitude in action can be transformed into social matters of learning, and the function of knowledge be enforced. However, conducted on the move between tasks, talks-to-go seem to exist by claiming their right for a moment of reflection in hallways and by coffee machines, and as a consequence, to exist in the shadows of the organizational life. However, as talks-to-go have the potentials to function as transit spaces for liminality in the life of organizations, the paper concludes that, if regarded and valued, talks-to-go can integrate formal and informal experiences and transcend formal and informal divides in organizations.

Keywords Workplace learning · Knowledge work · Pragmatism · Uncertainty · Transit spaces · Liminality

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Introduction

> "Do you have a moment?" the teacher asked his colleague as they left the staff meeting. "The meeting made me realize something about my teaching," he said as the they sat down on the couch in the coffee room and started talking about his issue. "It doesn't work well when I ask the students to reflect in small groups. I have to do it with them, but I feel old-fashioned, being that traditional teacher by the blackboard." "I know what you mean," the colleague replied, "I can't make them reflect on their own either." *Field note, coffee room at the Social and Health Care College*

As I, during my doctoral studies, had established my workspace in the staff coffee room at the Social and Health Care college (one part of my field of study) I could not help listening as the two teachers started talking. And as I walked around in nursing homes (the other field of my study), I noticed that care workers, trainees, and supervisors as well were having talks like this. As I began to pay attention to these talks, I found the practices around them were distinctly different from formal organizational knowledge-sharing practices; the professionals were conducting them in hallways and coffee rooms in moments during their daily workflow when on the move between work tasks. I wondered the following: what is it with these talks? What is attainable through them? Why do they seem to take place outside formal meetings?

To the agenda of the present anthology, whose aim is to investigate current phenomena in organizations, and their linkage to classic ideas of learning, the chapter will explore these questions as practices of knowledge sharing, and what is achievable when understanding them in the light of pragmatic learning theory. Firstly, the chapter will shed light on organizational knowledge sharing as a central buzzword in organizational learning. The chapter will relate knowledge sharing to contemporary practices of workplace learning, wherein *more* knowledge and knowledge *per se* is valued and wherein obstructive dichotomies are enforced, such as informality and formality, and learning and work. Drawing on pragmatism, and the American philosopher John Dewey (1916, 1922, 1929; Dewey & Bentley, 1949), the chapter will seek to go beyond these dichotomies to enforce learning as a social matter of shared inquiry into uncertain situations; situations that we stumble into leaving us in doubt and therefore triggering inquiry and a need for knowledge. To illustrate these perspectives, the chapter presents results from an ethnographic study of elderly care work and education, wherein momentary and unplanned talks are identified. In exploration of what these talks are made of and what becomes attainable through them, the chapter shows that the talks have the potential to move across and transcend formal and informal settings; that is by acknowledging the uncertainty in situations where an answer is not straightforward and by enacting a practice for co-creational inquiry. However, in order to transcend the divide between informality and formality in organizations, the chapter concludes that these 'talks-to-go' need to be regarded and qualified as valued organizational practices and not, as shown, stolen moments in both formal and informal settings. In sharing the uncertainty within everyday practice, talks-to-go have the capacity to evade solitude, give rise to a shared development of practice and to foster workplace learning.

Knowledge, Learning, and Work in Organizations

In recent decades, knowledge sharing and knowledge management have become popular buzzwords in organizational work (Alvesson & Kärreman, 2001). The common ideal is that more knowledge and more knowledge sharing is for the better. Knowledge sharing is often structured by information flows (typically from managers and databases), prescribed templates for action (typically from experts), and, to a lesser extent, by sharing ideas (Alvesson & Kärreman, 2001). Often, knowledge is confused with information (Kakabadse et al., 2003), and the flow of information seems overwhelming and exhausting to process, however "it is not knowledge to be shared that is missing but useful knowledge" (Elkjaer & Brandi, 2018, p. 92).

Learning Occurring Alongside Work

How knowledge becomes useful involves as well considerations of learning and work. Often learning and working are thought of as two separate processes; time spent on learning as time away from working (Nevalainen et al., 2018), and learning as a distinct and problematic factor when emphasizing changes in work practices (Brown & Duguid, 1991). While learning is illustrated as a process, knowledge is believed to be the content: "obvious: knowledge being the stuff (or content) that the organization possesses, and learning being the process whereby it acquires this stuff" (Easterby-Smith & Lyles, 2011, p. 4). These separations illustrate some of the problems that researchers and practitioners stumble upon when conceptualizing learning and knowledge in organizations. Practicing a separation of learning and knowledge as process and product creates transfer considerations between individuals and settings which succession have proven impossible and which are inadequate for understanding learning (Hager & Hodkinson, 2009). Even though organizations spend considerable resources on formal learning and training programs in order to enhance skills and knowledge, studies suggest that the majority of the actual learning happens in informal settings of the workplace (Livingstone, 1999), and that professionals constantly in informal settings are gaining new skills and knowledge (Cunningham & Hillier, 2013). Eventually, scholars claim, little attention is given to how people learn what they have to while working toward a joint purpose and together in problem-solving in their daily work (Hager, 2004). Still, we lack insight into how everyday practice influences local knowledge sharing and learning (Brandi & Elkjaer, 2019).

   To the agenda of this anthology, and in order to understand that it is with the talks-to-go, the chapter will rethink contemporary considerations of knowledge that separate work and learning in organizations to enforce the function of knowledge in the continuous interplay between formal and informal learning processes in organizations. The idea is to contribute to the conceptualization of knowledge and learning as aspects inherent in and necessary for handling work and not as additional burdens

disturbing the work (Nevalainen et al., 2018). When workplaces are recognized as learning environments in themselves, learning can be understood as occurring alongside work (Nevalainen et al., 2018).

Informal Moments

By adding a closer look, the chapter studies situations in which people interact and learn from and with each other. Apart from being under-researched, placing learning in the workplace context brings a perspective to research on knowledge and learning in organizations that encompasses a wider span of settings that are rarely structured with learning in mind (Eraut, 2004) and wherein learning is often treated as an occasional by-product (Eraut, 2011). Scholars have called attention to these informal interactions, naming them "hallway conversations" (Dixon, 1997), "corridor work" (Iedema et al., 2005), and "watercooler wisdom" (Bailey & Leland, 2006). Characteristically for these moments, they are integrated into work routines where employees are solving their daily tasks in on-the-job activities (Marsick & Volpe, 1999). Routines are not paused, nor are the moments structured or scheduled as work tasks. They are not enforced by external demands; however, they are triggered by either external or internal jolts (Marsick & Volpe, 1999). They are driven by the intentions of the employees, often with no explicit attention to the possible learning outcome. However, Dixon (1997) claims, these spaces are essential for learning: "Hallways are the only spaces in which it is possible for an organization to learn (. . .) If organizations are going to learn, they will need to construct hallways in which the learning can occur" (p. 27). If we trust these momentary encounters, as I found them in elderly care work and education, as significant spaces for learning in organizations, the importance of exploring what they are made of and what is attainable through them is evident.

The Pragmatist Philosophy of Learning, Knowledge, and Work in Organizations

To transcend issues in current practices derived from dichotomies of knowledge, learning, and work, the chapter argues the theoretical and empirical value in a revisit to the classic learning theory of John Dewey and his ideas of inquiry and transaction in relation to learning and knowledge. The aim is to understand how learning and knowledge, as organizational resources, are fueled by social processes of sharing, exploring, and creating knowledge of and in uncertain situations in formal and informal learning settings.

Uncertainty: The Trigger for the Need for Knowledge and Learning

In pragmatist philosophy, learning emerges from troubling situations like the one the teacher in the vignette shares with his colleague. Dewey (1922) explains, "Deliberation has its beginning in troubled activity and its conclusion in choice of a course of action which straightens it out" (p. 79). The "troubled activity" is triggered by a situation of unease (Dewey, 1916) or what Marsick and Volpe (1999) identify as a jolt—something that shakes us and make us stumble for answers. The feeling of unease triggers the need for an inquiry to understand what is at case and to transform the uncertainty into a more fulfilling situation. It ignites deliberation, that is, a discovery of the kind of problem we are facing and the choice of action we judge to be good and wise (Dewey, 1922). The vignette provides a glimpse into this type of troubling situation in which the teacher struggles with the ideal of good teaching that conflicts with what he finds workable in the situation. As "all action is an invasion of the future, of the unknown" (Dewey, 1922, p. 9), the teacher stumbles into the unknown of his future actions. Data in the present situation tell him that he needs to do something else. He is in search of solutions and does not yet possess the knowledge needed to resolve the problem. As the teacher needs to learn *something* in order to do his work, the need for knowledge is inherent in the process, triggered by the uncertainty and directed towards establishing a new certainty in similar situations.

Learning as Process and Result—Knowledge as a Tool for Inquiry

To summarize the pragmatic conclusion, learning is defined as both the *process* of inquiry which is triggered by a situation of unease and the *result* that gives an enhanced readiness to act in similar situations in the future (Dewey, 1916). In this process, a need is triggered for knowledge as an intellectual and practical tool to reveal uncertain problematic situations and to point to solutions to these situations. Consequently, knowledge functions, whether explicitly or implicitly, in the continuous interplay between a situation and its future course of action (Dewey, 1916). However, an intelligent use of knowledge as a tool for inquiry requires a deliberate examination of the conditions in the uncertain situations and the inherent values and theories. It can take place in either formal or informal learning settings; however, in both settings, it requires an acknowledgement of both uncertainty and certainty - of the impressions of uncertainty that are caused by an unsettled situation, and of the quest for certainty to settle the situation. "The quest for certainty becomes the search for methods of control; that is, regulation of conditions of change with respect to their consequences" (Dewey, 1929, p.103). The teacher in the vignette is eager to gain control over his work situation; he needs to regain a sense of certainty in the

classroom. However, to establish that certainty, he needs to face the uncertainty within the present situation. This is the set-off for learning.

Co-creative Inquiry: A Way Out of Solitude

Exploring learning as it arises from the disruptive and confusing tensions in increasingly complex work tasks entails a perspective of learning as more than individual acquisitions of knowledge (Elkjaer & Huysman, 2008). To grasp where and how learning appears in work, we need to attend to the social matters of participation, as yielded by the practice-turn in organizational research (Elkjaer & Huysman, 2008). In addition, we need to attend to the circumstances that take place when professionals stumble into practice and how they deal with it, including where and with whom they share those tense moments in reflective dialogues. Studying learning in organizations entails not separating what is a unity but seeking to endure the complexity of the interactions between individuals conducting the work, problems emerging from the work, and choices of actions made to resolve these problems. Dewey named this a continuity of "transaction" (Dewey & Bentley, 1949), to describe the dual process where individual acts upon the environment, and the environment acts upon them; a process wherein both individual and environment continuously are created and recreated. "This transactional approach draws together subjects (individuals), objects (knowledge), and situations into a mutually constituting, dynamic whole. To see organizational learning as fundamentally transactional is to focus on the interplay" (Elkjaer & Simpson, 2011, p. 72). In other words, managing the tensions of work is deeply embedded in the transactions between the professionals and various interests within the situation. The vignette indicates that the teacher is in doubt and, until now, has tried to locate answers on his own. As he approaches his colleague, he might be seeking a community outside of the solitude in which the uncertainty places him. Studying learning, I wondered whether these "talks-to-go", as I found them in moments of elderly care work and education, were producing potentials for co-creational inquiry about the doubt in uncertain situations. Do 'talks-to-go' have the potential to evade solitude in action and to create new knowledge? Could that be the reason why the professionals willingly have the talks despite their pressure of work? Before continuing, let me frame the study and methods for further examination of these questions.

Setting and Methods for the Study of Talks-to-Go

The background for this chapter is an extended empirical study that explores learning across organizational boundaries in the fields of municipal elderly care work and vocational education. The study involves participants from an elderly care service, a social and health care college, and the university as partners in joint

knowledge creation through 'Design Workshops'; established experiments of practicing and studying co-creational inquiry in different work settings. With a set-off in pragmatic philosophy, represented by John Dewey (1916, 1922, 1929; Dewey & Bentley, 1949), the study adopts a normative attitude led by an ameliorating intention for the involved practices and organizations. Shadowing the work of the participants (Czarniawska, 2007; McDonald & Simpson, 2014) at nursing homes and the college allowed the researcher to engage in the daily work practices of teaching and elderly care work. Shadowing as a research method gives the researcher the possibility to study the work of people, who, rather than staying in one place, move from place to place as they work (Czarniawska, 2007). Hence, shadowing offers the opportunity to explore everyday practices and organizational processes as they unfold at microlevels in various places and paces throughout an observed timespan (McDonald & Simpson, 2014). While Czarniawska (2007) mainly employs shadowing as a method to follow individual organizational actors, others apply the method to shadow organizational projects (Vasquez et al., 2012), objects (Latour, 1999), and phenomena in the unfolding of situations (Buchan & Simpson, 2020). The latter interpretation is aligned with the aim of this study to explore the phenomenon of momentary professional talks as they unfold in organizational practices. Shadowing the work practices provided the opportunity to participate in formal work routines of teaching, care work, and staff meetings as well as numerous informal chats in hallways. As the vignette illustrates, I often stumbled upon these moments by chance. By paying attention to what happened on these occasions, data took forms as experienced, emotional, responsive data (St. Pierre, 1997), and as stumbled upon rather than collected (Brinkmann, 2014). As the method of shadowing allows for the researcher to ask questions and engage with the research participants in "in-the-moment interpretations" (Buchan & Simpson, 2020), an abductive process emerged between something not yet understandable and the eager to understand more. From the basis of these "in-the-moment interpretations" between the researcher and the participants, data material was co-constructed as *narratives* that illustrated problematic situations and as *design experiments* that enabled new trials in practice.

To understand more in details what happens in and around these moments, and what becomes attainable through them, I will now present one of these narratives, where I was invited to shadow a supervisor at a nursing home as she followed a trainee through her morning routines with an elderly woman. The following analysis is qualified by the three conclusions derived from pragmatic philosophy: "Uncertainty: The trigger for the need for knowledge and learning", "Learning as process and result—knowledge as a tool for inquiry", and "Co-creative inquiry: A way out of solitude".

The Narrative

It is morning at the nursing home. A care work trainee and her supervisor are in the bedroom of an elderly woman. I try to keep at a distance in the next-door living room from where I can hear, but not see everything. The woman is in bed, and during the next hour the trainee will do the lower body washing in bed, help the woman out of bed, and into the bathroom. Then she will do the upper body washing and help her get dressed. Meanwhile, the supervisor observes her actions and occasionally takes notes. The woman's verbal language seems limited and, for her part, she is moaning and groaning with every move. She makes sounds when the trainee asks her questions, tells her what she is doing, and what she expects her to do. The trainee explains, "Now, I will wash you, and then you can get up." The woman moans in response. Occasionally the trainee and supervisor talk about how to do the work. The supervisor notes, "I see that she is red on her lower parts." The trainee asks, "What lotion would I use?" Then they talk about rashes, reddening, and ointments. The trainee is on the floor putting on the compression socks and states "It teases me today. I am all sweaty." The woman moans once again. "Are you ill or do you need to pee?" the trainee asks. "Yes," the woman replies, and the trainee helps her to the toilet. "Now I will give you a moment of peace," she says, and transits to the living room, where she and the supervisor are talking about the woman's arm sling. Finishing the morning routine, the woman is followed into the kitchen for breakfast.

"The woman's moaning is stressful," the trainee says, as we settled in the office. "It is difficult to focus on my job, with her sighing all the time. I found myself not taking care of the ergonomics sitting there on the floor." As they are talking, the woman comes to the office door. She starts moaning outside the door even louder than before. "She wants to go to the toilet," the trainee sighs and says, "I don't know what to do. I want to help her, but it doesn't seem to help." They talk about what to do. Another care worker enters the room: "I have just had her on the toilet a minute ago. I don't know how we can help her, but all her moaning is stressing me and the other elderly as well," she says. The care worker stays in the office for a while discussing the situation. At the time, they do not come to an answer. One of them suggests bringing the problem up at the staff meeting they are about to attend.

We all move to the lunchroom for the meeting. It is a daily event where the team go through the handling of medicine in order to reduce fatal errors. Initially, the supervisor tells her colleagues about their trouble, "No matter how often we help her to the toilet, it will never be enough. But how can we deny her help?" They talk about her moaning and sighing. "She is definitely not at ease. She is unhappy or in pain," another care worker opines. The manager enters, listens briefly, and then says, "It is a disfavor when we react to her impulses. As she is half-sided paralyzed, her control of the bodily sensations is reduced. I suggest we invite someone over to tell us about the consequences of this neurological damage." The talk ceases, and the meeting starts.

Uncertainty: The Trigger for the Need for Knowledge and Learning

A troubled situation is emerging in the bedroom of the elderly woman. The woman is moaning and sighing, and the trainee performing the morning care is affected, causing both sweat and wrong turns regarding her ergonomic positions. The woman's sighs and moans act as data in the situation that tells the trainee that she needs to act accordingly in this situation to provide proper care. However, the trainee does not know what to do to secure a continuous flow of actions in her intended care. Despite this uncertainty, the task of providing care for the woman demands her to act immediately. Not much time is left for reflection. The interactions are in constant flux. There is a constant call for action.

Later, the situation is made subject for formal debriefing between the trainee and the supervisor. Here, the trainee reveals her choices against her known knowledge of 'good ergonomics'; a theory that does not assist her choice of actions in this complex situation, but in fact seems to make it even more complex. The situation triggers a need for new knowledge, not only for the lesser experienced trainee but also for the supervisor and the colleague, as she enters the office and takes part in the discussion. This need for knowledge to handle the situation and provide good care for the woman in distress is emerging in continuity with their actual work.

Learning as Process and Result—Knowledge as a Tool for Inquiry

Dealing with the uncertainty in the situation requires a course of action to be decided upon involving many considerations; e.g. would it be helpful to work more hastily so the hassle sooner come to an end? Does the haste itself contribute to the hassle? Is it preferable to prioritize the well-being of the woman over the correct bodily positions of the trainee? How, when and where can they deal with the situation or share the problem with others? There is no script for these considerations; however, learning is made possible as the uncertainty has triggered the need for inquiry to enhance their readiness to handle situations like this. The care workers lack the tools to ensure the continuous flow of the situation, the good morning care of the woman, and the need for more knowledge, as a tool for this inquiry into actions, is triggered.

As the intelligent use of knowledge requires a deliberate and profound examination of the conditions that constitute the situation, the professionals seem to roam in and out of different formal and informal settings: the formal debriefing in the office, the informal talk in the corridor, and the formal staff meeting. To handle the inherent uncertainty and quest for certainty in the everyday situation, the care workers try to find time and space for the needed examination. At the staff meeting, the immediateness of the problem does not seem to fit the staff meeting's agenda, and the manager concludes that they need expertise from the outside to inform the situation.

For now, the care workers are left with the informal talks-to-go alongside the work as a workable practice for the inquiry into everyday work, for knowledge creation, and learning in these situations.

Co-creative Inquiry: A Way Out of Solitude

As not much time is given to process the feeling of unease in explicit reflections when in the situation, the trainee is left on her own to do the decision-making about which actions are appropriate. We see a few passages of reflection *in* the situation, e.g., the talks about rash, lotion, and arm sling; however, the majority of the trainee's deliberations remain hidden and private. Dealing in solitude with such a complex situation, as if its resolution were an individual's choice, makes it difficult to determine the appropriate course of actions. Often there will be no good, only a *good enough* answer to the situation; the decision will only be tentative, as its effectiveness will not be determined until completed. The uncertainty brings about doubt that can affect the trainee's sense of carrying out her work properly.

Despite the decision-making being privately performed in the care situation, it has the potential to be transformed into a social matter. The question is where and when the potential is supported. In the narrative, we see two formal settings, debriefing and staff meeting, and an informal and unplanned moment in the office. During debriefing, the unease is thematized and treated as a potential learning experience for the trainee. During the staff meeting, the unease is postponed to a later meeting with an expert. However, in either of the formal settings, the unease is advanced to a social matter of joint learning. The informal moment, on the other hand, that is emerging as the co-care worker enters the office, has the potential to alter the uncertainty from an individual to a social matter. This talk, as an example of a talk-to-go, brings the possibility to evade the solitude of being alone with the situation. Gradually the situation embeds the social, moving from the initial experience of the trainee's unease in the woman's bathroom to the first sharing with the supervisor, followed by the conversation with the co-care worker, and eventually with more colleagues. When sharing the doubt, care workers have the opportunity to examine their experiences and to uncover that their experiences of doubt are not individual affairs but are linked to this specific complex care situation. Sharing the doubt can dissolve their sense of solitude, and together they can consider appropriate responses to the situation and learn how to handle these kinds of situations.

Concluding Discussion

This chapter has identified what is significant about momentary, unplanned 'talks-to-go' as they emerge in a daily work routine in a nursing home and at a college. We can now conclude what is attainable through these kinds of talks, and why they seem to

be conducted outside formal settings. From the empirical analysis we conclude, as pointed out by Dixon (1997), that these unplanned and unstructured moments are shared inquiry that potentially form spaces for learning; the co-creational inquiry into the uncertainty of emerging problems in everyday work. However, while Dixon claims the informal spaces to be *the only* appropriate space for learning, the analysis shows that talks-to-go have the potential to transcend formal and informal settings in the organization. The work-related need for learning and knowledge makes the care workers search through formal and informal settings for a place to rest their doubts. In this search talks-to-go play a significant role to capture and make in common what is experienced doubtful in the work practices. Rather than discussing talks-to-go as spaces, the chapter suggests discussing them in aspects of mobility. Although conducted in informal spaces, these moments seem to function as "transit spaces" with a potential liminality in the life of organizations (Iedema et al., 2005). The recognition of the transitional processes that are potential from talk-to-go underlines how the content of the talks-to-go (the uncertainty and the quest for certainty) are moving in and out of the formal and informal settings of work. Discussions of whether informal or formal learning settings are the most effective means for an improvement of knowledge then become problematic. Aspects of informality can never be separated from those of formality, as both are present in all types of learning situations (Malcolm et al., 2003). Accordingly, the conclusion is not to formalize talks-to-go, as it will undermine their potentiality. Rather we conclude that talks-to-go can enforce the function of knowledge in the continuous interplay between formal and informal learning settings; talks-to-go identify the need for knowledge as a tool for inquiry into the conditions of problematic situations faced at work. Conclusively, the chapter offers distinctive insights into how talks to go enable co-creational learning among organizational members and how these talks have potential to serve as 'transit spaces' that combine formal and informal experiences and transcend formal and informal organizational divides.

As the intelligent use of knowledge transforms uncertainty into greater certainty, talks-to-go have the potential to transform the sense of solitude in action into a social matter of learning. Seldom, care workers are afforded the time and space to process the available information and to consider the consequences of their actions during direct care work, and often they perform their work alone. However, the practice of care is a fragile, ethical practice with conflicting interests that easily trigger uncertainty and, with it, an impulse to evade solitude by sharing with others. Caring is a collective knowledgeable doing (Gherardi & Rodeschini, 2016), and the practice of knowledge sharing is a matter of how work is organized, not a personal affair (Brandi & Elkjaer, 2019). Drawing on pragmatic philosophy of knowledge and learning, this chapter suggests a way out of individualization and solitude of uncertainty is to enhance and experiment with the examination of uncertain situations of doubt in practices of inquiry that are co-creational in nature. The drift of the uncertain situation through formal and informal settings is a search for the establishment of a practice for shared inquiry, a time and space where professionals transform the handling of a problematic situation from an individual and private to a collective and shared inquiry. Talks-to-go may be shared moments of co-creational

inquiry and provide the opportunity to develop and realize opportunities in practice and hence foster workplace learning.

However, talks-to-go seem to be stolen in time from that which is dedicated to 'real' work both in formal and informal settings. Conducted on the move between tasks, talks-to-go seem to exist by claiming their right for a moment of reflection in hallways and by coffee machines. By acting in the shadows of the organization, talks-to-go might be examples of "shadow organizing" (Gherardi et al., 2017) that enact the liminality between the prescriptive clinical guidelines and the everyday improvisational practices (p. 8–9). However, without the knowledge of what is going on in organizational talks-to-go, essential parts of workplace learning are left unknown, unsystematic, and unmethodical. If the formal settings neglect to acknowledge the uncertainty, talks-to-go might maintain an organizational secrecy (Gherardi et al., 2017). When dealing with knowledge sharing and creation in organizations, more insight is needed into how talks-to-go as practices for co-creational inquiry into doubt are practiced. It would be a gift for the professionals eager to evade the solitude of uncertainty and for further workplace learning if organizations more deliberately enabled the potentiality of talks-to-go as transit spaces to the divide of formal and informal experiences and settings in organizations.

References

Alvesson, M., & Kärreman, D. (2001). Odd couple: Making sense of the curious concept of knowledge management. *Journal of Management Studies, 38*(7), 995–1018. https://doi.org/10.1111/1467-6486.00269

Bailey, K., & Leland, K. (2006). *Watercooler wisdom: How smart people prosper in the face of conflict, pressure and change*. New Harbinger Publications.

Brandi, U., & Elkjaer, B. (2019). Subtleties of knowledge sharing: Results from a case study within management consultancy. *Knowledge Process and Management, 26*(3), 185–193. https://doi.org/10.1002/kpm.1597

Brinkmann, S. (2014). Doing without data. *Qualitative Inquiry, 20*(6), 720–725. https://doi.org/10.1177/1077800414530254

Brown, J., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization Science, 2*(1), 40–57. https://doi.org/10.1287/orsc.2.1.40

Buchan, L., & Simpson, B. (2020). Projects-as-practice: A Deweyan perspective. *Project Management Journal, 51*(1), 38–49. https://doi.org/10.1177/8756972819891277

Cunningham, J. B., & Hillier, E. (2013). Informal learning in the workplace: Key activities and processes. *Education and Training, 55*(1), 37–51. https://doi.org/10.1108/00400911311294960

Czarniawska, B. (2007). *Shadowing and other techniques for doing fieldwork in modern societies*. Liber/CBS Press.

Dewey, J. (1916, 1977). Democracy and education: An introduction to the philosophy of education. In J. A. Boydston (Ed.), *The middle works, 1899–1924*. Southern Illinois University Press.

Dewey, J. (1922, 2012). *Human nature and conduct: An introduction to social psychology*. Digireads.com Publishing.

Dewey, J. (1929, 1984). The quest for certainty: A study of the relation of knowledge and action. Gifford Lectures. In J. A. Boydston (Ed.), *The later works* (4th ed.). Southern Illinois University Press.

Dewey, J., & Bentley A. R. (1949, 1976). *Knowing and the known*. Greenwood Press.

Dixon, N. (1997). The hallways of learning. *Organizational Dynamics, 25*(4), 23–34. https://doi.org/10.1016/S0090-2616(97)90034-6

Easterby-Smith, M., & Lyles, M. A. (2011). The evolving field of organizational learning and knowledge management. In M. Easterby-Smith & M. A. Lyles (Eds.), *Handbook of organizational learning and knowledge management* (pp. 1–21). Wiley.

Elkjaer, B., & Brandi, U. (2018). Knowledge sharing viewed through a pragmatist lens: The case of management consultancy. *Teoria e Prática Em Administração, 8*(2), 80–102. https://doi.org/10.21714/2018_v8i240727

Elkjaer, B., & Huysman, M. (2008). Social worlds theory and the power of tension. In D. Barry & H. Hansen (Eds.), *The SAGE handbook of new approaches in management and organization* (pp. 170–177). Sage.

Elkjaer, B., & Simpson, B. (2011). Pragmatism: A lived and living philosophy. What can it offer to contemporary organization theory? In H. Tsoukas & R. Chia (Eds.), *Philosophy and organization theory* (pp. 55–84). Emerald Group Publishing Limited. https://doi.org/10.1108/S0733-558X(2011)0000032005

Eraut, M. (2004). Informal learning in the workplace. *Studies in Continuing Education, 26*(2), 247–273. https://doi.org/10.1080/158037042000225245

Eraut, M. (2011). Informal learning in the workplace: Evidence on the real value of work-based learning (WBL). *Development and Learning in Organizations, 25*(5), 8–12. https://doi.org/10.1108/14777281111159375

Gherardi, S., & Rodeschini, G. (2016). Caring as a collective knowledgeable doing: About concern and being concerned. *Management Learning, 47*(3), 266–284. https://doi.org/10.1177/1350507615610030

Gherardi, S., Jensen, K., & Nerland, M. (2017). Shadow organizing: A metaphor to explore organizing as intra-relating. *Qualitative Research in Organizations and Management an International Journal, 12*(1), 2–17. https://doi.org/10.1108/QROM-06-2016-1385

Hager, P. (2004). Conceptions of learning and understanding learning at work. *Studies in Continuing Education, 26*(1), 3–17. https://doi.org/10.1080/158037042000199434

Hager, P., & Hodkinson, P. (2009). Moving beyond the metaphor of transfer of learning. *British Educational Research Journal, 35*(4), 619–638. https://doi.org/10.1080/01411920802642371

Iedema, R., Long, D., Carroll, K., Stenglin, M., & Braithwaite, J. (2005). Corridor work: How liminal space becomes a resource for handling complexities of multi-disciplinary health care. In M. Muetzelfeldt (Ed.), *APROS 11: Asia-Pacific researchers in organization studies: 11th international colloquium* (pp. 238–247). APROS.

Kakabadse, N., Kakabadse, A., & Kouzmin, A. (2003). Reviewing the knowledge management literature: Towards a taxonomy. *Journal of Knowledge Management, 7*, 75–91. https://doi.org/10.1108/13673270310492967

Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies*. Harvard University Press.

Livingstone, D. W. (1999). Exploring the icebergs of adult learning: Findings of the first Canadian survey of informal learning practices. *The Canadian Journal for the Study of Adult Education, 13*(2), 49–72.

Malcolm, J., Hodkinson, P., & Colley, H. (2003). The interrelationships between informal and formal learning. *Journal of Workplace Learning, 15*(7/8), 313–318. https://doi.org/10.1108/13665620310504783

Marsick, V. J., & Volpe, M. (1999). The nature and need for informal learning. *Advances in Developing Human Resources, 1*(3), 1–9. https://doi.org/10.1177/152342239900100302

McDonald, S., & Simpson, B. (2014). Shadowing research in organizations: The methodological debates. *Qualitative Research in Organizations and Management: An International Journal, 9* (1), 3–20. https://doi.org/10.1108/QROM-02-2014-1204

Nevalainen, M., Lunkka, N., & Suhonen, M. (2018). Work-based learning in health care organisations experienced by nursing staff: A systematic review of qualitative studies. *Nurse Education in Practice, 29*, 21–29. https://doi.org/10.1016/j.nepr.2017.11.004

St. Pierre, E. (1997). Methodology in the fold and the irruption of transgressive data. *International Journal of Qualitative Studies in Education, 10*(2), 175–189. https://doi.org/10.1080/095183997237278

Vasquez, C., Brummans, B., & Groleau, C. (2012). Notes from the field of organizational shadowing as framing. *Qualitative Research in Organizations and Management: An International Journal, 7*(2), 144–165.

Chapter 5
'No Mental Surplus': Workplace Innovation from Problem Solving to Problem Framing

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Abstract Employees' everyday problem solving is often mentioned as a crucial driver for innovation initiated at the workplace, referred to in the following as 'workplace innovation'. Workplace innovation is here understood as long-lasting organizational change for the better contributed by employees owing to their experience, collaboration and learning through and for work. This chapter illustrates how this potential for workplace innovation was hard to realize in a new elderly care facility with a great amount of innovation in the form of new technology. Employees were busy solving problems, but this problem solving did not seem to provide grounds for long-lasting changes for the better – neither for themselves nor for the residents. Rather, problem solving tended to drain employees of what, using a Danish idiom for one's inner reserves or spare capacity to address challenges, they referred to as a 'mental surplus'. While highlighted in the literature as a driver for workplace innovation, employee problem solving seemed to be quite the opposite: tasks that merely added to their workload. On the basis of on this finding, we revisit the term 'wicked problem'. When the term 'wicked problem' was first introduced by Rittel and Webber (Policy Sci 4(2):155–169, 1973), they pointed out that problem framing and problem solving are one intertwined process. While 'wicked problem' is a popular term often used to explain why innovation is needed, the problem-framing aspect is rarely addressed in depth. Accordingly, we suggest that, in order to contribute to workplace innovation, employees must be involved in problem *framing* and that problem framing should be given more attention in studies of workplace innovation as well as in the design of elderly care practices.

Keywords Workplace innovation · Wicked problems · Elderly care · Welfare technology · Employee problem solving

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Introduction

Recent years have witnessed an increased interest in the innovation potential of everyday practices where employees reflect, interact and carry out their work (Høyrup, 2010; Haapasaari et al., 2018). The research field of workplace learning has contributed the important concept of employee-driven innovation (Høyrup et al., 2012), while similar ideas about employees as an important source of innovation are reflected in the terms 'practice-based innovation' (Ellström, 2010), 'everyday innovation' (Wegener, 2016) and 'bricolage' (Fuglsang, 2010). These perspectives point to employees' daily problem solving as a crucial resource for innovation. In these perspectives, employees are regarded as potential contributors to innovation owing to their knowledge and experience (Price et al., 2012) and thus innovation is studied as negotiated processes of learning and participation, including both personal values and involvement within and across social spaces (Billett, 2012).

In the following, we refer to this as workplace innovation. The term 'workplace innovation' (Fuller et al., 2018; Oeij et al., 2017) brings together theoretical perspectives from the literature on employee-driven innovation and more generally from social and practice-based learning theory. Inspired primarily by Fuller et al. (2018) and Price et al. (2012), workplace innovation is here understood as long-lasting organizational changes for the better contributed by employees owing to their experience, collaboration and learning through and for work. As such, learning and innovation are closely related, but not the same. Rather, ongoing learning is seen as a prerequisite for innovation (Ellström, 2010). This belief in people's ability to contribute to a community has become mainstream in recent years, and now resonates from across the political spectrum (Nicholls et al., 2015) and in management and governance theories and policies (Høyrup, 2010).

To investigate the practical conditions for these political ambitions, we report from a four-year-long study entitled 'Promoting social innovation within institution-based elderly care'. The project was driven by the normative perception of employees and local managers as agents of workplace innovation as outlined above. The project aimed to extract knowledge from 'first mover' elderly care practices in order to 'promote' (as the project title indicates) workplace innovation in the field more broadly. As addressed by Price et al. (2012), workplace innovation takes place in continual interactive processes between changing (technological and communicative) conditions and employees' ongoing learning. Employee expertise is regarded not only as an ability to adapt to innovation from 'outside' (e.g. while learning to handle new technology) but also as an ability to contribute new solutions. Little is known, however, about how this alleged capacity for innovation that springs from everyday work is mobilized, nurtured and managed, not least in highly regulated and resource-poor contexts (Fuller et al., 2018) such as elderly care. In the part of the study reported on here, we followed the establishment of a new high-tech care facility with a particular focus on the ways in which employees and local managers navigated their new technologically mediated workplace. We observed their problem-solving strategies and interviewed them about various aspects of

workplace innovation. The analysis is thus guided by the following question: how do employees and local managers navigate problem solving in their everyday work at a new high-tech elderly care facility?

First, elderly care is introduced, along with the role of workplace innovation in this field. Second, we describe the research project and the elderly care facility in more detail. The following analysis illustrates how problem solving takes two different forms: (1) as embedded in the basic care work and (2) as the handling of technology. In the subsequent discussion, the term 'wicked problem' is revisited to assist a problematization of problem solving as the main driver for workplace innovation. In conclusion, we argue that problem framing needs to be at the centre of attention as equally important and intertwined with problem solving, and that the term 'wicked problem' can assist that endeavour.

Innovation in Elderly Care

Elderly care employees in Scandinavia, as in many countries, have little (and sometimes no) education and are thus often considered not capable of contributing to innovation (Wegener, 2016). However, the elderly care sector has undergone gradual professionalization, and a wide range of organizational, managerial and educational experiences is making it an interesting field of research (Kamp & Hvid, 2012). Professionalization in elderly care (and health care in general) is driven by what is sometimes referred to as the triple challenge of health care: (1) an ageing population living longer with chronic diseases and a shrinking workforce to take care of them; (2) costly new technology; and (3) increasing patient expectations of access to new technology (devices and treatment) (Bevan, 2012). Technological innovation is seen as one of the main solutions and has gained enormous political attention, but the actual effect of technology seems to progress more slowly in health and social care than in other areas (Davies & Boelman, 2016). Nonetheless, a vast number of new technologies are implemented owing to political decisions. Meanwhile, there has been an innovative shift in conceptions of care work in which the care recipient is seen as an active co-producer of care (addressed already by Baldock & Evers, 1991). Staff upskilling thus does not only concern learning to operate new technology but additionally entails a redefinition of care and the professional's role therein. Within the field of elderly care (as in health care more generally), these co-production aspects extend to various kinds of collaboration with relatives, local organizations and volunteers. That is, elderly care employees are expected to incorporate new technology in their daily work practices, and there is also an increased focus on their collaborative and communicative skills. They are no longer expected to deliver care, but to co-produce it. This conceptual shift is reflected in the research project presented below, which had a specific focus (and obligation to the funding agency) on innovation as a co-produced practice embedded in the daily work at the elderly care facilities.

The Project

The project was initiated by a consortium of one Danish and four Norwegian research institutions and funded by the Research Council of Norway (NFR project no. 256647). Relating to the abovementioned research traditions, social innovation was understood as an umbrella term 'primarily oriented to generating social rather than economic value' (Fuller et al., 2018, p. 220). The study did not focus in particular on the implementation of new technology, but adopted a broad scope on innovations that are social in both ends and means, seeking to meet social ends (such as good care) by means of new ways of working, learning and collaborating (Murray et al., 2010).

The academic research group represented various research fields (anthropology, health, nursing, political science, psychology, social work and sociology). Recruited on their reputation as 'first movers' for innovation, six elderly care facilities served as cases along with the municipalities in which they were located. The Danish part of the research group which carried out the case study presented here comprised a municipal educational consultant and four researchers. We visited the construction site as the building progressed and was gradually populated with people and equipment. In this context of establishing a new care facility, we were introduced to: transverse lifts all the way from the bed to bathroom; automated 'wash-and-dry' toilets, sensor-controlled door locks; automated 24-h light and temperature regulation; protective fall mats beneath the beds linked to the alarm system; a sensory room; wellness spa; GPS devices; iPads and access to digitalized schedules for each resident; procedures and diets; and electronic information screens, to mention just some of the new features. These new technologies were available along with 'old' technologies such as phones and beepers for staff, stationary computers, measurement devices, wheelchairs and displacement equipment.

The facility was praised by local media and politicians as a highly innovative project realized by co-production methods involving various stakeholders in the design process. It was also praised for providing the newest welfare technology and environmentally sustainable solutions for a 'safe, cosy and active life in old age' (as stated in the promotional material), as well as good working conditions for the elderly care professionals. We searched for workplace innovation – realized and potential – in this technologically enhanced context.

Three of the researchers carried out:

1. five days of fieldwork based on an observation template focusing on interactions and dialogues in the everyday care work, staff meetings, coordination, morning care practices and documentation;
2. two focus group interviews regarding the care professionals' use of technology;
3. one interview with local managers about technology implementation strategies;
4. one interview with the local technology manager;
5. two semi-structured interviews with local managers on the ways in which they sought to facilitate workplace innovation;

6. four focus group interviews including all staff (local manager, nursing assistants, care workers, nurse, occupational therapist, students, relief staff and cleaning staff) in two different sections focusing on the everyday work at the few facility.

At the time of the fieldwork and interviews referred to here, two of the building's four sections were utilized, each including 20–24 full-time elderly care professionals and 24 residents.

The interviews were voice recorded. Fieldnotes were produced during and after the fieldwork and shared in the research group. The research group met at several day-long analysis sessions and produced maps and memos inspired by Situational Analysis (SA) (Clarke et al., 2017) including both interview and fieldnote material. What turned out to be particularly helpful in the SA approach was the construction of 'messy maps' and 'social worlds maps' and the memos each of us produced as free-form notes in between the mapping. A messy map includes all human, material and discursive elements that might matter in understanding the situation as it is framed by participants and researchers. As such, these initial processes of mapping are highly inclusive, because the analytic importance of specific elements cannot yet be known (Clarke et al., 2017, p. 128). Producing messy maps made us aware of the complexity of everyday care work while navigating a new high-tech environment, and not least pointed our attention to the ways in which this was related to the discourse of 'no mental surplus'. The present analysis is just one aspect pursued in the vast material (for other analyses, see e.g. Anvik et al., 2020). A social worlds map displays how meaning making is organized through social commitment to certain groups and distancing to others (Clarke et al., 2017, p. 150). Drawing these maps made us realize the lack of interaction with learning resources outside the collegial group, thus making peer learning the preferred strategy. After several rounds of mapping and memo-writing, we re-engaged with the workplace learning and social innovation literatures and decided on the concepts 'workplace innovation' and 'wicked problem' to further investigate and problematize the idea of employee problem solving as a driver for innovation. Preliminary analyses were presented and discussed with the municipal health and care management team as well as with our Norwegian project partners at meetings during the four years.

Analysis

This analysis focuses on problem solving in the everyday work at the facility and suggests that problem solving consisted of two different kinds of activity taking place either within the practices employees referred to as 'basic care' or when handling problems related to new technology. We focus on a 'salient discourse within the situation of inquiry' (Clarke et al., 2017, p. 14) in which employees and managers make (variously expressed) reference to having 'no mental surplus' until the 'basic care' is done well. We scrutinize one of many such situations observed during fieldwork, in which an employee divides her time and mental energy between

problem solving in collaboration with the care recipient and problem solving related to technology. Together, the interview quotes and the field observations lay the ground for problematizing problem solving as a main driver for workplace innovation.

Prioritizing Basic Care

In general, employees felt novelty overload due to the new building, new colleagues and not least new technology, which for many was difficult to use or did not seem to work or fit the needs of the residents. An explicit strategy was to prioritize basic care, as explained by an employee:

> I think, because everything is new and there are a lot of new staff too, most of us favour the close interaction with residents and the immediate care work, you know—wound care, medication, food and hygiene. We can't find the mental surplus until the basic care work is done well, and we are just not there yet. (focus group II)

The 'close interaction' is primarily unmediated by technology and involves basic professional skills related to the needs of the body. Likewise, the time to communicate and just be with each other was expressed in various ways, such as when an employee says:

> We prioritize small talk and just taking these extra five minutes to chat. If we are good together, we are good for the residents. (focus group I)

Some employees request training in order to learn to handle new technology, while others suggest that teaching would be of no use:

> When we'd just moved in here, there were simply so many things that we had to accommodate in our heads. I do not think we would have benefitted much from being taught about the technologies just then. Making the keys and the beepers work seemed much more important. (focus group interview conducted as part of the fieldwork)

A manager supports this view and seeks primarily to balance a certain pace of learning with simultaneously shielding employees from novelty overload:

> I think this is true indeed. It is about having the mental surplus to think: now I have these extra fifteen minutes, let's try it out. And when do we have these fifteen minutes in this extended period of change? The more peace and composure we have, the more this will happen all by itself. As a manager, I can insist that we keep going, but I must avoid overload. (focus group II)

Overload, however, is obviously hard to avoid in the everyday practice of attending to residents' and colleagues' needs, as exemplified in the following fieldnote from Susan's first hour at work.

Solving Problems

Susan, one of the care workers, has agreed to be accompanied by the researcher, Britta:

> *Susan explains to Britta that she needs to find out why the staff beepers are not working properly: the button must still be pressed very hard. Someone has informed her that changing the batteries has been tried but did not help. She says that she also needs to call Anders, the technician, because a GPS device cannot lock. The GPS is for a resident with dementia, and if it doesn't lock, they cannot track her if she goes astray. Today she will be responsible for four residents, Susan says, but Rita may be transferred to sheltered housing later. She writes their names together with the checklist of tasks for the day on a small paper pad she keeps in her pocket. The list reads: 'Rita transferred?, eye drops, exercise, medication dispenser, GPS, scales, blood pressure, blood glucose, drug schedule, walk, nurse must change bandages, incorrect dosage in the dispenser'.*
> *Susan calls Anders, the technician, and explains the GPS problem. She has identified the defect. The locking pin is loose, which is why it cannot be locked, and they need a new one. Susan gives Anders her direct cell phone number and asks him to call her when the new locking pin has arrived.*

Susan's tasks may look like simple problems, easily defined and with easily identified solutions. Thus, the problems should easily be solved provided that someone decides and informs her about Rita's transferal, that she knows how to correct the dispenser dosage, and that Anders calls back. She simply needs to solve problems or get in contact with those who can. For most of the problem solving, she relies on others. Also notable is that, in this high-tech facility well equipped with iPads and PCs giving access to electronic health records, weekly schedules and diets, Susan keeps track of it all in a pocket-size notebook.

Avoiding the new technology and sticking to well-known (analogue or low-tech) devices is prevalent in other situations as well. The wash-and-dry toilets especially are met with reservations and do not encourage much problem solving, as two care workers explain (during focus group III):

> I don't think it is working properly, you know, it doesn't clean well enough. There is some water, and then some air, but it isn't enough. It depends on how the digestion works, and if the resident gets iron supplements, you can't just rinse it off.

Another worker adds that her reservation is not grounded in residents' physiology but in a more profound mismatch between technologies and residents' conditions and needs:

> The waterjet is adjustable, but it does not necessarily make it more comfortable. Some of our residents find it unpleasant and say that they don't want to go to the toilet if. . . if they get 'hosed in their behind', you know. The residents with dementia, you can't just place them there and flush; they would jump up in terror.

Employees and managers are fully aware of ad-hoc solutions and avoidance strategies, but they rely on future stability – and with this a smooth integration of the new, without novelty overload. 'The more peace and composure we have, the more this will happen all by itself', as the manager puts it. Whether this will come true, we cannot know; however, in this 'extended period of change', as the manager describes their work situation, employees regard their work as centred on communication and care – in their words, 'time to chat', 'focus on basic care'. While much of the technology at the facility is designed to assist better care and smoother communication, circumstances seem to make employees feel the opposite: trying to solve problems with what does not work or fit takes time and mental energy. The core of their professionalism is 'basic care', as in this situation where Susan and Rita together must solve problems caused by Rita's night-time accident.

What Does Basic Care Look Like?

Britta is still with Susan on her morning round, and the first resident to assist is Rita:

On the way to Rita's two-room residence, Susan fetches diapers and protection sheets from the storage depot. She enters a dark room, the curtains are down, and there is a smell of stool. Susan says, 'Good morning' and approaches the bed. Rita responds:

'I have soiled my pants. The good news is that I had a shower at night. But now I need another one – it's happened again.'

Susan and Rita discuss how to proceed, and while Susan removes the quilt cover, they agree to set the washing machine to 40 degrees in order to wash the quilt. There is a drenched towel under the quilt, and the mattress cover also needs to be washed. Susan and Rita go to the bathroom together. Rita can walk on her own.

A lift by the bed and a slide rail in the ceiling go all the way to the bathroom. The room is well lit from big lamps mounted in the ceiling and centrally regulated for circadian rhythms. Under the bed is a mattress with sensors attached to an alarm system. In the bathroom is a 'wash-and-dry' toilet.

Susan tells Rita that she has brought diapers with her and that she will cover the armchair with a protection sheet. Rita says that she hopes her wound with the transplanted skin will not be ruined because of her night-time accident. Susan reassures her that the nurse will inspect the wound soon. They talk about washing instructions and how to avoid further accidents of this kind.

'Now, shall we see if we can get you washed?', Susan says, and Rita replies that it seems there is no way of avoiding that. They both laugh. 'What about clothes?', Susan asks. Rita wants the nightgown. Rita returns to the living room and sits down in the armchair with damp hair. Susan's phone rings.

This is one of many situations, similar in many ways and yet all different and unpredictable. Sometimes the phone rings all the time, sometimes a resident is much less capable of being an active co-producer of the care. Sometimes more technology

is involved – the lift is often used, the 'wash-and-dry' toilets not so often. Taking care of Rita and taking the time needed to assist her is no simple task. It involves multiple problems which must be solved immediately. What to do first? When and how to ask about Rita's ability to walk on her own, decide whether it is safe to let her walk on her own, respond to her clothing preferences and make sure the nurse comes by soon to take care of the wound—and not least, involve Rita in the care. It does indeed not have much to do with innovation, and what is needed from Susan in this situation is not to be a co-producer of innovation. In order to act professionally, what is needed from Susan is to be present and let go of the whirl of unsolved problems outside Rita's residence—for a while.

Never-Ending Problem Solving?

Susan is not yet done with Rita's morning care when she is asked to resume problem solving. Her phone rings:

It is a colleague calling about the beepers. Susan goes to the kitchen to retrieve Rita's breakfast. While walking through the staff room, Susan asks one of the students to check up on the beepers – she might find it on the computer. She makes small talk with the kitchen assistant and says that Rita may or may not be transferred to sheltered housing. As she is returning through the staff room with Rita's breakfast on a tray, colleagues want to discuss problems with iPads and the automatic doors which close too quickly. One colleague asks Susan to assist her with a broken wheelchair, and Susan promises to return. In Rita's living room, Susan sets down the tray, tells Rita that this is her tea and bread and then goes to the bathroom to start the washing machine.

In the midst of novelty overload, employees – supported by their managers – have decided to make time for small talk and to prioritize basic care. However, Susan has become the handywoman who must perform basic care and make small talk while she is literally assailed with requests for help, many of which she is not the one to solve. It is not unlikely that the feeling of 'no mental surplus' will be long lasting. Then, the future state of 'peace and composure', when learning 'will happen all by itself', might never come about.

Problematizing Problem Solving

The problem solving we observed during fieldwork and heard employees and managers talk about in interviews was not associated (by them or by us) with any innovation potential.

To go deeper into this finding, we revisit the term 'wicked problem' as it was introduced by Rittel and Webber (1973), a paper now considered a 'modern classic'

within the field of social policy and planning (Pesch & Vermaas, 2020) and widely cited in a variety of research fields. For instance, Head (2019) has argued for a strengthening and mainstreaming of the term 'wicked problem' to put innovation and learning centre stage and claimed that, while the literature on wicked problems has grown exponentially since 1973, discussions are often disconnected from the insights available in other disciplines. Here, we wish to connect insights from the wicked problem literature into a workplace innovation study in order to problematize problem solving and emphasize problem framing as a complementary driver for workplace innovation.

'Wicked problems' is often used to explain why innovation is needed. However, in studies of innovation initiated at the workplace, here referred to as 'workplace innovation', the term 'wicked problem' is rarely defined in depth. Rittel and Webber (1973), suggested the term 'wicked' as different from 'tame' problems, which can be defined and the right solution decided upon given access to appropriate knowledge, skills and resources. A wicked problem, on the contrary, is impossible to solve because of its complexity, its unstable character and not least its interdependencies with other problems and thus the involvement of various stakeholders with often contrasting interests. While a strict division of tame and wicked problems has been contested (Head & Alford, 2015), problems with various 'degrees' of wickedness are still considered as having no *one* right solution; a solution is settled upon because time, money or patience is exhausted. Thus, wicked problems are not *solved*, but merely *handled*.

Examples of wicked problems addressed in the fields of health and elderly care are healthcare student attrition (Hamshire et al., 2019) and ageing societies (Hazelton et al., 2019). The field of elderly care can be regarded as a wicked problem, not least because of the gap between an increasing number of older citizens in need of care and a declining workforce. Technology provides opportunities for handling this gap, but it also adds to the complexity. Thus, as also stressed by Rittel and Webber, a solution to (one part of) a wicked problem will always create new problems. If elderly care is treated as a tame problem (and framed as: 'we need more care delivered by fewer employees'), technology may appear as *the* solution. Like other wicked problems, however, a technologically mediated elderly care cannot be framed once and for all and then *solved* with rational planning within the prevailing thinking and doing. Processes of problem framing and reframing are just as important in order to transcend an existing paradigm. According to Rittel and Webber (1973), defining the problem, i.e. problem framing, is not restricted to the initial phases of innovation, but takes place just as long as solutions are debated.

Moreover, wicked problems cannot be addressed in isolation. A system, like the high-tech facility discussed here (and elderly care in general) is open and connected in complex ways—the output of one system becomes the input to another. Wickedness comprises demographic, political and economic dynamics as expressed in the triple challenge of health care. In the present case, it also involves: the transition from a well-known facility to a new one; the expectation that employees incorporate new technology in their daily work practices with no time to train new skills; ongoing, mainly individual, prioritizing of 'focus on basic care' or trying out new

technology; hurrying to finish tasks or taking the 'time to chat'. Accordingly, the 'salient discourse within the situation of inquiry' (Clarke et al., 2017, p. 14), that there was 'no mental surplus', became the common ground on which employees and local managers framed the problem—and this framing was not challenged.

What is needed in order to exchange this problem framing for other framings more likely to promote workplace innovation? It is impossible to identify the centre of a wicked problem, and accordingly it is impossible to point out one place or one way to intervene even though the goal – better health, wellbeing or safety – seems at a glance to be clear. What better health, wellbeing or safety entail, and how to address these issues, is always plural: '[. . .] consideration of social issues is ultimately about how divergent perspectives are expressed, mobilized and sometimes reconciled' (Head, 2019): Does the wash-and-dry toilet provide better or worse care for the individual resident? Is it too time-consuming or difficult to adjust it right now to make it fit? Do I stick to well-known routines, try out something new, keep doing the basic care or take the time to assist a colleague?

A wicked problem perspective, moreover, directs the gaze toward larger structures than just one practice. The group of stakeholders involved in the design of the elderly care facility was obviously concerned with sustainability, the quality of life in old age and employee safety – as praised in the promotional material. While problem framing may have been part of the initial phases, employees and local managers had not been involved in it and were left with the solution – the finished, undebatable facility – indicating that technology was *the* answer. There were no structures or managerial support for shared, ongoing problem framing, such as what needed to be learnt, whether interruptions were unavoidable, and the divergent feelings and opinions towards the technology. If problems are considered and solved independently, the total situation of which they are composed remains unexplored and unattended, and similar problems will keep emerging (Head & Alford, 2015). Problem solving of this kind and under these circumstances will probably not hold much innovation potential, and it will keep taking up the mental surplus that employees and managers expect to come in due course. Susan and her colleagues may learn to handle more of the new technology as times passes; however, the state of 'peace and composure' will probably never 'happen all by itself'. Problem solving will thus restrict workplace innovation.

Conclusion

Revisiting wicked problems, we find that the term is inspiring for studies of workplace innovation. The term assists a perspective on employees' experience, collaboration and learning necessary for workplace innovation to take place. The experience used and the collaboration and learning activated at the new facility merely took the form of ad-hoc problem solving – such as learning to handle technology or fix something when it was broken. Problem framing and reframing was absent. Problem framing could take the form of investigation and planning of

how and when to incorporate the new technology in daily work practices, long-term prioritization of the training, and dialogue about the various residents' needs and the relevance of employees' former experiences.

We found that a lot of effort had been put into material innovations and co-creational methods involving stakeholders in the initial phases, while employees' ongoing collaboration and learning were absent from the design and thus very hard for individual employees and local managers to make room for during busy workhours. Thus, mobilizing, nurturing and managing workplace innovation is not so much about acknowledging employees' ability to come up with new ideas or even new and better solutions. Turning to the 'wicked problem' makes it possible to ask how new high-tech workplaces can afford employees the opportunity to step back – or step in – and participate in problem framing and problem solving as intertwined processes. The mental surplus, then, may become a possible effect of, not a precondition for, learning.

References

Anvik, C., Vedeler, J. S., Wegener, C., Slettebø, Å., & Ødegård, A. (2020). Practice-based learning and innovation in nursing homes. *Journal of Workplace Learning, 32*(2), 122–134.

Baldock, J., & Evers, A. (1991). Innovations and care of the elderly: The front line of change for social welfare services. *Ageing International, 18*(1), 8–21.

Bevan, H. (2012). A trilogy for health care improvement: Quality, productivity and innovation. In P. Spurgeon, G. L. Cooper, & R. J. Burke (Eds.), *The innovation imperative in health care Organisations: Critical role of human resource Management in the Cost, quality and productivity equation* (pp. 37–61). Edward Elgar Publishing.

Billett, S. (2012). Explaining innovation at work: A socio-personal account. In S. Høyrup, M. Bonnafous-Boucher, C. Hasse, M. Lotz, & K. Møller (Eds.), *Employee-driven innovation: A new approach* (pp. 92–107). Palgrave Macmillan.

Clarke, A. E., Friese, C., & Washburn, R. S. (2017). *Situational analysis: Grounded theory after the interpretive turn* (2nd ed.). Sage.

Davies, A., & Boelman, V. (2016). *Social innovation in health and social care.* Brussels: Retrieved from https://www.siceurope.eu/sites/default/files/field/attachment/social_innovation_in_health_and_social_care_january_2016.pdf

Ellström, P. (2010). Practice-based innovation: A learning perspective. *Journal of Workplace Learning, 22*(1/2), 27–40.

Fuglsang, L. (2010). Bricolage and invisible innovation in public service innovation. *Journal of Innovation Economics, 1*, 67–87.

Fuller, A., Halford, S., Lyle, K., Taylor, R., & Teglborg, A. (2018). Innovating for a cause: The work and learning required to create a new approach to healthcare for homeless people. *Journal of Education and Work, 31*(3), 219–233.

Haapasaari, A., Engeström, Y., & Kerosuo, H. (2018). From initiatives to employee-driven innovations. *European Journal of Innovation Management, 21*(2), 206–226.

Hamshire, C., Jack, K., Forsyth, R., Langan, A. M., & Harris, W. E. (2019). The wicked problem of healthcare student attrition. *Nursing Inquiry, 26*(3). https://doi.org/10.1111/nin.12294

Hazelton, L. M., Gillin, L. M., Kerr, F., Kitson, A., & Lindsay, N. (2019). An ageing well collaboration: Opportunity or wicked problem. *Journal of Business Strategy, 40*(1), 18–27.

Head, B. W. (2019). Forty years of wicked problems literature: Forging closer links to policy studies. *Policy & Society: Journal of Public, Foreign and Global Policy, 38*(2), 180–197.

Head, B. W., & Alford, J. (2015). Wicked problems: Implications for public policy and management. *Administration & Society, 47*(6), 711–739.

Høyrup, S. (2010). Employee-driven innovation and workplace learning: Basic concepts, approaches and themes. *Transfer: European Review of Labour and Research, 16*(2), 143–154.

Høyrup, S., Bonnafous-Boucher, M., Hasse, C., Lotz, M., & Møller, K. (2012). *Employee-driven innovation: A new approach*. Palgrave Macmillan.

Kamp, A., & Hvid, H. (2012). *Elderly Care in Transition: Management, meaning and identity at work: A Scandinavian perspective*. Copenhagen Business School Press.

Murray, R., Caulier-Grice, J., & Mulgan, G. (2010). *The open book of social innovation*. National Endowment for Science, Technology and the Arts.

Nicholls, A., Simon, J., & Gabriel, M. (Eds.). (2015). *New Frontiers in social innovation research*. Palgrave Macmillan.

Oeij, P., Rus, D., & Pot, F. D. (Eds.). (2017). *Workplace innovation: Theory, research and practice*. Springer.

Pesch, U., & Vermaas, P. E. (2020). The wickedness of Rittel and Webber's dilemmas. *Administration & Society, 52*(6), 960–979.

Price, O. M., Boud, D., & Scheeres, H. (2012). Creating work: Employee-driven innovation through work practice reconstruction. In S. Høyrup, M. Bonnafous-Boucher, C. Hasse, M. Lotz, & K. Møller (Eds.), *Employee-driven innovation. A new approach* (pp. 77–91). Palgrave Macmillan.

Rittel, H. W. J., & Webber, M. M. (1973). Dilemmas in a general theory of planning. *Policy Sciences, 4*(2), 155–169.

Wegener, C. (2016). Driving forces of welfare innovation—Explaining interrelations between innovation and professional development. In S. Billett, D. Dymock, & S. Choy (Eds.), *Supporting learning across working life: Models, processes and practices*. Springer.

Chapter 6
Learning, Co-construction and Socio-technical Systems: Advancing Classic Individual Learning and Contemporary Ventriloquism

John Damm Scheuer and Jesper Simonsen

Abstract This chapter revisits Peter Jarvis's classic model of individual learning (Jarvis, Towards a comprehensive theory of human learning. Routledge, 2006) and introduce a contemporary ventriloquist perspective on the communicative constitution of organizations (Cooren, Action and agency in dialogue. John Benjamins Publishing Company, Amsterdam/Philadelphia, 2010) in order to answer the following research question: How may Peter Jarvis's classic model of individual learning and ventriloquism be advanced and contribute to our understanding of learning as it unfolds during co-construction of socio-technical systems? The case follows a participatory design project in a hospital emergency department. The project group try to design an IT-based flow-monitor that may be used to monitor and intervene in the flow of patients. The dialogue being analysed originates from co-design workshop meetings. The analysis suggests that human learning processes in socio-technical co-design situations unfolds through ventriloquist processes of dialogues. During these dialogues humans learn on the basis of relating to, interacting with and learning about design-related body-external humans and things/objects present in the design situation and about design related body-internal actants originating from participants reflections about wished-for future states, past experiences, knowledge, history and feelings. The chapter shows how Peter Jarvis's classic model of learning and the ventriloquist perspective supplements and may contribute to further develop each other.

Keywords Participatory design · Ventriloquism · Learning · Co-construction · Socio-technical systems · Effects-driven development

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Introduction

This chapter revisits Peter Jarvis's classic model of individual learning (Jarvis, 2006) and introduce a contemporary ventriloquist perspective on the communicative constitution of organizations (Cooren, 2010). The chapter discuss how insights from both perspectives contribute to answering the following research question: How may Peter Jarvis's classic model of individual learning and ventriloquism be advanced and contribute to understanding of learning as it unfolds during co-construction of socio-technical systems?

The case in the chapter follows a group of doctors, nurses and a researcher in a hospital emergency department, engaging in a participatory design project using the approach known as ´effects-driven IT development´ (Hertzum & Simonsen, 2011). The emergency department often experienced crowding. Crowding occurs when the identified need for emergency services exceeds available resources for patient care in the emergency department, hospital, or both (Hertzum, 2016:3). The project involved a design of a new flow monitor – represented through a software interface on an electronic whiteboard. The purpose was to allow doctors and nurses to monitor and intervene in the flow of patients so that crowding – resulting in piling up of patients in the aisles of the department – could be avoided. This flow monitoring constitute a socio-technical system. The co-construction (i.e. the participatory design and collaborative co-construction) of this socio-technical system includes gaining an understanding of the existing flow-related routines; identifying the problems and needs to be addressed; specifying and developing a software-based visualization of data related to the patient-flow through the department using software and hardware (computers, IT-networks, databases, etc.); implementing the technical and organizational changes needed to adjust routines and practices in the emergency department to meet the new envisioned flow monitoring process; and assessing the effects of the implementation to see if crowding is sufficiently managed or avoided.

Participatory design and co-construction of sociotechnical systems is generally known to imply mutual learning between the involved actors (Simonsen & Robertson, 2013). Jarvis (2006) and Cooren (2010) represents two different perspectives that, combined, can increase our understanding of learning in the co-construction of socio-technical systems.

Francois Cooren (2010) assumes that organizations may be theorized as heterogeneous assemblies of humans and non-human "actants" whose joint work "performs" the organization as suggested by actor-network-theory (Latour, 1996). In actor-network theory an actant is defined as "... something that acts or to which activity is granted by others. It implies no special motivation of human individual actors, nor of humans in general. An actant can literally be anything provided it is granted to be the source of an action" (Latour, 1996:375). Coreen (2010) suggests that organizations (as assemblies of actants) are constituted on the basis of communication and are produced and reproduced through a process of *ventriloquism*. Ventriloquism is the art of belly-speaking where a performer animates and makes a doll speak just as it seems as though the doll speaks to and animates the performer.

Ventriloquism thus means that humans are assumed to mobilise actants as well as to be mobilized themselves by actants in the dialogues through which they constitute the organization. The theory does not explain how learning unfolds. It does however imply that learning happens through communication processes where actors relate to, interact with and learn from both human and non-human actants.

Peter Jarvis (2006) theorises learning as a process where an individual living in a certain and taken-for-granted organizational life-world is disturbed by a phenomenon that he/she does not understand. The person then learn about this phenomenon by interacting with humans and things/objects in the world and by reflecting upon wished-for future states, past experiences, knowledge and history. Learning may thus be said to unfold as an individual as well as a collective process where humans embedded in an ecology of other humans and things/objects learn from interacting with these actants. Peter Jarvis presents a model of individual learning that complements ventriloquist theory. The model offers an understanding of the type of actants on the basis of which human actors learn during such processes. These actants are identified as being "body-external"; that is, as existing outside the participants bodies (other humans and things/objects present in the design situation that the participants interact with) and as "body-internal"; that is, as virtual or imagined actants originating from participants reflections communicated by the participants during the design situation. In the following we analyse how Cooren (2010) and Jarvis (2006) may be combined hereby advancing and contributing to our understanding of learning, co-construction and socio-technical systems.

The chapter is structured in this way: First, Peter Jarvis's model of learning and Francois Coorens ventriloquist perspective on the communicative constitution of organisations are elaborated. Then the case and the methods used to collect and analyse data are presented. This is followed by an analysis of a dialogue between three participants in a co-design process of an IT-based flow monitor supposed to help doctors' control the flow of patients through the emergency department and avoid crowding. Finally, the findings are discussed and conclusions are drawn.

The Ventriloquist Perspective on the Communicative Constitution of Organisations

One research stream - the ventriloquist perspective - in the Montréal school of the communicative constitution of organisations' perspective builds on actor network theory and its socio-material and relational ontology (see Cooren, 2010). From a ventriloquist perspective, communication is understood as the materialisation of relations through something or someone: an utterance, a force, a case, a spokesperson, a doorway, a website, etc. (Cooren, 2018:279). In this view, communication is not reduced to only human communication. People are viewed as communicating with each other but ecosystems, machines and organisations are seen as communicating, too, whether to each other or to us (Cooren, 2018).

Ventriloquism is a concept associated with the art of belly speaking where a performer speaks and has a conversation with a mechanical doll placed on his or her arm (Cooren, 2010). The performer animates and makes the doll speak just as it seems as though the doll speaks to and animates the performer. François Cooren has introduced ventriloquism as a core metaphorical concept for the communication and interaction process that unfolds in and constructs (or as he puts it; constitutes) the organisation (Cooren, 2010). Summarising his view in one sentence he says "it simply consists in noticing that a variety of forms of agency are always in play in any interaction" (Cooren, 2018:4). Ventriloquism is thus "understood metaphorically as the process by which interlocutors animate or make beings speak (which I propose to call figures, the word ventriloquists used to speak of the dummies they manipulate), beings that in turn animate these same interlocutors in interaction" (Cooren, 2010:35).

The ventriloquist view suggests that organisations are incarnated in talk and that the organisation is a hybrid and polymorphous entity that is composed of human and non-human elements that can be made present through communication, and thus consequential, to the interaction unfolding in organisations (Clifton, 2017:304). As people interact and communicate hereby constituting the organisation, they mobilise different actants (or figures) that they find relevant to their project at hand (for example constructing a measurement on a flow monitor). People think or know that some of these actants are relevant to their project at hand. But people may themselves also be mobilized and made speak by actants that they might not foresee were relevant to solving their task: In such cases, the people who participates in the interaction become a "mouthpiece" for the interests and actions of these actants (Cooren, 2010). The ventriloquist view on the communicative constitution of organizations imply that organisations are constructed through processes of communication where people ventriloquises and interact with actants and through that interaction and communication process co-constructs the organization. As Martine et al. (2016:170) points out: "People constantly create connections or translations between various sociomaterial elements. But some connections or translations happen to matter more than others. The emergence of such asymmetries is what we have to explain". Thus; through the communication process some actants may be augmented as more important to the project at hand in an organisation than other actants (for example, a measurement of doctors work on the flow-monitor). And it is the process leading to such assymmetries that needs to be explained. Francois Cooren's theory thus explains how organisations as socio-technical systems are co-constructed through ventriloquist communication processes and interaction with humans and non-humans. How learning happens through that interaction is however not explained. And that is where Peter Jarvis's model of learning may complement and contribute to Francois Coorens ventriloquist perspective.

Peter Jarvis's Model of Individual Learning

For Peter Jarvis, learners are whole persons rather than divided into a body or a mind; they are both material and mental (Jarvis, 2006:13). They are both responsive to the world and sources of activity in it. Jarvis suggests that it is not possible for a person to separate reason from passion; people are simultaneously thinking, feeling, and acting individuals. Individuals are moreover (as physical bodies) situated in certain places in space and time. Human learning is also influenced by the body's genetic, physical, and biological characteristics, and happens through the senses of the body. Peter Jarvis defines learning as:

> . . .the combination of processes whereby the whole person—body (genetic, physical, and biological) and mind (knowledge, skills, attitudes, values, emotions, beliefs, and senses)— experiences a social situation, the perceived content of which is then transformed cognitively, emotively, or practically (or through any combination) and integrated in the person's individual biography resulting in a changed (or more experienced) person. (Jarvis, 2006:13)

Peter Jarvis points out that "it is in the intersection of us and our world that we are presented with the opportunities to learn" (2006:17). Learning is triggered whenever our biographical repertoire is no longer sufficient to cope with a situation. As individuals are thinking, feeling, and acting, we transform our experiences through all three dimensions simultaneously, or in different combinations. First, the person as body, mind, and self takes his/her life-world for granted, then a disjuncture occurs in relation to other persons; things/events; envisaged futures; or what is remembered in a time and space-specific learning situation. The person then thinks, feels, and acts within the socio-materially constructed situation, whereby learning occurs in relation to all three dimensions resulting in a changed person – a changed body, mind, and self. The changes are then memorized and the person becomes more experienced. The body, mind, and self, as well as the life history of that person, have changed and the individual enters new learning cycles.

According to Jarvis, there are four different relationships between the person and the world on the basis of which they learn (see Fig. 6.1): person-to-person; person-to-thing/event; person-to-a-future phenomenon; and person-to-self (including experiences and memories of the past). In the present, people interact with their external

Person-to-person	I ⬌ thou
Person-to-phenomenon (thing/event)	I ➡ it
Person-to-a-future-phenomenon	I ➡ envisaged thou or it
Person-to-self	I ⬌ me

Fig. 6.1 The person-in-the-world
Source: Jarvis, 2006:15. The double arrows represent a two-way relationship; that humans learn from interacting and having a dialogue with other persons and with them-selves (reflecting upon own life-history and educational biography). The one-way arrows means that humans also learn from things and events as well as from thinking about the future while they are still in the present

world through relationships with other individuals (the I-thou relation) and through an awareness of phenomena (things, events, and so on: the I-it relation); however, individuals also have envisaged relationships with the world. They think about the future while they are still in the present; thus, they have desires, intentions, and so forth (the I envisaged-thou, or it, relation). In a similar manner, humans can think about the past, or about an idea (the I-me relation). We can contemplate, muse, and thereby relate to ourselves. This reflecting upon our past results in our own awareness of our life history and educational biography. The relationships a person has with the world may thus be depicted as follows:

In the first two *body-external* types of relationships with actants (person-to-person and person to phenomenon), all five human senses are operative and individuals may have an experience as a result of any of them, or any combination of them; thus, humans may learn and change as a result of hearing, seeing, smelling, tasting, touching, and feeling while interacting with other persons or things/events present in the context "outside" their own bodies. They may, however, also learn from interacting with and reflecting upon *body-internal* actants originating from their own imagined wished-for future states, past experiences, knowledge, history or feelings (i.e. the I – envisaged thou/it and I-me relationship in Fig. 6.1).

This means that learning is not just individual but rather individual and collective at the same time since what is learned is co-constructed in the encounter between the individual and his/her ideas about future wished-for states, his/her experiences, knowledge and history as well as feelings (body-internal actants) *and* other humans and things/objects (body-external actants) present and influencing the situation. As a consequence learning is socio-materially embedded and an individual and collective phenomenon at the same time.

The model thus offers an understanding of learning as based on interaction with body-external and body-internal actants that fits well with Francois Coorens actantial and communicative view on the ventriloquist constitution of organisations. The model moreover broadens our understanding of the types of actants that we according to the ventriloquist perspective interacts with and (according to Jarvis) learn from when we/humans co-constructs organisations as socio-technical systems. They may not just be body-external – that is present humans and non-humans in the design situation/context. They may also be body-internal, that is; originating from our reflections about wished-for future states, past experiences, knowledge or history and feelings.

Case: Designing a Flow-Monitor in an Emergency Department

The development of an IT-based patient-flow monitor took place in the emergency department of Nykøbing Falster Hospital, Denmark. The emergency department had three sections: The triage section where patients arrived, were examined (triaged)

and categorized into red, orange,yellow and green patients depending on whether their health situation was judged to be life-threathening, severe, a little severe or not severe. An additional two sections with in total 32 beds where the patients coming in from the triage section were placed until they had been examined by an emergency doctor and were either treated at the emergency department, transferred to other departments in the hospital or send away from the hospital to the patients' local council, own doctor or home. Emergency departments at Danish hospitals often experience crowding and have challenges sustaining a sufficient flow of patients. Normally, doctors will start acting and try to deal with crowding at the moment in time when it occurs. The aim of the participatory design project was to develop an IT-based flow monitor that would allow doctors and nurses to foresee and start acting and take precautions several hours before a crowding situation potentially would occur in the department.

Participatory design is a research field that focuses on how ´users´ (employees, citizens, clinicians, patients, etc.) actively may participate in the design, implementation and use of IT-systems (Simonsen et al., 2018). Effects-driven IT development (EDIT) was developed in this research field and constitutes a sociotechnical instrument for managing IT projects (Hertzum & Simonsen, 2011). EDIT focuses on producing specific and concrete measurable results through an on-going participatory and iterative process of interventions, including changes to the work organization and the systems in use (Simonsen et al., 2018).

The project at the emergency department can be described as three subsequent parts: The first part focused on analyzing whether historic data stored in the databases and electronic whiteboards of the emergency department could be used to make a prognosis of the flow of patients through the department on a monthly, weekly, and daily basis (reported in Hertzum, 2016). The second part of the project based on 12 interviews with doctors and nurses in the emergency and other hospital departments focused on analyzing what affected the patient-flow and identifying which other types of data might needed to be registered and displayed on the monitor in order to support doctors and nurses flow related decision-making. The third part of the project was informed by the data collected through the two first parts and consisted of an IT-development process (EDIT) where a group of doctors, nurses and one researcher (one of the authors of this chapter: John Damm Scheuer) from Roskilde University worked with designing a prototype of the patient-flow monitor based on (1) the data that had been generated during the first two parts of the project, and (2) nurses', doctors' practical experiences and knowledge related to the flow of patients through the department as well as the knowledge of the researcher.

Design research may be practiced in at least three ways (Bærenholdt et al., 2010:3); 1. Research *for* design, 2. research *into* design and 3. research *through* design which also includes design through research. In research through design, design becomes as much a medium and process of research, as a result (Bærenholdt et al., 2010:4). The research part of the EDIT process was based on the "research through design" approach. It meant that John Damm Scheuer first participated in the co-design process of the workgroup guided by EDIT and then afterwards took up the role as researcher trying to answer the research question posed in this article through

Measurements	Measurements of development from now until 8 hours´ later	Goals, measures and capacity	
	Now 1 hour 2 hours 3 hours 4 hours 5 hours 6 hours 7 hours 8 hours	Outcome goals and measures	
Occupancy Number of beds in the aisles Time used from arrival of patients to department to (*): - Triage - Journal uptake - Status - Discharge - Transfer to other department	How does occupancy and number of beds in the aisles develop from now until 8 hours´ later according to an algorithm comparing data from now with historical data ? If average time used now to solve these patient-related tasks in the department is compared to historical data by an algorithm; how much time will it then predict will have to be used from 1 to 8 hours from now to solve the same tasks on average ?	1. Number of minutes with crowding goes down 2 .Number of minutes with patients in aisles goes down **Capacity compared to tasks:** 3. Number of patients/statuses finished per doctor per hour on average 4. Doctor-patient ratio (status commenced within 6 hours) 5. Max. 25% of service-time used on red and orange patients. 6. Nurse-patient ratio	In the case it is discussed whether a measure of doctors´ flow-related work should be included in the visualisation. And if so, how it should be designed. The final design is shown here.
	* Patients who have just arrived are given a "triage"/a colour depending on the severity of their condition (red: very severe, orange: rather severe, yellow: a little severe, green: not severe), then younger doctors open a journal on the patients. After this, a senior doctor creates and finishes a "status" - that is a final evaluation of the patient´s problem so that the patient may be discharged or transferred to other departments at **the** hospital.		

Fig. 6.2 Prototype of visualisation

making this process an object of study. Such a colloborative approach to research makes it possible for `researcher-designers´ to explore the design related tacit knowledge and invisible practices of practitioners/co-developers but also results in a risk of a biased interpretation of the course of events.

Two prototypes of the monitor was designed by the working group at three two-hour long workshop meetings on this basis. Figure 6.2 shows a simplified version of the last protype of the flow-monitor developed by the group. It was this prototype that was discussed at the meeting/in the case below. Each meeting was voice recorded resulting in 6 h of recordings that were transcribed and analyzed.

In the following sections we analyze a specific dialogue that took place at the third meeting of the working group. The participants in the dialogue are the IT-knowledgeable doctor; Ulrich, the leading nurse of the emergency department; Tom, and the researcher from Roskilde University; John. At the meeting John presented a slide visualizing and describing a prototype of the flow-monitor and how it related to wished-for outcome/effect measures (see Fig. 6.2). The prototype was based on a suggestion for how the flow-monitor may look like that had been produced by Ulrich - the IT-knowledgdable doctor in the work group, based on discussions from prior meetings in the group of data from interviews and a former version of the prototype of the flow monitor.

The prototype showed some measurements of the flow that had to be monitored and acted upon by doctors and nurses if they wanted to control the flow of patients through the department and avoid crowding. Thus if the algorithm of the monitor (calculating on the basis of actual and historical data) predicted that the number of patients in the department within 1–8 h from now would exceed the 32 beds available or would result in an increase in the number of patients/beds in the aisles, management or leading doctors would have to act on that information. They would also have to act/interveen if the algorithm of the monitor predicted that the average time used to do the triage, take up the patients journals, make the status's and

discharge or transfer the patients seemed to increase too much 1–8 h from now. The visualisation moreover showed the types of outcome effects expected from using the flow-monitor (a decrease in the number of minutes with patients in the aisles and crowding). Finally, the prototype included some measurements that described and measured the departments capacity to solve its tasks (number of doctors compared to number of patients, number of nurses compared to number of patients in the department and a measure showing that only 25% of employees service time should be used on red (very sick) and orange (rather sick) patients. It is this second prototype that is discussed below: *In particular*, the dialogue focusing on whether a new type of measurement – the number of patients (statuses) examined and finished per emergency doctor in average per hour – should be included in the section that described "capacity compared to tasks" in the visualisation (encircled in Fig. 6.2).

The reason why this measurement was important was that the faster doctors could finish their status's the faster the patients could be discharged or transferred to other hospital departments, local councils, home care, own doctor or their homes whereby crowding could be avoided. The doctors were thus identified as the "motors" that pushed the patients through the department and the speed with which they finished statuses was a main factor influencing the flow through the department and thus whether it became crowded or not. This measurement had not been included in the preceeding version of the prototype. What is discussed in the dialogue below is whether it should be included. Another thing in focus in the dialogue is how the measurement should be designed if such a measurement should be included in the new version of the prototype.

Body-External and Body-Internal Actants Present at the Outset

First, the setting and the actants involved in the dialogue may be identified. The human actors involved in the dialogue is the head nurse of the emergency department, Tom; the emergency doctor, Ulrich; and the researcher, John. They relate to each other as well as to the slide that shows the prototype of the flow-monitor (Fig. 6.2) that Ulrich designed before the meeting as they engage in how to measure and visualize doctors flow related work on the flow-monitor. They thus relates to other humans (persons) as well as to a thing (the prototype of the flow monitor shown on the slide that is projected upon a wall during the meeting). These actants are external to the body of the three participants, respectively.

Body-internal actants are also present at the outset. The participants are guided by and learn from their "body-internal" ideas about an imagined future actant; "the flow-monitor" that is imagined to "do" certain things in the future; making monitoring and intervening in the flow of patients through the emergency department possible and preventing crowding. The body-external physical design of the

prototype, on which the measurement of doctors flow related work is to be placed, is the physical translation and representation of this idea.

At the beginning of the meeting John comments on a new actant on the flow-monitor under the category "capacity compared to tasks" (encircled in Fig. 6.2); a measurement of doctors flow-related work. The reason is that John thinks that doctors are "the motors" that drives the flow of patients through the department. John thus ventriloquises and suggests that one type of (human) actant "doctors" is more important than other actants in relation to what makes patients move through the department and should therefore be included under the category "capacity compared to tasks". The doctor Ulrich accepts this interpretation.

> "If you register the number of patients (status's) finished per hour per doctor this is what drives the flow in the emergency department. Doctors finishing their statuses" (John) "That's right" (Ulrich)

Drawing Upon Body-Internal Knowledge About and Becoming a Mouthpiece for Formal Organisation

John draws on his body-internal knowledge about hospitals formal organisation and Tom being the leading nurse and member of department management as he ventriloquises the hierarchy and formal position of Tom as leading nurse and manager in the department when he tries to mobilise further support for his interpretation of doctors as particularly important actants whose work output should be measured.

> "This says something about the motor – the doctors – how much do they produce per hour. Then you Tom can sit and monitor the situation and check out: How are things working out? You will also be able to see fluctuations depending on who is on duty. And you will be able to get an idea about what the number of finished patients (statuses) should be. And the nurses could have a tool showing when the department is going in red. And now we should call in extra personnel because now this ratio is falling. It says something about the capacity related to flow – whether you have the sufficient capacity" (John)

As demonstrated, John at the same time becomes a "mouthpiece" for and starts speaking on behalf of formal hierarchy and the position of Tom in the organisation. He also uses his body-internal knowledge about department managers tasks from his former employment in a hospital and his interviews to interpret what Tom's needs and interests are in that position that should make Tom interested in Johns proposal. John argues that a measurement as the one he suggests will make it easier for Tom "to monitor and check out the situation" and thus solve his formal task of controlling the flow of patients through the department including calling in more staff when necessary. Further advantages emphasized by John are that such a measure will show hospital management if there are too few doctors compared to the number of patients admitted to the department. A capacity problem John knows have bothered Tom. John also suggests that it will make it possible for Tom to learn about what an average or normal number of processed patients in the department may be and about

how differences in present doctors' competences may influence the productivity of the department (fluctuations related to "who is on duty").

Exploring and Learning from Conflicting Views and Ventriloquised Actants

Tom now identify a problem that Ulrich respons to:

> "But something I also find important is that. . . when you sit out here you know that there are big differences between what people can do...It will easily have negative side effects. If we have a visualization showing that Ulrich is popping up every time showing that his flow is simply to slow, that would be a visualization that would not be very nice" (Tom).

Here Tom draws in a body-internal actant that originates from his memory and past history in the department – the experience that doctors' competences are different and some of them may be slower than others. He takes this experience and makes it an actant in his judgment of another body-internal imagined future actant – the measure of doctors' flow-related work on the flow-monitor. He moreover expresses and makes his body-internal feeling such a "visualization that would not be very nice" an actant in the groups design process by indirectly implying that such a visualization should be avoided. Ulrich response to Tom's utterance is:

> "No. What would come out of it for me would be that I would be very fast to handle the patients with low triage [green patients] . . . they are send home. And then my statistics will be good. But if they call me and the patients are sick it takes a very long time. Because then I start digging because I am thorough. Alternatively, because I am highly qualified and can see all the details. Or because I am very stupid and therefore very uncertain. And then I soon become a person that may be replaced. But if I am clever, I do not only take the complicated patients or the simple patients. Because then I lose my competence in another area. So I try to shop around because otherwise it is not fun for me" (Ulrich)

Here Ulrich takes up Toms idea and explore and try to learn about the consequences of different types of doctors as actants being monitored on the imagined future actant; the flow monitor by imagining himself as being a competent compared to a "stupid" or "uncertain" doctor. His analysis shows that both types of doctors may risk being "replaced" if monitored. Ulrich also acts as a mouthpiece for the formal organisation as he draws on his knowledge about the hospitals formal organisation and ventriloquises it as an imagined body-internal actant that in the future may replace a doctor where measurements show that he/she is too slow.

Tom's response to Ulrich's' reflection is as follows:

> "But there is a risk if a doctor sticks out and the average processing time is too low. And you come and tell him: you need to start processing faster or need to do something else" (Tom)

Here Tom affirms Ulrich's interpretation and also act as a mouthpiece for how the body-external formal organisation will make him – that is Tom – act in the future if a doctor "sticks out" and has a processing time that is "too slow". It will make him tell

the doctor to process patients faster or to do something else (or put differently; that he is fired).

Ulrich's response to Tom is this:

"The consequence that I think it should have and the reason why I do not think it is so dangerous is that when you have your employment development talk then I think it is the manager's task to get these data and say: Well I can see Ulrich that every time you come you are very slow. What is it that we together can do so that your competence is up-graded and developed? Because that is the appropriate management solution to this problem. That is: If you do not want to tell people: Now you need to become a retiree" (Ulrich)

Ulrich again ventriloquises, explore and try to learn from what his body-internal knowledge about the formal organisation may suggest that it will make him or Tom do as managers in the future if measurements show that a doctor is to slow. He interprets this situation as a learning rather than as a top-down control situation that is related to the institution/actant of the "employment development talk". He further interprets the formal organisations expectations to managers as being the persons responsible for assuring that doctors' competences are sufficient and that they are upgraded if they are not. He also ventriloquises his body-internal feelings about this; that he does not think that measuring the speed of individual doctors work "is so dangerous". A feeling that is different to Toms feeling about the matter.

John now intervenes and try to end the discussion suggesting a compromise of average rather than individual measurements:

"In Orthopedic surgery, there have been a discussion of who owns data registered in clinical databases. If it is the management of the department who owns data then what would happen if the systems showed that some doctors had very high infection rates ? If it was shown that Hansen, Jensen and Petersen had a problem and they needed to learn from Birger and Soren because their infection rates were much lower? And then doctors were suddenly not interested in registering data in the clinical database because now suddenly it was a control tool that the management of the department used to punish the doctors. Instead of it being a collective tool aimed at learning, collection of experiences and development. I think that if anyone perceive this system (the flow monitor, JDS) as a control tool that is to be used to control the doctors I think that we will get an implementation problem. Because then doctors will say....I do not think I feel like filling out all the data slots necessary to make the system work. So I think that it is ok that the visualization shows an average of the number of statuses finished per doctor per hour. Because then you can sit among the doctors and say...ok we can see that on this watch we are x-number of doctors at work. And then you will be able to see that with the people that are here you have a problem with producing the flow that is needed. And then that is what is focused upon not whether it is Hansen, Jensen or Petersen who produce this outcome "(John)

Here John ventriloquises a body-internal actant that originates from his memory – the experiences he had in relation to clinical databases in orthopedic surgery in the hospital where he was formerly employed. The example demonstrates the difference between perceiving a flow-monitor as a management and control tool compared to an individual learning tool. The example shows that turning the flow-monitor into a management and control rather than into a learning tool will probably result in implementation problems. The flow-monitor system will only work if doctors register information about when they start and finish making their statuses for each

patient in the system. John therefore suggests that the flow-monitor should be a department related flow-management tool where what is focused upon monitoring and controlling is doctors productivity measured as "the number of statuses finished per doctor per hour" *in average* rather than the speed of individual doctors' work. Consequently, John suggests that implementation problems related to doctors not wanting to be individually controlled and therefore not being willing to fill necessary data into the flow-monitor system will be avoided.

Ulrich response to John's reflections about this body-internal actant is like this:

> "...I am responsible for the education of the younger doctors. There I am actually able to turn this into a positive thing. . .I say to them: I count and measure the different patients you see because I want to be sure that I can acknowledge/accept your stay here. So that you can learn something. So you are able to communicate it positively and then they are actually interested in doing these things. However, when that is said, I can easily understand your point. . . . So could we agree upon something like this then?" (Ulrich)

As demonstrated Ulrich draws on his body-internal knowledge about the formal organisation of the hospital and personal experience as the doctor who is responsible for younger doctors education when he present himself as an actant that should be listened to. He has experienced that he could make the young doctors accept his measurements and control practice as positive because they understood that they contributed to educating them. He thereby suggests that this may be the same when managers in the emergency department measure and control the speed of individual doctors work using the flow-monitor. He however ends up accepting the relevance and rationale of John's example and argument and thus John's suggestion.

Conclusion

Peter Jarvis's model of learning as well as the case analysis suggests that humans learn through interacting with "body-external" and "body-internal" actants. This includes learning from humans and things/objects present in the immediate environment as well as from interacting with virtual or imagined "body-internal" actants originating from humans reflections on wished-for future states, past experiences, knowledge, history and feelings. This was demonstrated in the analysis. It was also demonstrated that humans are socio-materially embedded and that learning is therefore not only individual as suggested by Jarvis but rather individual and collective at the same time. What an individual or a group learn when constructing socio-technical systems is co-constructed in the meeting between humans and the body-external and body-internal human and non-human actants that they encounter or mobilise during the proces. What is learned is thus co-constructed rather than indidually constructed as suggested by Jarvis in the intersection between humans and their world.

Ventriloquism suggests that organisations are constituted through communication processes where the actor-networks of which organisations are buildt are "talked into existence". In such processes humans ventriloquise and make human and

non-human actants that they find relevant to the project at hand "speak", and they may also themselves be ventriloquised by human and non-human actants that they did not originally think or foresee were relevant to this project. Ventriloquism explains how organisations are constituted through communication processes and emphasises the importance of humans interacting with and learning from humans and things/objects while constructing socio-technical systems. Ventriloquism is however not sufficiently aware that many of the actants that are mobilised in socio-technical learning and construction processes are "body-internal", that is, they may originate from participants ideas about wished-for future states, past experiences, knowledge, history or feelings. The case-analysis showed that the learning that unfolded resulted from interacting with the other body-external actors present at the meeting – Tom, Ulrich and John – as well as from interacting with the artifact – the prototype of the flow monitor. It however also showed something that is novel to ventriloquism: That most of the other actants that were ventriloquised and interacted with in order to learn were "body-internal"; that is virtual and imagined actants that were introduced into the discussions about the design of the measurement of doctors work from the participants memory and historical knowledge about the system and the context and thus the "ecology of actants" in which the flow-monitor was supposed to function and produce certain future wished-for outcomes. The translators thus mobilised and made body-external and body-internal actants "speak" during the translation proces just as some (sometimes unforeseen) actants made the translators "speak" (for instance the participants feelings).

Our research question was "How may Peter Jarvis's classic model of individual learning and ventriloquism be advanced and contribute to understanding of learning as it unfolds in co-construction of socio-technical systems? ". The analysis suggests that Peter Jarvis's model of individual learning may be advanced and contribute to our understanding of how learning unfolds during the construction of socio-technical systems if it is considered a model of how socio-materially embedded humans learn individually as well as collectively at the same time as they try to co-construct socio-technical systems. It also suggests that it may be advanced and contribute to this understanding if the importance of learning from interacting with locally present body-external human and non-human actants and virtually present, imagined and communicated body-internal human and non-human actants during co-construction processes is recognised to a greater degree. The analysis suggests that the ventriloquist perspective may be advanced if it recognises the importance of both body-external and body-internal actants in the ventriloquist communication processes. Finally the analysis shows that human learning processes unfolds through ventriloquist processes of dialogues where humans learn on the basis of relating to, interacting with and learning about design-related body-external humans and things/objects in the world (as other participants and power-points of flow-monitors) and about design related body-internal actants originating from participants reflections about wished-for future states, past experiences, knowledge, history and feelings (for instance reflections about what the flow monitor "should do"; participants' knowledge about formal organisation; past experiences with doctors, histories about clinical databases and feelings about things; etc.)

Finally it may be suggested that Peter Jarvis's model of learning and Francois Coorens ventriloquist theory about the communicative constitution of organisations are complementary. They each offer insights that the other model/theory is blind for. Peter Jarvis's model of learning offers further insights into individual and collective learning processes and the types of body-external and body-internal actants that humans interact with and learn from. The model however lacks an understanding of how organisations as socio-technical systems are constructed on the basis of such learning processes. Francois Coorens ventriloquist perspective explains how organisations as socio-technical systems are co-constructed through ventriloquist communication processes. It lacks however a deeper understanding of how individual and collective learning processes unfolds during such processes and of the particular roles that body-external and in particular body-internal actants play in that connection.

References

Bærenholdt, J. O., Büscher, M., Scheuer, J. D., & Simonsen, J. (2010). Perspectives on design research. In J. Simonsen, J. O. Bærenholdt, M. Büscher, & J. D. Scheuer (Eds.), *Design research – Synergies from interdisciplinary perspectives* (2010). Routledge.

Clifton, J. (2017). Leaders as ventriloquists. Leader identity and influencing the communicative construction of the organisation. *Leadership, 13*(3), 301–319.

Cooren, F. (2010). *Action and agency in dialogue*. John Benjamins Publishing Company.

Cooren, F. (2018). Materializing communication: Making the case for a relational ontology. *Journal of Communication, 68*(2), 278–288.

Hertzum, M. (2016). Patterns in emergency-department arrivals and length of stay: Input for visualizations of crowding. *The Ergonomics Open Journal, 9*, 1–14.

Hertzum, M., & Simonsen, J. (2011). Effects-driven IT development: Specifying, realizing, and assessing usage effects. *Scandinavian Journal of Information Systems, 23*(1), 1–26.

Jarvis, P. (2006). *Towards a comprehensive theory of human learning*. Routledge.

Latour, B. (1996). On actor-network theory. A few clarifications plus more than a few complications. *Soziale Welt, 47*, 369–381.

Martine, T., Cooren, F., Bénel, A., & Zacklad, M. (2016). What does really matter in technology adoption and use? A CCO approach. *Management Communication Quarterly, 30*(2), 164–187.

Simonsen, J., & Robertson, T. (Eds.). (2013). *Routledge international handbook of participatory design*. Routledge.

Simonsen, J., Hertzum, M., & Scheuer, J. D. (2018, April). Quality development in healthcare: Participation vs. accreditation. *Nordic Journal of Working Life Studies, 8*(S3), 49–69.

Chapter 7
The Promise of Learning Through Gaming at Work

Katia Dupret

Abstract This chapter discusses the potential of learning through gamification. It does so because a growing body of evidence suggests that games can help us learn, become motivated and engage with complex practices in the workplace through the compression of time, through specific processes of reflection and by mimicking difficult and at times taboo topics from real life (e.g. Deterding S, Dixon D, Khaled R, Nacke L, From game design elements to gamefulness: defining gamification. In: Proceedings of the 15th international academic MindTrek conference: envisioning future media environments, pp 9–15, 2011; Hamari J, Koivisto J, Sarsa H, Does gamification work? – a literature review of empirical studies on gamification. System Sciences (HICSS), 47th Hawaii international conference, pp 3025–3034. https://doi.org/10.1109/HICSS.2014.377; Landers R, J Manag Inquiry 28(2):137–140, 2019; Savignac E, The gamification of work: uses of games in workplaces. Wiley, Incorporated, 2017). Strategically framing play in serious contexts is known as gamification (Deterding S, Dixon D, Khaled R, Nacke L, From game design elements to gamefulness: defining gamification. In: Proceedings of the 15th international academic MindTrek conference: envisioning future media environments, pp 9–15, 2011). As part of an action research project on the future of work, a game has been developed which facilitates learning about how to thrive amidst agile organizing. The real life work dilemmas used in the game seek to awake engagement and reflection among staff which have the potential of mirroring real life experiences (Brown, Experiment: abstract experimentalism. Wakeford N, Lury C (eds) Inventive methods: the happening of the social. Routledge, London, pp 61–75, 2012). This mirroring gives an emotional and cognitive insight into how agile organizing may affect well-being at work. The analysis of the gaming session and the staff member's experiences with the game focuses on different systemic levels of learning while gaming and what this means in contemporary organizations (e.g. Bateson, 1972, 2000). The contribution of the chapter is that it reveals important points of concern in the use of gamification at work, as it potentially addresses

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serious dilemmas without having the organizational capacity or willingness to change real life practices and leaves them dealt with only superficially. The chapter also concludes that gaming always has to be followed up by professional facilitation processes, not least to materialize change, and also to help see the politics behind gaming as a process of learning itself.

Keywords Gaming · Gamification · Co-creation · Knowledge work · Transformational learning

Introduction

The role of play in working life has been expanding and games are increasingly used to modulate the behaviour of staff (Savignac, 2017). This transformation of framing play into a strategic form is gamification. It is used to motivate learning and behaviour in specific directions. Gamification is a phenomenon involving 'the use of game design elements in non-game contexts' (Deterding et al., 2011) or 'a process of enhancing a service with affordances for gameful experiences to support user's overall value creation' (Huotari & Hamari, 2012). In this context, 'gaming' is used as the activity of running and playing of the digital games, and 'gamers' are the people participating in the gaming activity. Many variations of gamification definitions exist, but their focus remains the same: gamification aims to change behaviour and attitudes through technology and systems (Hamari et al., 2014). Thus, understanding what gamification can and cannot do cannot be separated from social interaction and learning. Central to gamification is its relation to a sense of purpose, combined with strategic thinking, motivation and participation (McGonigal, 2011).

While the concept of gamification is a fairly recent one, with a more historic lens it can be seen as an updated version of a long tradition within organizational learning and management studies of trying to employ different tactics to increase staff productivity. The use of motivational gaming activities is intended to create a sense of competition and to make workers 'do their best' (Nelson, 2012). On a more abstract level, the driving force behind gamification is the idea that the motivation to work can be enhanced by merging it with play (Sørensen & Spoelstra, 2012). Classic organization theorist James March (2006) suggested that what to the establishment seems like foolishness, such as play or gaming, can result in changes that are just as useful as those obtained through rational planning and strategies.

Even though a great deal of gaming at work still has the focus on enhancing motivation and hence productivity, gamification also follows the tendency to create greater focus on aspects of working life which are not only about the rational approach to work. Herbert Simon (1982) rejected the notion of an omniscient 'economic man' capable of making purely rational decisions as a way of bringing the greatest benefit possible. Instead, he proposed the idea of an administrative man who, bound by the possibilities of context and the situation, looks for a course of action that is satisfactory. Insight into learning and psychological processes is

necessary to understand what motivates staff to feel satisfaction. This then requires that we move away from the instrumental approach to gamification (Landers, 2019).

It is not pure entertainment. 'We are concerned with serious games in the sense that these games have an explicit and carefully thought-out educational purpose and are not intended to be played primarily for amusement' (Abt, 1968, p. 9). Also, Sebastian Deterding (2019) critically points out that gamification today stands at a crossroads between, on one hand, choice architecture (that mimics the instrumental approach) and, on the other hand, humanistic design. Choice architecture is design-based control techniques – broadly understood as the purposeful shaping of the environment and things and beings within it towards particular ends (Yeung, 2016). Choice architecture comprises a whole range of technologies, e.g. nudging, inducement, coercion (Yeung, 2016, p. 187). When using a choice architectural approach, games appear as perfect micro-devices for controlling micro-agential behaviour, a kind of management dashboard that can be used to elicit pre-planned behavioural patterns from people. It is thus concretely designed to direct people's behaviour in specific ways. Not leaving room for critical thinking or systemic changes, but very suitable to introduce concrete work procedures or skills. In contrast to the choice architecture approach stands a humanistic game design tradition, in which games can bring about rich meaningful experiences (Vesa & Harviainen, 2019, p. 129). By this is meant that a humanistic approach to gaming can bring about an emancipatory potential that strives to alter the very processes of work itself (ibid.). Deterding (2019) points out that while the choice architecture reasoning is easier to absorb into corporate life without reflection, the humanistic design approach is likely to be more robust for bringing about actual transformative change as it requires analytical and critical thinking. This chapter positions itself within the humanistic design approach supported by theoretical references to Gregory Bateson (e.g. 1972, 2000) and Steve Brown (2012). Both Bateson and Brown moved away from an individualistic approach to learning and the reasoning of rational causal effects of change. Rather, learning resides in the connections and relations in socio-material systems, not in individuals' brains.

In line with the call of this book, which seeks to 'embrace powerful normative ambitions of ameliorating matters of concern in order to make changes for the better', this chapter investigates how gamification motivates different kinds of learning of new behaviours in an ethical and critically reflective way (Landers, 2019; Dupret & Chimirri, 2018). The critical reflection in learning in organizations is especially relevant today, as organizations are increasingly held responsible for solving the 'wicked' problems facing us (Elkington, 2020).

Theoretical Resources – The Complex World in Games

Levels of Learning

Gregory Bateson explores the potentials of learning in organizations. He was inspired by cybernetics (Wiener, 1949) – which is a way of thinking in which systems are organized according to feedback. From a systemic perspective, learning

happens through circular feedback adjustments that are dependent on the interdependence of cognitive, social and material relations. Bateson's theory of levels of learning (1979, 2000, p. 276–278) is inspired by Russell's theory of logical types (1910–13) that distinguishes between levels of abstraction. The theory of learning comprises five levels. In terms of creating a potential for normative changes for the better, elements of learning involving critical reflection are particularly interesting to investigate.

Learning level 0 (zero) entails doing what one has always done: an automated response. That means responding to stimuli but learning nothing (Tosey et al., 2010, p. 58). In a gamification context, L0 can be implied by two gamers returning to their former work routines, e.g. making strategic long-term project planning (stage gate projects) contrary to the content of the game, giving them tools to work with agile project planning methods.

Learning level I denotes the changes in knowledge, skills and attitude that comprise change in specificity of response by correction of errors of choice within a set of alternatives (Bateson, 1972, pp. 286ff). Gamification can be developed in order for participants to learn a range of new skills, e.g. how to apply new time tracker tools that make transparent how a project team evaluates time spent on a specific task.

Learning level II is about learning how behaviours, norms and attitudes are connected in patterns of a context. Artefacts, symbols, humans and non-humans interact and their relational patterns and communication enact the context. This is where one learns through social relations, i.e. learns how to learn. LII is essentially learning about the context in which activity takes place, and thus the meaning that is to be given to behaviour that can guide one's action and interpretation in other, apparently similar contexts. In workplace games, it is important to differentiate between the context of 'play' and a context of 'assessment', for example. New LII happens when the gamers become able to enact a new pattern of relating that no longer replicates that past context (Tosey et al., 2010, p. 59).

Learning level III, also called *deutero* and *transformative learning*, is 'change in the process of Learning II, e.g. a corrective change in the system of sets of alternatives from which choice is made' (Bateson, 1972, p. 293). However, LIII is rare, as Bateson said: 'something of the sort does, from time to time, occur in psychotherapy, religious conversion, and in other sequences in which there is profound reorganization of character' (Bateson, 1972, p. 273). Likewise, this reorganization of character is, according to Jack Mezirow (2009), fundamental to understanding oneself and one's surroundings. It is the creation of a new or revised interpretation of an experience that subsequently shapes understanding, assessment and action. He suggests that transformative learning is better than other types of learning, as it paves the way to become more inclusive, reflective and emotionally able to change. It involves critical reflection, and it is a metacognitive reasoning that, in addition, highlights insight into the source, structure, and history of a frame of reference, e.g. agile organizing, as well as judging its relevance, appropriateness, and consequences.

In learning level III, a relevant concept is the 'double bind'. In Bateson's terminology, a double bind is a communicative dilemma in which an individual (or group) receives two or more conflicting messages, with one negating the other (Bateson et al., 1956). When LIII happens, Bateson et al. emphasize that double binds can be its triggers, while also noting that double binds can lead to psychosis as well as to enlightenment. One given example from organizational learning is the transition to agile organizing. Staff are encouraged (or even commanded) to 'be spontaneous' in order to increase their responsiveness to the environment, thereby increasing efficiency. This very communication one can argue contradicts spontaneity, but it only becomes a double bind when one can neither ignore the encouragement nor comment on the contradiction.

Learning level IV addresses evolutionary transformation and Bateson scarcely discusses it, commenting that it 'probably does not occur in any adult living organism on this earth' (1972/2000, p. 293). This level of learning refers to a more global and societal change, rather than learning at the individual level (Table 7.1).

Table 7.1 Overview of Bateson's levels of learning and application in gamification

Learning level	What is it?	Can be applied in relation to gamification
L0	An automated response	When gamers return to their former work routines without applying any changes
L1	Changes in knowledge, skills, and attitude that comprise change in specificity of response by correction of errors of choice within a set of alternatives	When gamers learn a range of new skills, knowledge, an attitude in relation to an already known area of work
L2	Learning how behaviours, norms and attitudes are connected in patterns of a context	When gamers become able to enact a new pattern of behaviours, norms and attitudes in ways that no longer replicate that past context
L3	Profound reorganization of character that is often triggered by communicative dilemmas in which the learners receive two or more conflicting messages. It entails creativity, re-visioning and critical reflexivity.	When gamers get the opportunity to discuss and laugh about contradictions in the new ways of organizing that the game helps make visible and more accessible and subsequently take action to change their ways of practicing. It requires a meta-cognitive and emotional reasoning that not only shows an understanding of existing practices. It requires games to be able to invent new practices on the basis of critical reflection of the dilemmas presented to them in the game.
L4	An evolutionary transformation	Is hardly likely to occur.

Frame and Meta-communication

Bateson invites us to approach play as a form of 'frame', rather than a content or substance. The form allows us to distinguish real from pretend situations (in play). It allows us to reflect on the relations and the content that is staged. The form (gamification) stages a particular narrative about the activity it covers, e.g. how various dilemmas of collegial relations are created during a process of organizational change. Bateson calls this 'the meta-communicative function of play'. Defining the frame is essential for the participants to be able to detect whether it is a game or reality (Savignac, 2017, p. 22) and not fall into the real conflicts that the game may represent to them (Bateson, 1972/2000, p. 179), and also to be able to analyse how to behave in the situation. When using games at work, however, this is tricky. Social relations from real life work are brought into the gaming session and the frame of the game therefore cannot be isolated from the culture of the organization. Also, different organizations may have different cultures that influence informal and formal hierarchies, project management, etc. It is important therefore that the frame of the game relates to the context in which it is played in order for participants to be able to learn what is intended with the game.

Functional Equivalence

Two frames are thus considered at the same time: the game frame and, in relation to it, the organizational frame. Steve Brown's (2012) concept of 'functional equivalence' adds an important dimension to understanding the dynamics of this composition. Gamification is staging and governing socio-material markers from different frames, not in order to replicate something from the world 'outside' in a simplified form, but to re-compose it and perform it. It characterizes the re-composition of what is taken into the game and left out. It adds a particular dimension to the game, making the transfer to real life performativity more likely, through a mutual recognition of our emotions (Brown, 2012). Serious games are like social psychological experiments, controlled frames that aim to produce an emotional and cognitive mirror of the social relations outside the frames. However, the differences between social psychological experiments and serious games are to be found in both means and purpose. Serious games use technologies of entertainment and competition in order to enhance gamers' motivation to participate and learn. In social psychological experiments, the aim is that the researchers learn from the subjects participating in the experiment. Learning is not necessarily a goal for the participants.

However, the concept of functional equivalence confronts how social psychological experiments seek to replicate the real world in a representative fashion, and suggest that it is not a matter of replicating the world itself but of mirroring the way we experience it (Brown, 2012, p. 6). 'Real world experiences' are a matter of creating recognizable feelings and engagement among participants. Thus, staging

serious games is not about replicating real-world work procedures or processes but about staging experiences that gamers can identify with emotionally and cognitively with.

Summing Up on the Analytical and Theoretical Resources

Even though Bateson and Brown draw on two different backgrounds, cybernetics and science and technology studies, respectively, they have inspired fairly different fields of research and practices. Throughout the eighties and nineties Bateson was widely applied in the field of systemic family therapy thus increasingly entered the field of systemic organizational consultation while Brown worked within the field of critical social psychology and management studies. Here they complement each other in the context of gamification in a learning perspective. They share that learning and knowing are created in systemic socio-material emerging processes, with the approach that the mind is inherently relational with socio-material artefacts. For both it is emergent and recursive. While both deal with ways staged setups create different kinds of potential learning frames, Brown provides us with an explicit language of how to understand this staging as emotionally performative, and makes it possible to think of learning as emotional mirroring, adding to the cultural transformation suggested by Bateson.

Staging the Serious Game 'Agile Thriving'

The digital serious learning game that is discussed here is called 'Agile Thriving' (AT) (https://siw.actee.com). It is a research-based game for organizations wanting to work with agile organizing while ensuring well-being and is part of the research project on the future of work named Socially Innovative Knowledge Work (SIW).[1] Being research-based means that the content of the game is developed on the basis of in-depth ethnographic research in collaboration with an IT-consultancy agency (N=23). The development of the game involved all partners of the project (researchers, commercial partners and interest organizations) and collaborative processes were applied as a methodological tool. The focus of this part of the research was on how agile organizing affects staff and management over a range of themes of well-being at work. The case agency participates because technological development demands that it responds more rapidly and triggers a quest for more customized technological programming services. Therefore, it has reoriented itself towards agile

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organizing that is more in sync with current customer needs and wants to ensure that staff are thriving in this transformation process (Dupret & Pultz, in press).

Participants and Facilitation of the Game

The empirical material used for this chapter was created through conversations and observations of the collaborative design workshops with staff and management facilitated by the researchers in the winter of 2018–2019 on the basis of the content from individually conducted research interviews focusing on how the organizational change affected each individual. The empirical material in this chapter comprises screenshots of the content of game and field notes from the last workshop, at which the gamers had the opportunity to play the digital, final version of the game, including the dimension of competition, and to engage in explicit reflection and mirror real life experiences.

When referring to 'gamers' in the analysis, it is staff and management that are playing the final game. The case agency staff and management comprise male and female front- and back-end programmers and consultants from various educational and experiential backgrounds. Below is an overview of the staff and management that participated in the case study and the gamification design workshops. All interviewees participated in the final workshop (Table 7.2).

Table 7.2 Sample characteristics IT consultancy agency

Interviews	Gender	Position
Søren P*	M	Partner, CEO
John P*	M	Partner, Project manager
Sara P*	F	Partner, Project Manager
Michael P*	M	Partner, Project Manager
Simon P*	M	Partner, Project Manager
Dave P*	M	Partner, Software Developer
Julia L	F	Project Manager
Barry L	M	Project Manager
Monica L	F	Project Manager
Eric L	M	Project Manager
Adam V	M	Developer
Phil V	M	Developer
Jonathan V	M	Developer
Billy V	M	Developer
Analytical workshop I	*6 partners	Including researchers and game developer
Gamification workshop II	7 persons	Mixed project managers and software developers together with game developer and researcher
Gamification workshop III	15 persons from the case agency	Mixed partners, managers and software developers with game developer and researcher and representatives from the interest organization from the research team.

Some have worked with the agile mindset and methods for many years; most were introduced to this approach when starting at the agency. The case agency is very explicit about wanting to apply agile organizing while maintaining well-being inside the organization. Working collaboratively with the agency draws inspiration from classic organizational psychologist Kurt Lewin, who coined the term 'action research' to refer to a tactic of studying a social system while imparting changes at the same time, and emphasizing the importance of involving and collaborative processes in attempts to solve particular problems (McNiff & Whitehead, 2009, p. 36). Likewise, organizational learning theorists Argyris and Schön (1991) emphasize the features of Lewin's approach:

> Action research takes its cues – its questions, puzzles, and problems – from the perceptions of practitioners within particular, local practice contexts. It builds descriptions and theories within the practice context itself, and tests them through intervention experiments – that is, through experiments that bear the double burden of testing hypotheses and effecting some (putatively) desirable change in the situation. (p. 86)

With this inspiration, the analysis of the game development is approached as an experimental intervention, with the goal of new knowledge, critical reflection and ideas for concrete change. Accordingly, participants are to learn a mode of democratic reflection, and participate in solving self-diagnosed problems (Dickens & Watkins, 1999). This means that the presentation of the game and the analysis are structured primarily around the final part of the experimental intervention, and the learning processes specifically connected to this framework.

Content and Focus in the Game

AT is globally accessible and addresses the relevant and updated dilemmas and challenges of working with agile organizing while maintaining a high level of well-being and talent retention among staff. Agile organizing can be defined along a continuum. One axis represents a cultural mindset comprising a range of ideas about autonomy and anti-hierarchy as a prerequisite for responsiveness, flexibility and innovation capacity, and the other axis, concrete methods to ensure the logistical framing and control of project planning and development, e.g. Scrum, Lean and Kaizen. Agile organizing affects the social dynamics in the workplace (Dupret & Pultz, in press). The game guides the players through real life scenarios that ensure reflection on key challenges associated with implementing this specific organizational mindset.

Analysis – Playing 'Agile Thriving'

Introducing the Game

When playing AT online, gamers are instructed to read about their own role as a change agent, the situation of their organization and how agility is to be understood. Here is an example of the beginning of the introductory text (Fig. 7.1).

In the multi-player mode, the team of gamers have the responsibility of introducing and implementing a change project. The team identifies with the avatar 'project manager'. The game is organized around a timeline and stages of an organizational change process, e.g. introduction to staff, consolidation of the organization and outcome/relations with the outer world and costumers. Each chapter contains two conflicts that gamers have to take into consideration when making choices on how to proceed with the organizational change. For example, the conflicts in Chap. 1 of the game are:

Introduction to Flying Monkey and Your Role Within the Company

Your role

You are an experienced project manager in the IT consulting firm Flying Monkey and you have now been appointed to conduct an agile implementation process internally in your organization with the aim of making the organization more competitive in the future, so that you can follow global technological development   and   secure   business   profits.

You have experience managing agile projects and have read a lot about the subject. Therefore, you know that the new approach could have consequences for employee well-being, which could mean a potential loss of talent and customers. Therefore, many things are at stake when integrating the agile mindset as part of your organization, and when the associated agile methods and tools must be used to solve your daily tasks.

Your task

Your task is to help your colleagues learn how to work agilely and also to improve internal cooperation. Your main topics are increased innovation, sales, customer satisfaction and maintaining talents.

Results are measured on how well you have been able to help your colleagues come to terms with agile methods and how your colleagues experience the level of thriving throughout the workplace.

Fig. 7.1 Introductory text in text game 'Agile Thriving'
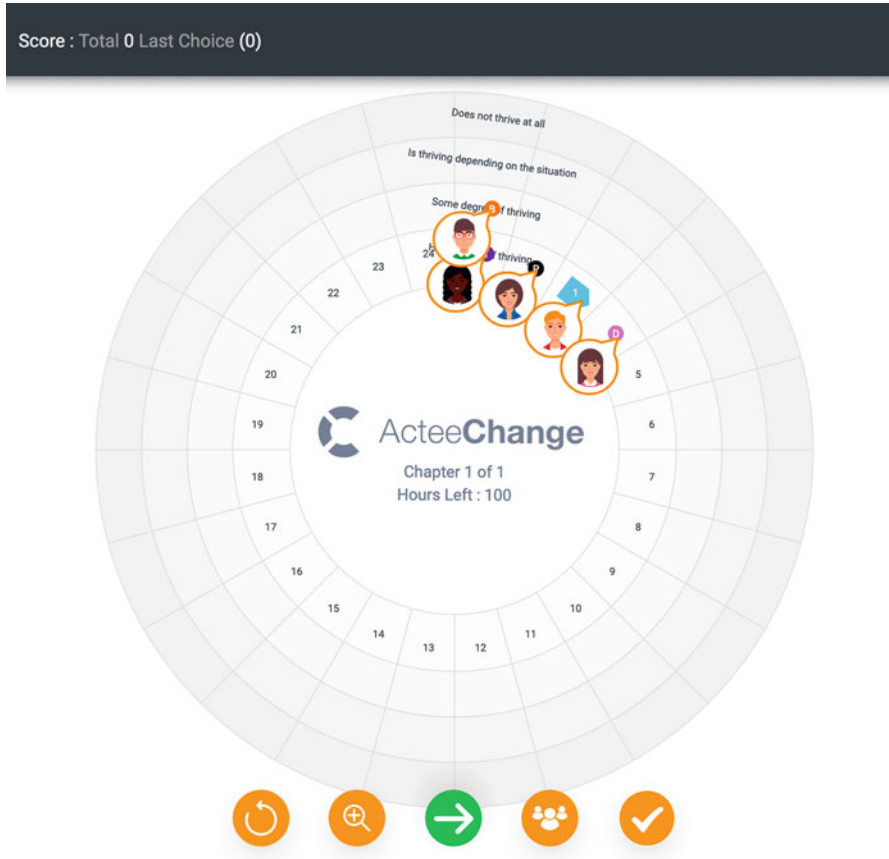
Fig. 7.2 Gameboard with five avatars

1. Not all colleagues will agree/feel that the agile change process is the answer to ensuring the company's survival in the future.
2. Not all colleagues will find that organizational change is needed at all.

When playing Chap. 1, the gamers must bear in mind both the organizational change process and getting their colleagues on board. This is visualized on a gameboard. The gamers must move a whole team (the little blue boat on the virtual board) of avatar-colleagues that have different interests and work experience through the stages of the change project (Fig. 7.2).

Each chapter provides gamers with nine choices. For the sake of illustrating the complexity of the game, the screenshot of a version with a range of choices in Chap. 1 from the test version of the game is presented below. The headlines of each choice represent the action in focus (Fig. 7.3).
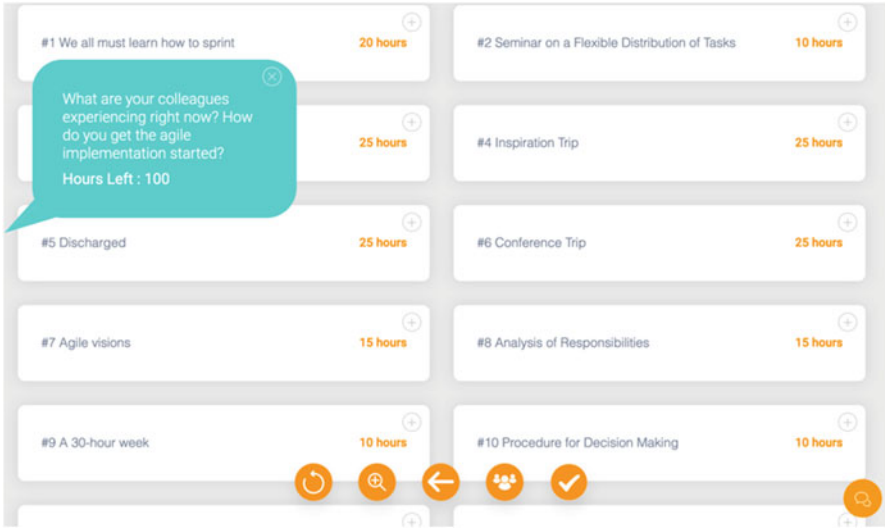
Fig. 7.3 Overview of a range of possible choices in TA
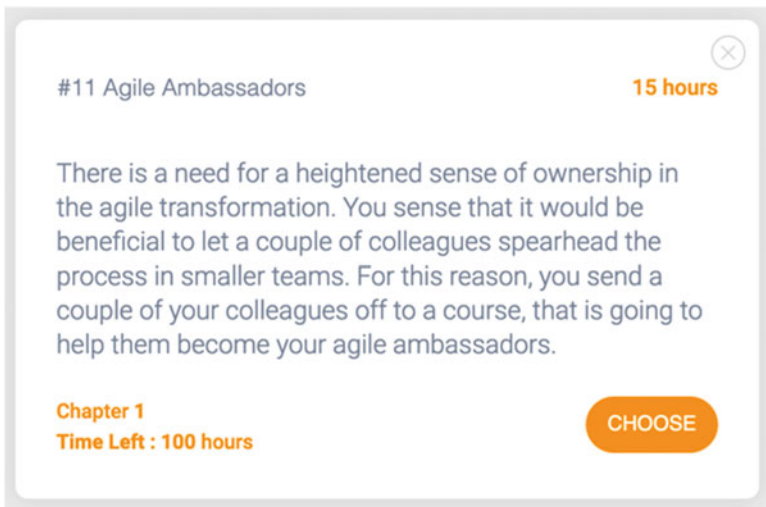
Fig. 7.4 Example of choice in 'Agile Thriving'

The gamers have a limited amount of resources (100 h), like in real working life. In this way, points are accumulated adding to the game dynamics and 'play' frame of the game. When clicking on the choice, the gamer reads what the choice implies. To give an example, gamers can choose to send off a couple of colleagues to qualify them to help with the implementation of the organizational transition process (Fig. 7.4).

Score
Total 235 Last Choice (235)

#11 Agile Ambassadors

Summary: You send a couple of your colleagues off to a course to become agile ambassadors.

Your action: is targeting the strengthening of your colleagues' commitment and sense of ownership on an organizational level.

Consequence: Those of your colleagues who are selected to go on a course come back inspired and motivated. They take their responsibility as spreaders of the agile mindset very seriously. This, however, creates some tension between colleagues, as those who were not selected to become agile ambassadors feel overlooked.

Designating internal ambassadors to maintain a specific focus is a common tool in the change management toolbox, where new processes need to be implemented while maintaining the same organizational culture. It can be significantly beneficial to have key personnel with a high social status to take care of pointing the process in the right direction. This can, however, result in a backlash where those who do not feel involved can react by not seeking ownership of the process but rather avoid getting involved.

If you would like to know more: Within the research field of working environments, the sense of responsibility has become increasingly important to how knowledge workers thrive. Responsibility, in this case, refers to what degree colleagues take responsibility for organizational development. It is concerned with the feeling of making a difference in your workplace and to what degree the organization helps you make a difference on an abstract level.
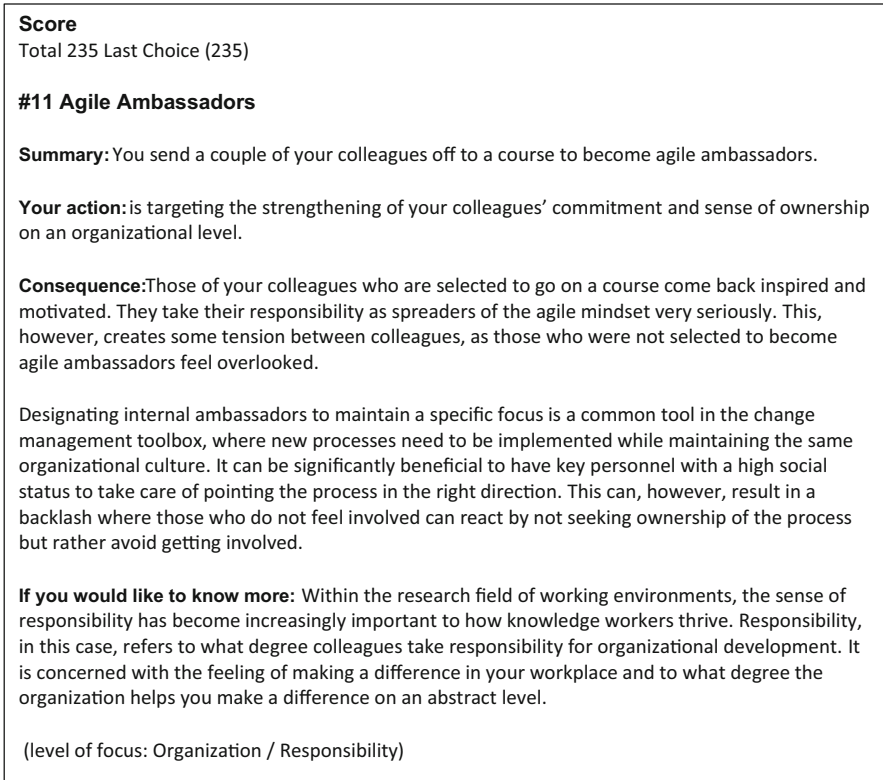
 (level of focus: Organization / Responsibility)

Fig. 7.5 Example of result text from choosing #Agile Ambassadors in Agile Thriving.

When the gamers have chosen, they get a score, and an explanation. Choice #11 Agile Ambassadors is explained below (Fig. 7.5).

At the end of each chapter and at the end of the game session, the facilitator asks questions requiring reflection.

Drawing on Prior Learning May Raise Ethical Concerns When Gaming

When adults engage in gaming, a whole range of prior learning that is a prerequisite for LII to happen is brought into the gaming session, both in relation to gaming logics and rules and in relation to the content of the game. Both aspects of prior learning raise important ethical concerns when facilitating gaming for organizational change in contemporary organizations.

When onboarding and starting to play the game, the gamers showed awareness of aspects of previously patterned behaviour which refers to LII (Bateson, 2000,

p. 301). For example, comparing how collaborations are narrated in AT with how they are usually conducted in the organization. During the game session the facilitator observed that gamers already experienced in role-playing and gaming would spend less time getting on board in the game session and also show a faster overview of how the AT mimics project management, etc. Gamers' previous experiences and learning helped them decode the expectations and norms of the game, making them more able to concentrate on the central focus (i.e. dealing with dilemmas of agile organizing while ensuring thriving colleagues) rather than having to learn the norms and rules of the game dynamics.

This created a complex social dynamic where some gaming teams would be faster onboarding the game and others needed more instruction in relation to both the technical frame and the content frame of the game. However, the collaborative game development process that involved preparation and sharing of the game dilemmas also created a shared frame of reference and high level of expressed relevance to the gamers that seemed to help all gamers focus on the mutual learning potential of the gaming session. The gamers initiated reflections on difficult experiences (e.g. hidden informal power dynamics or being a novice at agile organizing). Prior knowledge about onboarding games and understanding its norms could potentially have created a more instrumental focus where the goal of winning the game was prioritized. However, even if previous experience with gaming among some gamers added a differentiated point of departure, the technical help and extended time spent onboarding others ensured that the focus could be on the content related to agile organizing and thriving.

Another aspect of using prior learning as a point of departure in gamification is that AT contains both constructive (enhancing well-being) and provocative suggestions of action (e.g. individualizing responsibility, or suggestions of actions that do not solve the actual problem), and gamers are engaged through expressing their recognition or disagreement towards these choices. If the choices of action were experienced by the gamers as too provocative, the game frame was foregrounded as 'off', which could have inhibited reflective learning about double bind dilemmas that would then remain invisible. However, the facilitator invited reflections of what made these situations 'off' in order for the gamers to reflect upon the differences in the frames of game and work. Therefore, prior learning and the use of recognizable dilemmas re-actualized through gamification made it possible to engage in critical reflection about emotional recognition which gave the gamers the opportunity to discuss their own social dynamics as it could be contrasted to something 'off'.

While the potential for LII is in principle constantly present, often we simply reproduce previously learned patterns of relationships that we bring along from early intimate relations. Bateson calls this 'transference' (1972, p. 220, p. 271). However, 'this self-validating characteristic of the content of Learning II has the effect that such learning is almost ineradicable' (Bateson, 1972, p. 272). A third example of the triggering of prior learning is the game's scenarios containing decision-making processes with no pre-defined authority. The scenarios and game choices are constructed to challenge vertical (parental) authority stereotypes. As we learned from the management and employees in the research process, agile organizing

requires strong skills in dynamic positioning, as authority is not attached to functions in the organization, but to expertise that is continuously negotiated (Dupret & Pultz, in press). However, in order for gamers to successfully engage in renewing LII on new dynamics of authority, it requires that the process of gaming clearly differentiates the patterns of authority according to these previously learned contexts. The discussion on how to renegotiate authority through the application of the agile mindset is an ongoing theme in the organization. It is therefore likely that the frames of game and organizational practices facilitate learning in interchangeable and subtle ways.

Dealing with Taboo or Ethical Dilemmas

Specifically dealing with AT's invitation to confront complex double bind dilemmas that often trigger emotional distress or fear of exclusion, we know from the interviews that decision mandates are not necessarily transparent, potentially creating frustration among staff, despite the ambition to create a high level of autonomy in agile organizing. We also know that agile organizing aims for a high level of autonomy, which creates a need for frequent coaching of especially new and inexperienced colleagues, leaving them less autonomous (Dupret & Pultz, in press). All specific individuals and recognizable situations have undergone a process of ethical anonymization in the gamification process. The gamers showed engagement and willingness to discuss the themes in a manner where concerns were raised, but names not mentioned.

This willingness suggests that one learning potential in the use of gamification in organizations is to be able to deal with taboos and double bind dilemmas in ethical ways, as they are distanced from specific colleagues or superiors. However, the delicate balancing of power relations and ethical concerns necessitated the facilitator reminding the gamers of the game frame. The role of the facilitator became core, including the previous briefing and presence during the development period ensuring a level of confidence and trust while gaming. As mentioned previously, the humanistic approach to gaming was momentarily threatened as some gamers focused primarily on the competitive (goal oriented) elements. Apart from technical assistance provided to gaming novices, it also meant that the facilitator had to re-introduce reflective learning questions and the social dynamics evolved around those. Luckily the competitive focus did not prevent reflection on sensitive topics, but in similar game sessions the collective reflection necessary to change inappropriate practices where people are at risk of becoming psychologically exposed risks being overruled by the socio-materiality of the technical logics of the game. It raises an ethical concern in the humanistic design approach of gamification when used for learning in organizations. If competitive motivation overrules the purpose of critical reflection of emotional recognition, the 'game' frame may collapse and gamers may feel they compromise themselves or specific others.

Laughter in Gamification as an Enhancer to Create Collaborative Learning

Gamification uses techniques of competition and entertainment to enhance motivation to learn. Even though AT can be played in 'single player' mode, the entire content and the dynamics of the game is built with a collective and social psychological focus and the collective dynamics are enhanced playing in 'team mode', where the competitive dimension in particular made the gamers laugh together. All gamers can monitor the opposing teams' progress on the shared screen. When an opposing team would get 'behind' by 'losing' an avatar colleague from the 'boat', it resulted in increased group enthusiasm within the gaming team and laughter in the room in general. It appears as if humour in the gaming sessions can act as a can opener to enter LIII and deal with potential double bind paradoxical conflicts and taboos in the organization, making it easier to change vulnerable practices. Humour is the implicit acceptance and acknowledgement of paradoxes, and laughter is a way to meet the paradoxical: 'laughter is the sign of agreement that X is both equal to Y and not equal to Y. It is agreement in a field in which a paradox has been presented' (Bateson, 1952, p. 5). Confronting dilemmas and paradoxes through humour and playful competition thus gives us a transformative potential and inspiration that is not only individual but collectively shared. To play through gamification processes contains the potential to transgress worlds, to dilute and recreate categories and identities together with others. Even though laughter obviously does not make both formal and informal power relations disappear and, as previously stated, necessitates delicate balancing by the facilitator to deal with it ethically, it potentially creates a platform of mutual acceptance and thereby the potential of shared learning.

The Potential of Reflective Transformative Learning Through Gamification

In order for us to understand the collective aspect in gaming beyond mutual laughter, it is useful to recall LIII – also called 'transformative learning'. Central to LIII is that 'the concept of "self" will no longer function as a nodal argument in the punctuation of experience' (Bateson, 1972, p. 275). Bateson (1955/1972) writes about his observations of primates at the Fleishhacker Zoo in San Francisco, and wonders how a monkey's nip on the neck, which might ordinarily be a signal for aggression and fighting, is instead taken as a signal for play. The message 'this is play' addresses how we negotiate 'what we are doing' by pointing to a higher level of abstraction that is now taking place together with others (Dupret & Hasse, 2012). This is not necessarily verbalized. The gamers in AT meta-communicate including the frame and relational context in which the social interaction takes place. Collective meta-communication is thus a socio-material entangled process where game facilitator and gamers interact, share knowledge about former situations with agile

organizing, experiences with difficult decision-making processes, and collaborate in order to make shared choices in the gaming session. Transformative learning is given shape and content through collective analysis and engagement (Dupret & Hasse, 2012). Thus, gamers become socialized into the cultural practices of fellow gamers and the organization narrated in the game. Has AT given the opportunity to create transformative learning, by enabling gamers to act on their own purposes, values, feelings and meaning rather than adapting uncritically others' opinions and world-views? Contrary to adaptive or coping learning, transformative learning is not only adaptive but also oriented towards the creation of desired change – transformation – in social contexts such as the learners' workplaces. Critical reflection was indeed present during the gaming sessions also directed towards existing working practices, and the facilitation of the game made the collaborative reflection and shared laughter take place. However, did gamers change their frames of reference by critically reflecting on their assumptions and beliefs and consciously making and implementing plans that bring about new ways of defining their worlds? Undoubt-edly, a heightened awareness has taken place, and subsequent conversations with management about the relevance of the gaming sessions and action research process show that further initiatives on thriving in the organization are in focus and acted upon.

Summing Up on Learning

Do we see elements of learning nothing (L0) while gaming Agile Thriving? L0 can be implied by two gamers returning to their former work routines. Indeed, some gamers approached AT as mere 'play'.

Do we see elements of LI? This is understood as changes in knowledge, skills, and attitude that comprise change in specificity of response by correction of errors of choice within a set of alternatives (Bateson, 1972, p. 286ff). AT has made it possible to gain new knowledge about agile organizing and especially how it relates to thriving. So, the answer is yes.

Do we see elements of LII? The learning of context seems to a large extent to be successful. Employees engage in discussions about their own emotional and practi-cal experiences and how they relate to the narratives of TA. Ongoing discussions with members of the organization show that the psychological aspects of organiza-tional culture are of great concern. Whether this is solely due to the gamification process is difficult to answer. But the humanistic design approach to gamification has no doubt contributed to this awareness.

Do we see elements of LIII and transformational learning? It requires a high degree of freedom because the premises of the organization and the ways work tasks are organized etc. should be given the potential to be substantially changed. In many ways, AT provides a frame of learning that is in alignment with the humanistic design approach. Hence, with its focus on meta-communication and relational learning, that are difficult to control by management or even facilitators of the

game, it aims at both encompassing the complexity of social dynamics in change processes but does also facilitate a frame of potential systemic change that goes beyond the imagination of the designers or managers. Power relations are important in this respect. It is difficult to foresee whether staff creativity will be taken seriously by management and eventual substantial transformative changes taken on board.

Discussion and Conclusion – How Can Gamification Motivate Learning in Organizations Today?

Gaming from a humanistic design approach (Deterding, 2019) gives the opportunity to take one step back and deal with difficult dilemmas in ethically sound ways. Because they are functionally equivalent (Brown, 2012) and mimic the work frame, but are not a representation of personal relations at work; they enact a platform of potential transformative learning. The learning organization is emergent, constantly adapting in relation to surrounding demands. Staff and management are not only learning new skills, but have the opportunity to reflect in spaces where awareness of learning is encouraged. This creates an awareness of one's own practice and subsequently increases critical self-reflection about one's own organization regarding whether the changes are happening in ways that are ethically desirable. Games can therefore be good tools for supporting and enhancing learning in the organization (Savignac, 2017). This awareness empowers staff, and they are able to participate to a greater extent in the creation of their future organization.

Most organizations are concerned with global and technological development and the way it affects their organization. This often motivates projects of change and calls for increased speed of innovative capacity. Gaming time usually needed for learning is compressed. So, whether gaming is a good idea in terms of learning and staff well-being is also a political question. On the one hand gaming may create an acceleration in obtaining transparency and possibly viewing potential conflicts from multiple perspectives through the game scenarios, thereby creating a space to reflect upon and engage in possible solutions. Thus, games can be a good opportunity to quickly learn about the dilemmas organizational change brings along and to allow gamers to put their everyday work experiences into a theoretical framework. It can get staff quickly on board in terms of vision, goal and output of an anticipated organizational change. A top down approach to gaming is then applied. TA can be played in three or four hours. On the other hand, dealing with real life conflicts at work may take years and creating a new meta-communicative frame goes well beyond the game session. So, if organizations wish to truly learn from the reflections appearing during gaming, they must move away from predefined visions of the organization and follow up with an infrastructure that can apply the reflections into the daily practices of the organization. This requires time beyond the gaming session and not least it requires a willingness to fundamentally change the frame of the organization.

The aim of transformative learning requires that the organizations *set free* what the result of learning should be. Gamification may create the potential to stage double bind situations that gives gamers the opportunity to go beyond the purpose of the organization. However, learning theorists in organization research often suggest that transformation should be developed on the practitioners' own terms; transformative learning cannot be pursued in a predefined fashion.

References

Abt, C. C. (1968). Games for learning. In S. Sarane & E. O. S. Boocock (Eds.), *Simulation games in learning*. Sage, CHILS.

Argyris, C., & Schön, D. (1991). Participatory action research and action science compared. In W. F. Whyte (Ed.), *Participatory action research*. Sage.

Bateson, G., Jackson, D. D., Haley, J., & Weakland, J. (1956). Toward a theory of schizophrenia. *Behavioral Science, 1*, 251–264.

Bateson, G. (1952). The position of humor in human communication. In *Macy conferences*. Josiah Macy, Jr. Foundation.

Bateson, G. (1979). *Mind and nature*. Fontana/Collins.

Bateson, G. (2000). *Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution and epistemology*. University of Chicago Press.

Bateson, G. (2000/1972a) A theory of play and fantasy. In G. Bateson (Ed.), *Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution and epistemology* (pp. 177–193). University of Chicago Press. (Original work published 1955).

Bateson, G. (2000/1972b) The logical categories of learning and communication. In *Steps to an ecology of mind: Collected essays in anthropology, psychiatry, evolution and epistemology* (pp. 279–308). University of Chicago Press.

Brown. (2012). Experiment: Abstract experimentalism. In N. Wakeford & C. Lury (Eds.), *Inventive methods: The happening of the social* (pp. 61–75). Routledge.

Deterding, S., Dixon, D., Khaled, R., & Nacke, L. (2011). From game design elements to gamefulness: Defining gamification. In *Proceedings of the 15th international academic MindTrek conference: Envisioning future media environments* (pp. 9–15).

Deterding, S. (2019). Gamification in management: Between choice architecture and humanistic design. *Journal of Management Inquiry, 28*(2), 131–136.

Dickens, L., & Watkins, K. (1999). Action research: Rethinking Lewin. *Management Learning, 30*(2), 127–140.

Dupret, K., & Chimirri, N. (2018). Teaching ethical-participatory social design. *Dansk Universitetspædagogisk Tidsskrift, 13*(24), 20–36.

Dupret, K., & Hasse, C. (2012). Metalogiske teknologiforståelser. [Metalogical technological literacy]. In K. Dupret & C. Hasse (red.), *Teknologiforståelse: på skoler og hospitaler* [Technological literacy: In schools and hospitals] (1. ed. pp. 238–259). Aarhus Universitetsforlag.

Dupret, K., & Pultz, S. (in press). People as our most important asset: A critical exploration of agility and employee commitment. *Project Management Journal*. Special issue: Project behavior.

Elkington, J. (2020). *Green swans – The coming boom in regenerative capitalism*. East Company Press.

Hamari, J., Koivisto, J., & Sarsa, H. (2014). *Does gamification work? – A literature review of empirical studies on gamification*. System Sciences (HICSS), 47th Hawaii international conference, pp. 3025–3034. https://doi.org/10.1109/HICSS.2014.377

Huotari, K., & Hamari, J. (2012). Defining gamification: A service marketing perspective. In *Proceedings of the 16th international academic MindTrek conference* (pp. 17–22). Academic MindTrek Conference.

Landers, R. (2019). Gamification misunderstood: How badly executed and rhetorical gamification obscures its transformative potential. *Journal of Management Inquiry, 28*(2), 137–140.

March, J. (2006). Rationality, foolishness, and adaptive intelligence. *Strategic Management Journal, 27*(3), 201–214.

McGonigal, J. (2011). *Reality is broken: Why games make us better and how they can change the world*. Penguin.

McNiff, J., & Whitehead, J. (2009). *All you need to know about action research* (Repr. [3. print]). SAGE.

Mezirow, J. (2009). Transformative learning theory. In J. Mezirow & E. W. Taylor (Eds.), *Transformative learning in practice: Insights from community, workplace, and higher education* (pp. 18–31). Jossey-Bass.

Nelson, M. J. (2012). *Soviet and American precursors to the gamification of work*. In Proceeding of the 16th international academic MindTrek conference, pp. 23–26.

Savignac, E. (2017). *The gamification of work: Uses of games in workplaces*. Wiley, Incorporated.

Sørensen, B. M., & Spoelstra, S. (2012). Play at work: Continuation, intervention and usurpation. *Organization, 19*, 81–97.

Simon, H. A. (1982). *Models of bounded rationality Cambridge*. Cambridge, Mass: MIT Press.

Tosey, P. D., Langley, & Mathison, J. (2010). Chapter 5: Bateson's levels of learning – A framework for transformative learning? In Woerkom & Poell (Eds.), *Workplace learning: Concepts, measurement and application* (pp. 55–68). Routledge.

Vesa, M., & Harviainen, J. T. (2019). Gamification: Concepts, Consequences, and Critiques. *Journal of Management Inquiry Vol., 28*(2), 128–130.

Wiener, N. (1949). *Cybernetics or control and communication in the animal and the machine*. Technology Press & Wiley.

Yeung, K. (2016). The forms and limits of choice architecture as a tool of government. *Law & Policy, 38*(3), 186–210. https://doi.org/10.1111/lapo.12057

Chapter 8
Entrepreneurial Learning. Learning Processes Within a Social Innovation Lab Through the Lens of Illeris Learning Theory

Joy Rosenow-Gerhard

Abstract This chapter seeks to answer the following question: In what way is Illeris's Learning Triangle useful for analyzing learning processes within a new field of practice? The chapter explores the content, incentive, and social interaction dimensions of Illeris's classical learning theory through a meta-analysis of an innovation lab. The original research project intended to facilitate entrepreneurial learning. The analysis at hand strives to illustrate the theoretical analytical perspective of the learning triangle and extends the model for the given context. Findings are re-analyzed according to the participants´ learning processes.

For the analysis, I used interview and protocol material out of an innovation lab research project that took place in German welfare organizations in 2018/2019. For this study, I have analyzed the learning dimensions of content, incentive and social interaction. I adapted Illeris's learning triangle, renaming the environment dimension into organization and incorporating the innovation lab as the learning situation and the home organization as the organizational situation. The society becomes another layer surrounding the situation. With its grounding in classical learning theories, the learning triangle can enable a detailed perspective for the diverse discourse of entrepreneurial learning and innovation labs. From this perspective, this research contributes to a learning theory basis for learning arrangements in work-related organizational studies and those of human resources.

At the end of this chapter, the reader has learned about (a) innovation labs as new fields of practice and (b) how the model of the learning triangle can be fruitful to analyze learning processes, in this case, entrepreneurial learning.

Keywords Entrepreneurial learning · Illeris learning triangle · Human resources · Adult learning · Organizational learning · Innovation lab

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Introduction

This chapter seeks to answer the following question: In what way is Illeris's Learning Triangle useful for analyzing learning processes within a new field of practice? The chapter explores the content, incentive, and social interaction dimensions of Illeris's classical learning theory through a meta-analysis of an innovation lab intended to facilitate entrepreneurial learning. The analysis strives to illustrate the theoretical analytical perspective of the learning triangle and extends the model for the context at hand. The chapter develops a richer perspective on learning and the acquisition of entrepreneurial competencies.

Previous research on innovation labs (e.g., Schröer & Rosenow-Gerhard, 2019; Schröer & Händel, 2020) has not foregrounded the learning process itself. Until now, entrepreneurial learning processes in these labs has not been explored in detail as learning is not observable *in vivo*. Therefore, in the following chapter, I adopt Illeris's learning theory to re-analyze material from a research project on an innovation lab in the social sector.

Illeris's model was developed in connection with his practice in continuing education. His model of a "learning triangle" (2007) was designed to analyze and explain adult learning processes. The model is grounded in classical learning theories (e.g., Piaget or Dewey) and enables a deeper understanding of learning processes by accounting for cognitive, social, and emotional dimensions. In this study, the model is used to analyze how the participants learned to create innovations as part of entrepreneurial learning (Bacigalupo et al., 2016).

This study is grounded on research that has analyzed the development of social service innovation processes within the social sector in Germany. German welfare organizations are under pressure to innovate due to legal and financial changes and increasing complexity, which characterize this field (Becher & Hastedt, 2019; Ridder & Baluch, 2019). Accordingly, social services must respond to current and future challenges facing organizations at different levels (Schröer, 2016). Research on innovative social services in Europe shows that innovations occur in the form of "new services, new practices, new processes, new rules and regulations, or new organizational arrangements" (TEPSIE, 2014, p. 36). To sum up the findings, I discovered that entrepreneurial learning means to be challenged with new perspectives and methods, to balance very different emotions, and to involve the organization in the project development process.

Section "Definitions in the innovation lab & theoretical background of the meta-analysis" elaborates the theoretical background of fostering entrepreneurial learning and innovation and presents the learning triangle. Section "Material & research process of the meta-analysis" describes the methods and material used for the meta-analysis. Section "Analysis – Using the triangle for learning processes in the lab" presents the results, following the main elements of this model. In Section "Discussion & conclusion", I discuss the study according to the two main questions of this anthology.

Definitions in the Innovation Lab & Theoretical Background of the Meta-analysis

Fostering Entrepreneurial Learning and Innovation Through Innovation Labs

Entrepreneurial competence is defined by Bacigalupo et al. (2016) as follows:

> Entrepreneurship is when you act upon opportunities and ideas and transform them into value for others. The value that is created can be financial, cultural, or social (ibid., p. 10)

They describe entrepreneurship as a competence that affects all spheres of life, and they focus on value creation, regardless of the type of value or context (ibid., p. 11). Hence, entrepreneurial competence includes intrapreneurship, one of the main goals of the innovation lab at hand (see Section "Material – The laboratory process").

The two most popular theories in entrepreneurial learning trace back to Schumpeter and Kirzner. In a Schumpeterian view, entrepreneurial learning is conceptualized as "a behaviour that is discontinuous and leads to the disruption of stability." However, from a Kirznerian perspective, it "leads to a behaviour that is adaptive and [. . .] restores stability" (Erdélyi, 2010, p. 13). While literature agrees largely that entrepreneurship can be learned and increased, the means of doing so is seen differently. The aspect of learning is implicit in early literature starting with Schumpeter (1934), but its explicit articulation has increased in recent decades (Erdélyi, 2010). Although the use of the term "learning" is widespread in entrepreneurial learning literature, "the definitions are diverse, highly individualistic and fragmented or even not existent" (Wang & Churgh, 2014).

In this study, the participants are identified as social intrapreneurs (Schmitz & Schröer, 2016) – people who operate as entrepreneurs by developing and implementing new products, services, or processes within existing organizations. Nandan describes intrapreneurs as people who "focus on innovation and creativity that transform the way organizations do business and create social solutions" (Nandan et al., 2015, p. 39). In recent years, the term "social intrapreneurship" has become established for describing start-up practices in existing social enterprises (Schmitz & Schröer, 2016).

Innovation labs, originally designed to develop technical innovations and marketable products, are increasingly known for fostering social innovations (Kieboom, 2014; Westley & Laban, 2015; Then & Mildenberger, 2017). They are often run in cooperation with universities and social service providers. Successful laboratories are characterized by at least three elements (Tiesinga & Berkhout, 2014): They bring together different internal and external perspectives; they encourage learning, experimenting, and failing as quickly as possible, developing collaborative solutions together; and they look at the specific system (ibid). Jones and English emphasize

the need for entrepreneurial education to be conducted in a different learning environment. Essentially, a teaching style that is action-oriented, supportive of experiential learning, problem solving, project based, creative, and involves peer evaluation (2004, p. 422).

I follow Gryszekiewicz and colleagues' definition of an innovation lab as

a semi-autonomous organization that engages diverse participants – on a long-term basis – in open collaboration for the purpose of creating, elaborating, and prototyping radical solutions to open-ended systemic challenges (2016, p. 16).

Accordingly, innovation labs systematically link informal and formal structures of innovation development (Schröer, 2016). In this study, participants from different organizations and backgrounds used the innovation ecosystem of the lab to learn how to create a business model for a social service innovation within the context of their home organization.

By featuring the above-mentioned aspects, the researched innovation lab increases the likelihood of initiating individual and organizational learning processes. By embedding new knowledge and competencies into the routines, systems, and structure of the organizations, the long-term goal of organizational learning is achieved (Dutta & Crossan, 2005). To deepen the insights into the learning processes, it is therefore beneficial to conduct a meta-analysis through the lens of Illeris's learning theory.

Illeris's Learning Theory

Illeris's learning theory was intended to encompass the entire breadth of current learning theories (Illeris, 2002, 2015). The model has gradually developed over 50 years and is based on different classical learning theories, including socialization theory (Lorenzer), developmental psychology (Piaget), and activity theory (Engeström). Illeris involved a number of theories and fits them into the learning triangle for a general view of these theoretical positions (Illeris, 2007, p. 257). He once described the development of the theory in an interview:

The [. . .] development of my theory of learning has taken place in conjunction with practical experience [. . .] with vocational courses of study [. . .]. And this has contributed to an understanding of learning that has many facets to it (Hansbøl & Christensen, 2016, p. 306f.)

According to Illeris, this model is an auxiliary tool that

can function to provide an overview as a kind of checklist of different key matters that are at play, and as a guide pointing out the areas one comes through and the elements to which one must relate (Illeris, 2004, p. 441).

This theory is based on two basic assumptions:

1. Learning takes place in two different processes: The external process addresses the social, material, and cultural context; the internal process addresses
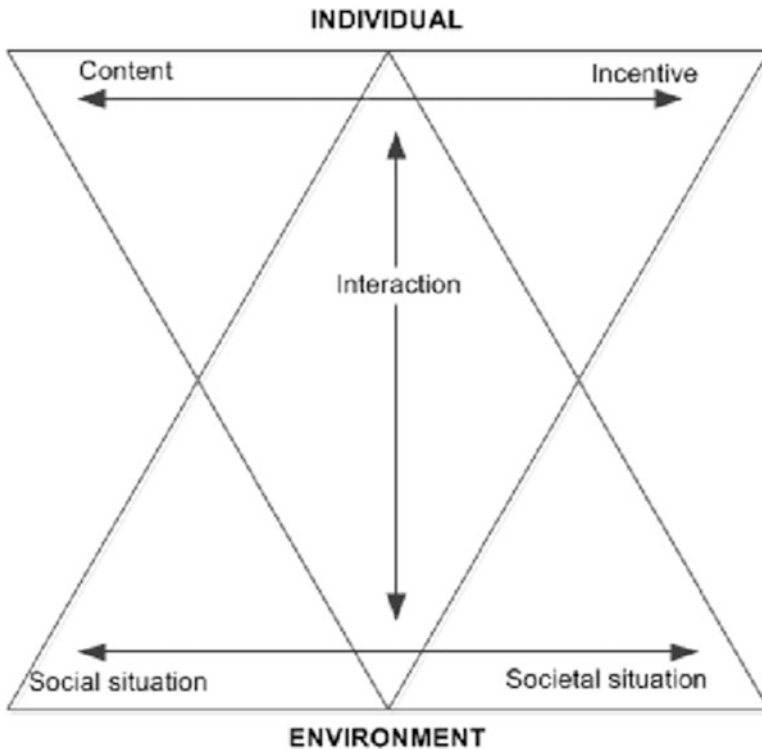
Fig. 8.1 Illeris's complex learning model. (Illeris, 2007, p. 98)

acquisition on a psychological level. Learning is an integrated process, which consists of these two connected processes influencing each other (Illeris, 2007, p. 22).

2. Every learning process contains three dimensions – the content, incentive, and interaction. Therefore, Illeris developed the model of a triangle (see Fig. 8.1; the triangle with the tip down), where the process of acquisition is represented by an arrow that includes the learning content and incentive, and the process of inter-action includes the learner in his or her specific environment, because "no learning process can be fully understood without considering all three dimensions" (ibid. 29).

Illeris broadly defines learning as "any process that in living organisms leads to permanent capacity change and which is not solely due to biological maturation or ageing" (Illeris, 2007, p. 3). Learning is influenced by what the learner already knows (his or her existing dispositions), so that both the existing scheme and the new impulse are influenced or changed. He formulates criteria in his model that must be met to progress from experiencing to learning: Learning "must be of considerable subjective significance" (Illeris, 2002, p. 153), and the subject must be "present and self-aware" (p. 154). In the model, there is a second triangle added (wide side down

and tip up) to integrate the learning situation, which comprises the social situation and the societal situation that influence the learning situation of the individual.

Furthermore, the theory differentiates between four types of learning: "Cumulation" (additional learning without direct connection to the situation); "assimilation" (something is added to an existing schema); "accommodation" (an existing schema is changed); and "transformation" (existing schemata are no longer sufficient, so new orientation is needed). The four types of learning are further examined in Section "Analysis – Using the triangle for learning processes in the lab".

This theoretical model has been adopted in teaching, but it has been less used in empirical work (one example is Poortman et al., 2011). In the present research, this theory is employed because intrapreneurship needs implementation into an organization. This can be considered as individual and organizational learning. In the model, three dimensions of learning are differentiated, and the context of learning is also studied. In the context of innovation labs, there are several environments in which learning occurs: The lab itself, the home organization, and the society.

Material & Research Process of the Meta-analysis

Material – The Laboratory Process

The data was gathered from an innovation lab which took place in 2018–2019 in a large German city. The innovation lab process aimed at three outcomes: For the participants to (1) gain entrepreneurial competencies, (2) create a social service innovation, and (3) contribute to change in their home organization (intrapreneurship). The lab consisted of six workshops, one day each, over ten months. Between each workshop, the participants were assigned individual tasks. In addition, the participants were offered three optional meetings to discuss the tasks. There were kick-off and closing events that were attended by representatives of the participating organizations (supervisors, colleagues), experts, and the interested public. Teaching methods used in the workshops were expert input, teamwork, group discussion, feedback, and presentations. Between the workshops, the participants worked on their projects individually. Moderators were present for questions during all phases and between the workshops.

The participants ($N = 12$) were mainly professionals in social services who attended the training as part of their organizations' human resource development initiatives ($n = 8$), some in leading positions, and four students of Organizational Education and Social Work. They differ in age (23–62 years old), gender (6 female; 6 male), and entrepreneurial expertise. In pairs, they addressed a social problem, for example, loneliness of elderly people in the countryside, and sought a solution to it. As such, they were taught Design Thinking-methods (Plattner et al., 2009), e.g., which is a human-centered and iterative methodical approach for solving complex problems. Through these methods, the participants were enabled to keep the potential user in focus and to develop a solution that met the potential user needs, for

example, by creating a persona – a fictive person representing the potential future user. In addition, to help them create a business model, they learned methods like the Business Model Canvas which "describes the rationale of how an organization creates, delivers, and captures value" (Osterwalder & Pigneur, 2010, p. 14) through factors such as customer segments, value propositions, and cost structure. After the moderators presented each step of the method, the participants implemented the steps in the context of their project.

As an example, one team started with the question of why young people do not participate in educational workshops in their voluntary year. They found out that these young people are anxious because they do not know what will happen and are unwilling to meet people they do not know. After interviewing young volunteers and educational staff of the educational workshops, they created a mobile app that connected volunteers before the workshops and provided information about the schedule. With this solution, the organization updated its digital information process and created a participant management tool that could be scalable for other organizations.

Methods – The Process of the Meta-analysis

The data was collected using semi-structured interviews and participatory observation. The research project was performed by one project leader, one project member (myself), and two assistants.

Before and after the lab, telephone interviews were conducted with participants and their supervisors (28 calls averaging 52 mins). The semi-structured interviews aimed to generate narratives and evaluate the process. The topics for the first interview included the professional background, personal motivation, resources, entrepreneurial competencies, and expectations of each participant. The topics covered in the second interview included whether expectations were met, the reaction at the workplace (colleagues, supervisors), the learning content, personal growth, and the developed solution. On an evaluation level there was a focus on the methods used in the lab and their support to entrepreneurial learning. The interviews were then transcribed and coded according to Mayring's Structuring Qualitative Content Analysis (2011), which builds categories.

The participatory observation – following the ethnographic approach of Breidenstein et al. (2013) –was conducted by a team of two who were present during the entire workshop days. Interaction in the workshops was not directly influenced by the researchers – they did not influence the communication by suggesting topics, for example. In line with the ethnographic approach, the observers synchronously monitored and took notes on local practices (ibid.), with (a) focusing on how the project developed, (b) which challenges and successes the participants described, (c) how the teams worked together, and (d) how the moderators supported the participants. The observers conducted a reflective analysis on their notes in the retreat from the field.

Subsequently, for this study, I re-analyzed the Qualitative Content Analysis-coded interview material from the original study in the light of Illeris's learning triangle with categories adopted from Poortman et al. (2011). As an example to define the two main types of learning processes in the lab, assimilative learning is operationalized as follows:

> New impressions are elaborated and integrated into previously established structures. The new element is linked as an addition to a scheme or pattern that was already present (Poortman et al., 2011, p. 280).

Accommodative learning is operationalized as follows:

> New impressions are difficult to fit into any existing schemes or patterns because they are not really understood or are difficult to relate to. The learner therefore needs to break down all or parts of an existing scheme and transform it so that the new situation can be integrated. Established structures are reconstructed through dissociation, liberation and reorganization (ibid., p. 281).

Also with these categories, I enriched the interview material with situations of the observation protocols that suggest the assimilative or accommodative learning processes of the participants.

Analysis – Using the Triangle for Learning Processes in the Lab

In the following section, I illustrate learning processes in the lab through the learning triangle. Therefore, the analysis focuses on the main elements of the model: Content, incentive, and social interaction with the environment (see Fig. 8.1; triangle with the tip down). The analysis focuses in particular on social interaction because it was found to be the most important dimension in the lab. In the context of intrapreneurship, in particular, the participants' learning situation in the lab group and the involvement of the home organization during the lab process was important. For this study, I have adapted Illeris's learning triangle, renaming the environment dimension into organization and incorporating the innovation lab as the learning situation and the home organization as the organizational situation (see Fig. 8.2). The society becomes another layer surrounding the situation.

Content – What Did the Participants Learn in Terms of Content and How?

The first dimension in the learning triangle is content. All learning has a content, which can be "skills, knowledge, opinions, understanding, insight, meaning, attitudes, qualifications and/or competence" (Illeris, 2007, p. 51). The acquisition process is mainly cognitive. In the following, I describe what the participants
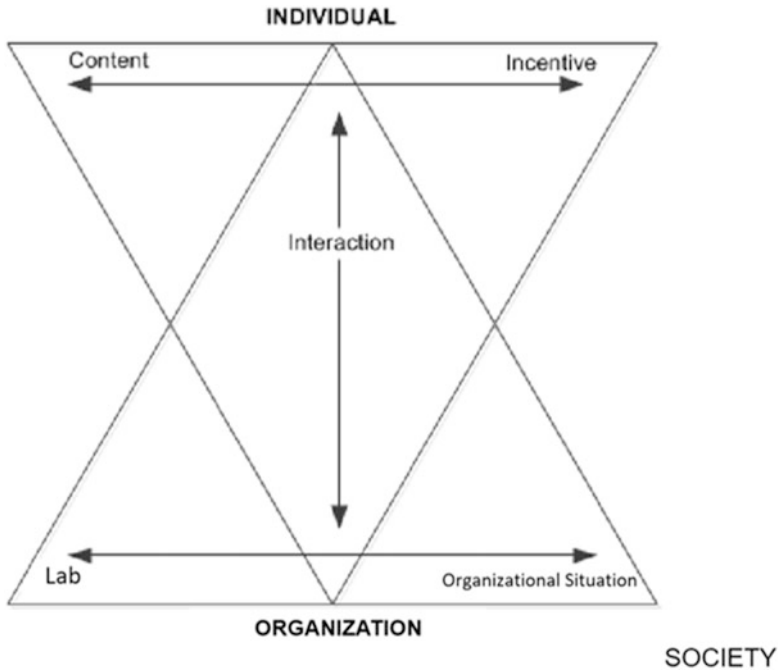
Fig. 8.2 The extended complex model in the context of intrapreneurship. (Own picture based on Illeris, 2007)

(identified as, e.g. "P1") stated they had learned and what form of internal acquisition process is identifiable. Illeris describes four types of learning: "Cumulative," "assimilative," "accommodative," and "transformative learning" processes. Cumulative and transformative learning were not identifiable in the material.

An intended learning goal was for participants to learn to use the new methods. The moderators presented these methods to develop a certain solution to a specific social problem (see Section "Methods – The process of the meta-analysis"). Therefore, problem-based learning (Illeris, 2007, p. 244) was used in the lab. Although some participants were familiar with project management, this was a very different and new way of developing a project and a business model. Some participants described that although parts of the tasks – like conducting interviews – were not new to them, the concrete methods like Design Thinking were new. The participants learned how to discover the need of the target group, to generate ideas, to choose and create potential solutions, and set up the financial business model. Overall, participants adapted the new elements to their prior knowledge. For example, when the moderators explained how the participants should create a persona, one participant ensured that the participants acted like a profiler – a criminal psychologist or policeman (P7, WS2b). This participant formerly worked for the police. In this situation, the new element was tied to personal experience and the participant ensured that the task was understood correctly. At the same time, this comparison

to a profiler operated as an additional explanation for the other participants. It illustrates what Illeris describes as assimilative learning – connecting new content to prior knowledge. Therefore, new understandings were developed and integrated into previously established structures (see Section "Material – The laboratory process").

In addition to the new methods, during the workshops, the participants were challenged to create a solution from a need-oriented perspective. This is different from regular project management, which is typically goal-oriented. The process was demanding but beneficial for all of them, as this participant describes:

> I actually found it difficult in the beginning. [. . .] it's really a hurdle I had to overcome. [. . .] really difficult [. . .] to leave out this goal perspective [. . .] because somehow, somehow, I feel that one strives towards the target somehow [. . .]. But, as I said, this has great advantages, because you can then work in a more unbiased way [. . .] at that moment (P11, t2, 135; translated from German by the author)

This participant describes how the lab process challenged her way of developing ideas. It illustrates accommodative learning processes, which occur when established structures are reconstructed. This is sometimes a hard and energy-demanding process because the new concepts challenge the existing schemes or patterns, and the learner must transform these schemes to incorporate the new situation.

The participants also mentioned unintended learning that went beyond the intended learning objectives. For example, one participant stated that he learned from how the moderators led the group and influenced the atmosphere in the lab positively (P13, t2).

In sum, the participants learned new methods to create a social service innovation. They gained knowledge with assimilative and accommodative learning processes and also learned, e.g. by copying the moderators leading the group.

Incentive – Which Affective Components Influence the Learning in the Lab?

The second dimension of Illeris's triangle, "incentive," concerns the motives, emotions, and volitions which power the learning process. Therefore, this section discusses the participants' motives for participation in the lab, their motivation while attending, and emotions that influenced their learning process.

All participants stated that a motive for their participation was to learn new methods and different ways of thinking and acting. The lab process itself was highly motivating – the participants commented that they had fun in the lab and that the interaction with other participants and experts motivated and enriched them. Four participants reported that their level of motivation for their project increased throughout the project, two reported that their level of motivation remained the same (high), one participant's motivation decreased, and three described their

motivation as fluctuating, or a "rollercoaster" (P3, t2; 10 out of 12 participants responded).

All participants were motivated to participate by a desire to contribute to something "higher." that makes sense to them. Innovative social services aspire to solve a social problem, such as the loneliness of elderly people in the countryside. Long-term social impact is addressed in the lab, and the participants resonate with that aim, which is evident in the following quote:

> So most of all, I would be happy if it works in the end. [. . .] And it would be the best of all if it develops further and picks up speed and [is rolled out] nationwide [. . .] everyone is then allowed to steal the idea and put it into practice. And hence many thousands of people are torn out of their loneliness. That would be the greatest joy. That's actually my (.) my motivation (P8, t2, 54)

This quote illustrates the subjective significance demanded by Illeris (see Section "Illeris's learning theory") and the interconnectedness society with the model (see Fig. 8.2). Interestingly, during the labs, the moderators did not initiate any discussions about the personal motivations of the participants (see observation protocols of the workshops). When the progress of the projects was discussed, personal motivations were not mentioned, which could have affected the learning process.

Another emotional aspect that had influence on the learning processes was the dealing with expectations and challenges. All participants stated how much the process itself challenged them, e.g. P2:

> Well, yes, because you went in there with a certain expectation, or you took a kind of order from your colleagues, from your supervisor, and from yourself, an expectation that you could use the laboratory in a certain way to implement this order. To break away from this and to say, (.) I am not fulfilling this task by implementing what I have taken up, but I am really open to something completely new, is very difficult, yes (P2, t2, 25)

The participants were pressurized by the need to meet their own and their supervisors' intentions (organizational situation in Fig. 8.2). This created a particularly challenging situation when they created a different solution to that which they had originally expected to develop.

The participants faced expectations for both human resource development and organizational development. From the perspective of human resource development, there were assumptions of personal growth and knowledge increase. From the perspective of organizational development, there was an expectation of organizational change. Half of the participants were uncertain about how to deal with these requirements. The other half saw it as a challenge and were motivated to do something new and different.

The atmosphere in the lab was mostly positive, and the moderator lightened the atmosphere with occasional jokes. At the beginning of nearly every workshop, the mood ranged from relaxed to exuberant. Participants were joyful about meeting each other and sharing creative ideas, which they mentioned in the interviews. Towards the end, especially in the last workshop, there was a recognizable strain caused by presenting the developed ideas to guests. This can be seen, for example, in the

participants' irritable or monosyllabic answers to each other, their stressed focus on their presentation, the speed at which they encouraged each other, loud sighing, and occasional grumbling (Protocol WS6). It was visible that the participants had to balance very different emotions while gaining entrepreneurial competencies.

Social Interaction – How Do the Participants Interact in the Lab and with Their Environment?

All learning in Illeris's model is situated, which means that the social and societal context influences the learning process and the results (Illeris, 2007, p. 214). Because the participants in the lab were part of different social environments that influenced their social interaction, the following subsections differentiate between the learning situation within the lab (lab in Fig. 8.2) and the participants' interaction with their social environment, which is mainly the home organization in the context of intrapreneurship (organizational situation in Fig. 8.2).

The societal dimension of Illeris's model (society in Fig. 8.2) is not covered as the analysis is a meta-study and the original data does not cover societal dimensions.

Interaction Within the Lab (Social Situation)

Illeris describes six ways participants can socially interact within their environment (Poortman et al., 2011; Illeris, 2007): "Transmission," "perception," "experience," "imitation," "activity," and "participation." In the lab (a social learning situation), the most-adopted form of participant interaction was transmission, which was evident to the observer when the participants were listening actively and taking notes. In some situations, participants used perception, which was evident when participants passively perceived information or listened to other lab participants. Experience was the third type of interaction, and this was noted in all observation protocols. This was evident when participants presented their project and were actively involved, for example. The participants also interacted through activity, which was evident when they worked independently and purposively on their projects. When participants were working together with others, for example in pairs or tandems, this was deemed to be participation, according to the model. Imitation was not evident in any workshop protocol.

Interaction with the Environment (Organizational Situation)

The intrapreneurs' environment is the home organization. To implement intrapreneurship, the organization is a primary facilitator or preventor of success (Rosenow-Gerhard, 2020). Individuals can develop ideas, create solutions, and

develop new competencies (see Section "Content – What did the participants learn in terms of content and how?"), but without implementation into the organization, there is no intrapreneurship (Rosenow-Gerhard & Händel, 2020). Therefore, it is important to illustrate how the participants in this study interacted with the home organization.

There were two primary ways in which participants interacted with their home organization concerning the projects in the lab: Half of the participants included their supervisor and colleagues in the development process and half of them did not. Nevertheless, all participants described their colleagues as "rather positive" towards their project. Home organizations that were involved gave feedback that was helpful for the progress of the project. Some participants included their supervisor or colleagues (for example, to test the prototype) and accordingly enabled processes of experience – the third type of social interaction (see above; Illeris, 2007).

The following quote is typical of those who did not include their supervisor or colleagues:

> There were some queries from my department head. At some point, my supervisor said, "You don't hear anything about [P4/the participant; JRG] anymore." (.) But otherwise, it wasn't very well announced within the organization. So, we have over six hundred employees. I think maybe a handful of them knew that I was in this lab (P4, t2, 53)

When the participants did not involve their organization, their colleagues and supervisors had no choice but to be passive, following the second type of social interaction – perception (Illeris, 2007). Even though the department head requested feedback, no information was provided. Opportunities for organizational learning were blocked. This is especially clear in an interview with a participant's home organization supervisor:

> I don't know the results of the project. As I told you, I don't have a presentation from my employee who said [they] would come to me and say "I would like to realize this" [. . .]. So, I don't have an appointment from my employee, I don't have a business plan, I don't have an elaborated project idea. I'm not involved. [. . .] I heard [them] say at another point that [they] assume that the project will be realized, but then [they] would have to talk to me, I would say. [laughing] so it would be advisable (A2, t2, 85–93)

The supervisor wished to have been more included in the project development. Even after the lab ended, there was still no involvement or knowledge about what the employee developed. This created a feeling of alienation, as the project status could not be described in the interview after the last workshop. Furthermore, the supervisor indicated that the non-involvement impeded the project implementation and any organizational learning opportunities.

In conclusion, social interaction is a crucial factor within entrepreneurial learning and intrapreneurship. The participants gained significant amounts of intended and unintended entrepreneurial knowledge. However, as they are the gatekeepers to their home organizations, they either facilitated or prevented opportunities for organizational learning, which is evident in the social interactions with the home organization. Social interaction was the primary factor affecting whether participants only performed their new methods within the lab, or whether they implemented them in

the home organization as well, having gained entrepreneurial expertise. For the subsequent implementation, additional resources are needed (Rosenow-Gerhard, 2020; Rosenow-Gerhard & Händel, 2020).

Discussion & Conclusion

In this section, I first discuss the findings of my research and connect the discussion to the two guiding questions of this anthology. Finally, I provide an outlook on further research.

The chapter has explored the extent to which Illeris's learning triangle is useful to analyze learning processes within a new field of practice, with the case study of an innovation lab. The participants learned new methods and different perspectives on developing projects as solutions to social problems. The participants reached intended learning goals (e.g., Design Thinking-methods) and also mentioned unintended learning (e.g., how the moderator led the group). The participants' learning processes can be described as assimilative and accommodative, according to Illeris's theory. In the learning process, they had to balance different or conflicting emotions, for example, their own motivation and the supervisors' expectations. Subjective significance was important because of their motivation. This aligns with Schmitz and Schröer's (2016) description of social intrapreneurs (see Section "Fostering entrepreneurial learning and innovation through innovation labs").

The participants in this analysis connected theory with practice when using the new methods to work on their projects. They explained that bridging this gap was very helpful for their learning processes (see Section "Content – What did the participants learn in terms of content and how?"). According to entrepreneurial learning literature, personal experience is a central element for successful entrepreneurial learning (e.g., Politis, 2005). In line with this discussion, Jones and English (2004) emphasize the importance of an action-oriented, supportive, and experiential learning situation (see Section "Illeris's learning theory"). The innovation lab in this study matched these conditions.

The analysis illustrates that subjective significance is vitally important for the learner (see Section "Incentive – Which affective components influence the learning in the lab?"). This is as true for intrapreneurship as it is for learning in general. Schmitz and Schröer (2016) define intrapreneurs – among others – as people who have a vibrant character, which is evident in pro-activeness or persistency. Looking at the participants' entrepreneurial learning in the lab through the lens of this theory helped to identify the implications of their motivation (see Section "Incentive – Which affective components influence the learning in the lab?").

The moderators primarily created opportunities for assimilative and accommodative learning (see Section "Content – What did the participants learn in terms of content and how?"). This is appropriate for the context of workplace learning (Poortman et al., 2011). Intrapreneurship includes the implementation of new ideas

into the organization, so connections between the lab situation and the organization are crucial. Accommodative learning processes lead to the transfer of the learning content in different situations (Illeris, 2007) and could enable the employees to recognize, discover, and create opportunities. Successful entrepreneurs must be able to identify, address, and create opportunities (Sarasvathy, 2001).

Social interaction between the participants and the home organization is vital for the facilitation of the progression from individual to collective learning (see Section "Social interaction – How do the participants interact in the lab and with their environment?"). Organizational learning means the embedding of new knowledge and competencies into the routines, systems, and structure of the organization (Dutta & Crossan, 2005). If the organization is not included in the development process from the start, there may be resistance to the implementation of the new social service in the organization later on (Rosenow-Gerhard & Händel, 2020). Accordingly, individual learning was enabled in the lab, but the potential for organizational learning – here, the institutionalization of social service innovation – was not fully exploited. Some participants needed support to constructively interact with the home organization.

Two questions link the chapters of this anthology: Firstly, what is lost and what are the costs for the turn to new fields of practice? Secondly, what may be gained in terms of theoretical and empirical insights by bringing learning back in? In answer to the first question, the innovation lab is an interesting new field of practice – it strives for individual learning resulting in organizational change, in this context, social intrapreneurship. Individual and organizational learning processes co-occur. Illeris's model was applicable to analyze and illustrated the participants' learning processes in their specific situation. The triangle fits the learning processes in the lab because of its focus on the individual situation and the dual learning environment. Therefore, this study offers insights into the learning processes of adults in a human resource initiative in the welfare sector. This approach clarifies how adults gain entrepreneurial competencies. To strengthen the explanatory power in the context of intrapreneurship, Illeris's model was extended with the layers of the lab and the home organization (see Fig. 8.2). Future research should include the concepts of "mislearning" (learning the content incorrectly) and "non-learning" (not learning the content of the pedagogical situation, e.g., because of resistance; Illeris, 2007).

In answer to the second question, changes to organizations are often seen with a focus on innovation and, therefore, the product. This implies a loss of focus or depth on the learning process of the participants. When the focus changes from "innovation" to "learning," Illeris's model can be used to analyze the types of learning and account for the situation with its dimensions of content, incentive, and social interaction. Research can identify supporting and impeding factors for this process and strengthen the explanatory power of the process. In future analyses, the learning triangle needs additional theoretical embedding and specification to derive theory-based categories – Illeris provides no concrete operationalization of his model in the literature.

The results of this study can be used as a starting point for further research. With its grounding in classical learning theories, the learning triangle can enable a detailed

perspective for the diverse discourse of entrepreneurial learning. From this perspective, this research contributes to a learning theory basis for learning arrangements in work-related organizational studies and those of human resources.

References

Bacigalupo, M., Kampylis, P., Punie, Y., & Van den Brande, G. (2016). *EntreComp: The entrepreneurship competence framework*. Publication Office of the European Union; EUR 27939 EN;. https://doi.org/10.2791/593884

Becher, B., & Hastedt, I. (2019). "Innovationen" in der Sozialwirtschaft. Modethema oder Erfolgsnotwendigkeit? In Ebd. (Hrsg.), *Innovative Unternehmen der Sozial- und Gesundheitswirtschaft* (pp. 3–53). Springer Fachmedien.

Breidenstein, G., Hirschauer, S., Kalthoff, H., & Nieswand, B. (2013). *Ethnografie. Die Praxis der Feldforschung*. UVK Verlagsgesellschaft mbH.

Dutta, D. K., & Crossan, M. M. (2005). The nature of entrepreneurial opportunities: Understanding the process using the 4I organizational learning framework. *Entrepreneurship Theory and Practice, 29*, 425–449.

Erdelyi, P. (2010). *The matter of entrepreneurial learning: A literature review*. International Conference on Organizational Learning, Knowledge and Capabilities (OLKC) 2010, 3–6 June 2010, Northeastern University, Boston, MA, USA.

Gryszkiewicz, L., Lykourentzou, I., & Toivonen, T. (2016). *Innovation labs: Leveraging openness for radical innovation?* https://ssrn.com/abstract=2556692.

Illeris, K. (2002). *The three dimensions of learning*. Roskilde University Press.

Illeris, K. (2004). A model for learning in working life. *The Journal of Workplace Learning, 16*(8), 431–441. https://doi.org/10.1108/13665620410566405

Illeris, K. (2007). *How we learn: Learning and non-learning in schools and beyond*. Routledge.

Illeris, K. (2015). The development of a comprehensive and coherent theory of learning. *European Journal of Education, 50*(1), 29–40. https://doi.org/10.1111/ejed.12103

Hansbøl, M., & Christensen, G. (2016). An interview with Knud Illeris. In A. Qvortrup, M. Wiberg, G. Christensen, & M. Hansbøl (Eds.), *On the Definition of Learning* (pp. 299–322). University Press of Southern Denmark. Online: https://www.sdu.dk/-/media/files/om_sdu/institutter/ikv/forskning/forskningsprojekter/on+the+definition+of+learning/book+chapters/chapter+16.pdf (last 22.03.2020)

Jones, C., & English, J. (2004). A contemporary approach to entrepreneurship education. *Education and Training, 46*(8/9), 416–423.

Kieboom, M. (2014). *Lab Matters: Challenging the practice of social innovation laboratories*. Kennisland.

Osterwalder, A., & Pigneur, Y. (2010). *Business model generation: A handbook for visionaries, game changers, and challengers*. Wiley.

Nandan, M., London, M., & Bent-Goodley, T. (2015). Social workers as social change agents: Social innovation, social intrapreneurship, and social entrepreneurship. *Human Service Organizations: Management, Leadership & Governance, 39*(1), 38–56. https://doi.org/10.1080/23303131.2014.955236

Plattner, H., Meinel, C., & Weinberg, U. (2009). *Design thinking: Innovation lernen – Ideenwelten öffnen*. mi-wirtschaftsbuch.

Politis, D. (2005). The process of entrepreneurial learning: A conceptual framework. *Entrepreneurship Theory and Practice., 29*(4), 399–424.

Poortman, C. L., Illeris, K., & Nieuwenhuis, L. (2011). Apprenticeship: From learning theory to practice. *Journal of Vocational Education & Training, 63*(3), 267–287. https://doi.org/10.1080/13636820.2011.560392

Ridder, H. G., & Baluch, A. M. (2019). Human resource management in NPOs. Innovation und Voraussetzung für Innovationsfähigkeit. In B. Becher & I. Hastedt (Eds.), *Innovative Unternehmen der Sozial- und Gesundheitswirtschaft. Herausforderungen und Gestaltungserfordernisse* (pp. 97–115). Wiesbaden.

Rosenow-Gerhard, J. (2020). Lessons learned. Configuring innovation labs as spaces for intrapreneurial learning. Special Issue to the conference Researching Work and Learning 2019 RWL 11th, *Studies in Continuing Education*. Tailor & Francis.

Rosenow-Gerhard, J., & Händel, R. (2020). Begrenzter Schonraum. Social Intrapreneurs im Spannungsfeld eines Labors zur Entwicklung von sozialen Dienstleistungsinnovationen. In A. Schröer, S. Köngeter, S. Manhart, C. Schröder, & T. Wendt (Eds.), *2. Jahrbuch der Sektion Organisationspädagogik. Organisation über Grenzen*. Springer.

Sarasvathy, S. D. (2001). Causation and effectuation: Toward a theoretical shift from economic inevitability to entrepreneurial contingency. *The Academy of Management Review, 26/2*, 243–263.

Schmitz, B., & Schröer, A. (2016). *How giants learn to dance. Towards conceptualizing the social intrapreneur*. Arbeitspapiere der Evangelischen Hochschule Darmstadt Nr. 21. Online: https://www.eh-darmstadt.de/fileadmin/user_upload/PDFs/Forschung/Arbeitspapier_Nr_21.pdf (last 26.10.2019).

Schröer, A. (2016). Fostering innovation in social services. A diaconal intrapreneurship lab. *Diaconia, 7*, 159–173.

Schröer, A., & Händel, R. B. (2020). Social Intrapreneurship Labs – organisationspädagogische Grundlegung und empirische Befunde. In A. Schröer, N. Engel, C. Fahrenwald, M. Göhlich, C. Schröder, & S. M. Weber (Eds.), *Organisation und Zivilgesellschaft* (pp. 189–201). Springer.

Schröer, A., & Rosenow-Gerhard, J. (2019). Lernräume für Intrapreneurship. Eine praxistheoretische Perspektive auf Grenzziehung und Grenzbearbeitung im Spannungsfeld zwischen Arbeitsalltag und Innovationsentwicklung. *Zeitschrift für Weiterbildungsforschung ZfW, 42*, 221–233. https://doi.org/10.1007/s40955-019-0134-z

Schumpeter, J. (1934). *Theorie der wirtschaftlichen Entwicklung. Eine Untersuchung über Unternehmergewinn, Kapital, Kredit, Zins und den Konjunkturzyklus*. Duncker und Humblot.

TEPSIE. (2014). *Social innovation theory and research: A summary of the findings from TEPSIE*. A deliverable of the project: "The theoretical, empirical and policy foundations for building social innovation in Europe" (TEPSIE), European Commission – 7th Framework Programme, Brussels: European Commission, DG Research.

Then, V., & Mildenberger, G. (2017). Soziale innovation. Innovation labs als Innovationskatalysatoren. *Soziologie Heute*, (3), 14–17.

Tiesinga, H., & Berkhout, R. (2014). *Labcraft. How social labs cultivate change through innovation and collaboration*. Labcraft Publishing.

Wang, C. L., & Chugh, H. (2014). Entrepreneurial Learning. Past Research and Future Challenges. *International Journal of Management Reviews, 16*, 24–61. https://doi.org/10.1111/ijmr.12007

Westley, F., & Laban, S. (2015). *Social innovation lab guide*. Online: https://assets.rockefellerfoundation.org/app/uploads/20150610111553/10_SILabGuide-FINAL-1.pdf (last 26.10.2019)

Chapter 9
Networks of Learning: Exploring What Organization Means in Professional Attempts at Organizing Learning

Kasper Elmholdt and Claus Elmholdt

Abstract This chapter address what organization means in professional attempts at organizing learning. What an organization is and what it may learn was at the heart of classical literature on organizational learning. This early literature considered a close link between individual- and organizational learning, and stressed the importance of creating shared cognitive maps of organization. While this literature provided important insights into how mainly intraorganizational learning was accomplished, it favored a cognitive perspective and downplayed the role of materialities and other organizations in organizing learning. More recent literatures have replaced the cognitive understanding with a focus on how practices and sociomaterial configurations impede and enable learning, and increasingly consider learning to occur between organizations. While moving beyond cognitive understandings, this more recent literature neglect the early question of what an organization is. This is a critical shortcoming not least in the context of the current focus on organizing learning within and between organizations. In this chapter we aim to reclaim the importance of considering how a shared map of organization is created, and we bridge the early awareness on organization with the focus on materiality and practice. Drawing on a qualitative case study of developing cross-sectional organization in continuity of public healthcare, we focus on what we call translation loops and how a network of learning is established. We theorize the multiple translations involved in mobilizing a new mode of organization, and analyze how organization stabilize. Through this case, we contribute to the knowledge about workplace and organizational learning by showing how a new (inter-) organizational configuration came into being and got lasting properties through ongoing translation work, and the composing of a heterogeneous network of actors.

Keywords Organization · Inter-organizational learning · Actor-network theory · Healthcare · Translation

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> It is clear that organizational learning is not the same thing as individual learning, even when the individuals who learn are members of the organization [. . .] Organizations are not merely collections of individuals, yet there is no organization without such collections. Similarly, organizational learning is not merely individual learning, yet organizations learn only through the experience and actions of individuals (Argyris & Schön, 1978: 9).

Studies of organizational learning have advanced the understanding of professional attempts at managing and organizing learning (Argyris & Schön, 1978: Easterby-Smith, 1997). While recent writings on learning have advanced practice-based and sociomaterial understandings of learning at work (Nicolini, 2012; Fenwick, 2015), early questions of what an organization is and how it may learn (Argyris & Schön, 1978) has evaporated lately (Elkjær, 2017; Du Gay & Vikkelsø, 2016). The enigma of what an organization is, however, still haunts the organization literature. For instance, du Gay and Vikkelsø (2016: 2) notes that what is an organization 'is increasingly a simulacrum' the question keeps being of outmost importance (Bencherki & Trolle Elmholdt, 2020; Taylor & Van Every, 2014). Anticipating the work of Morgan (1986), Argyris and Schön (1978: 12) already suggested that an organization is many things, both a government, an agency, a task system and a cognitive enterprise or artifact, and not least, a theory of action. Indeed, the early organizational learning literature put organization at the core of their inquiry. Yet, the role of materiality and how individual learning translate into organizational learning and becomes durable only started to be theorized from later sociomaterial- and practice-based perspectives (see also Elkjær & Nickelsen, 2016). Moreover, although early studies of organizational learning also discussed learning between organizations, what we may term *inter*organizational learning (Argyris & Schön, 1978: 268), this literature did mainly focus on forces within, what we may call, an *intra*organizational field or within the group (see also Levitt & March, 1988; Burnes, 2004; Lewin, 1947). Hence, less on networks of learning facilitated by participating in an *inter*organizational field (Czarniawska, 2013: Selznick, 1949). Given that the environment of firms or enterprises consist almost solely of other organizations (Perrow, 1991), enterprises learn almost entirely in interorganizational constellations. Indeed, it is argued that many difficulties in the current management of large corporations or public sector organizations require networks of learning and innovation between corporations (Ingerslev & Elmholdt, 2012). For instance, in a study of innovation in the biotechnology field, Powell et al. (1996: 116) argued that, "when the knowledge base of an industry is both complex and expanding and the sources of expertise are widely dispersed, the locus of innovation will be found in networks of learning, rather than in individual firms". Later Swan et al. (2002) argued that, "most radical innovations occur in the interstices between CoPs rather than within". Yet, as Czarniawska (2013: 11) notes, we should not fall into the trap of focusing on 'either interorganizational or intraorganizational processes', rather, we need to consider both, 'simultaneously, and in connection with one another' (see also Williamson, 1975). Hence, there is a need for revisiting what we mean by organization in current attempts at organizing learning across formal bureaucratic or intraorganizational boundaries and we ask the

question: 'How is organization assembled in professional attempts at organizing learning across formal bureaucratic units?".

To answer this question, this chapter bridge the sensitivity towards what an organization may- be and learn, from classical work on organizational learning, with more recent work within Science and Technology Studies (STS) and Actor-Network theory (ANT), which affords a sociotechnical understanding of what an organization is and how it achieves lasting properties. The chapter draws on a case study of a cross-sector attempt at organizing learning in the nexus of a hospital, a municipality and general practitioners to ensure better quality of care for vulnerable patients. This case involves experiments where learning becomes collective (organizational) particularly by being dislocated to material objects (e.g. a discharge summary and an electrocardiogram), and through the active role of boundary-spanning agents (e.g. hospital and municipal practitioners). By analyzing the case, we advance an actor-network inspired conception of *networks of learning* (Eyal, 2013: Latour, 2005, Powell et al., 1996).

What Is an Organization That It May Learn?

The seminal work of Kurt Lewin paved the way for much thinking in the field of organizational learning. Lewin had a focus on the group and how a new 'we' may be constructed in group development (Lewin, 1947). Lewin argued that group norms was a strong influence in the 'force field' of individuals, accordingly, groups and individuals had to become aware of or 'reflect on the forces that impinge on their lives' (Burnes & Cooke, 2013: 413). Resonating this work of Lewin, Argyris and Schön (1978) later stress that the behavior of organizational members could be understood as informed by 'theories of action', in the sense of a theory individuals hold of what compose effective actions within a certain practice. Aggregating this idea to an organizational level, they argued that an organization's theory of action could be considered as composed by the norms, strategies and assumptions embedded in the accomplishment of certain company practices (Argyris & Schön, 1978: 14). This theory of action may be considered as the 'theory-in-use' of the particular practice, which may differ from the 'espoused theory' that contains the explicit theory or the theory of action that can be explicated and is likely to comply with the officializing norms. To Argyris and Schön (1978: 13), an organization is a collective, which needs to be able to take action 'in its own name'. As such, we may consider a unit of a company as an organization, yet, we also may consider the overall company as an organization. Roughly speaking, what differentiates an organization from a mob is that members of an organization must be able to use the pronoun "we" as a reference to the collective. This means that an organization needs to be assembled, and when assembled individuals act on behalf of- or for the organization it makes them representatives of this political entity. This aspect was key to understand how organizational learning occurred:

> Organizational learning occurs when members of the organization act as learning agents for the organization, responding to changes in the internal and external environments of the organization by detecting and correcting errors in organizational theory-in-use, and embedding the results of their inquiry in private images and shared maps of organization (Argyris & Schön, 1978: 29).

Accordingly, organizational learning would need members of the organization to inquire into the forces or theories-in-use, which are impinging on the current mode of organizational action. Through reflection, the organizational member, typically the manager, would have to 'discover that it is the norm for predictable management which they hold, perhaps tacitly' (their theory-in-use) that would create conflicts in relation to their objectives (p. 22). As such, when a group of managers (acting as learning agents for the organization) were brought together to reflect on current organizational issues, they would have to start revising current problematic theories of action. Yet, their learning would only become organizational when their revised individual theory of action was shared with a collective, hence, spread to- and adapt everyday collective action (organizational theories in use).

This mode of restructuring or learning, stipulated a mainly cognitive learning approach and the link between individual learning and organizational learning was to be found in the shared cognitive maps. Although stressing the importance of understanding what an organization means in professional attempts at organizing learning it prioritized organization as a human assemblage leaving out many non-human actors with durable properties in terms of stabilizing organization. Hence, how organizational practice actually is altered and made lasting in new forms remained undertheorized.

Organization as a Heterogeneous Network Effect

To advance an understanding of what an organization is and how it may learn, we follow Czarniawska (2013) and view organization not as a variable that explains behavior, but rather an assemblage to be explained, organization is 'the *state* of an organized body' (Starbuck, 2003: 156 in Czarniawska, 2013: 4). This understanding is consistent with a focus on the process of organizing (Weick, 1979; Robichaud et al., 2004, Robichaud & Cooren, 2013; Latour, 2013). Czarniawska (2013) suggest that what is to be explained is how a net(work) of actions come together (an action net), it is when connections between actions are stabilized, that the identity of an organization becomes visible. Likewise, Robichaud et al. (2004) argue that organizations is made up of a 'diversity of communities of practice', which recursively take part in a 'metaconversation' that makes organization something more than the different communities (see also Fox, 2000). As such, the organization is composed in a network of actions or communities and comes into being when one starts to perform like an organization. Viewing organization this way draw inspiration from ANT and STS. These latter literatures has among other things explored how certain technologies and scientific theories gain traction (becomes a fact) through a chain of
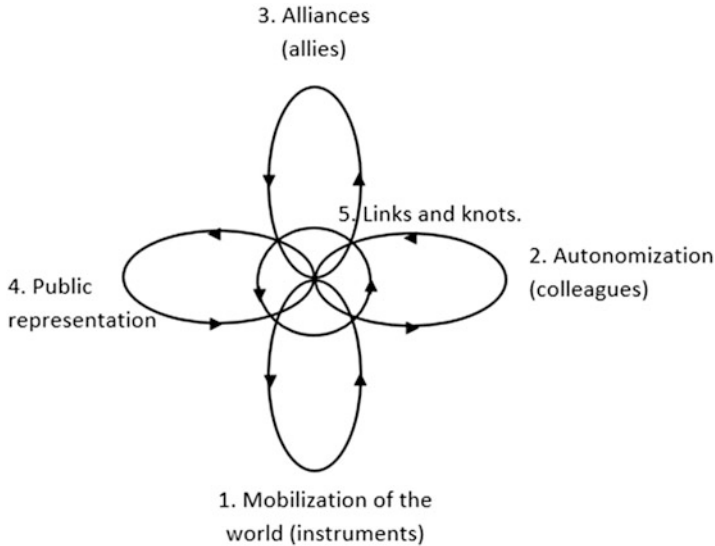
Fig. 9.1 Five entwined and non-chronological translation loops (Latour, 1999: 100)

translations in a network of actors (Latour, 1987: Callon, 1986). Here organization (a state of an organized body) is best understood as a network effect that links together devices, concepts, agents, spatial and institutional arrangements (see also Eyal, 2013), organization becomes a momentary accomplishment and translation of heterogenous actors that align. To translate means here, to interpret and redefine "another's interests or identity", hence, enroll actors into a network and become able to speak on their behalf (Michael, 2016: 164, Callon & Latour, 1981).

In order to investigate how organization is accomplished this way, we draw inspiration from Latour (1999) who suggest a process consisting of five entwined and non-chronological translation loops, which enable the circulation of scientific theories (Fig. 9.1). At the core we may consider a community of scientists at work, or in our case a diversity of professional communities of practice organizing a shared work task. Firstly, they need to 'mobilize the world', which is, they must produce data that makes the world intelligible for arguments. This data may come from certain instruments in a laboratory but it could also come from survey data or fieldwork, which the scientists then process into arguments (e.g. through statistics). Through this loop certain matters of concern 'are progressively loaded into discourse' (Latour, 1999: 99–100). Secondly, the results from the data do not travel by itself it needs to be recognized by colleagues in other communities, Latour calls this 'autonomization'. This means that colleagues have to be interested if a theory is to spread. Thirdly, this whole process needs 'alliances' not only among colleagues but with other communities like interest groups or professional organizations and policy actors. The fourth loop consist in 'public representation'. To get funding, to get a common sense understanding of the object of study, scientists also need to communicate with communities of civilians and the idea must be represented to costumers,

citizens or other parts, which are not directly involved. Finally, the fifth loop consist in 'links and knots', making scientific theories circulate is not just about instruments, interesting colleagues, creating allies and making public representations, it requires the community of scientist at the core producing evidence and concepts (in the laboratory), linking and knotting things together. Through this process we may observe a momentary organization where certain actors are able to speak on behalf of a chain of actors, which are now enrolled. Yet, this process may also involve counter translations from some of the communities that are attempted enrolled, which do not allow the scientists to speak on their behalf.

Looking at organization through this stance affords a distributed and heteroge-nous understanding of what makes an organization learn. Indeed, organizing becomes a recursive process that is made durable and lasting by being supported by a large net of entangled human and non-human collectives. Paraphrasing Fox (2000: 864), "we cannot think of the knowledgeable-skilled" manager that reflects and corrects a problematic theory-of-action "outside the prosthetic context of her or his tools and working materials". Rather, it is this context and the reconfiguration and stabilization of a net of heterogenous actors and communities, that must be taken into account to understand how an organization learn. Here organizational learning may be understood as a network of learning involving 'changes in knowledge and action' in a chain of actors (Lave, 2009: 201; Fox, 2000). We suggest that this translation loop take is particularly relevant to analyze, what we term, networks of learning as it traces the diversity of actors or communities contributing to making learning organizational.

Inter-organizational Learning: An Illustration from Organizing Health Care

Issues of cross-sector organizing in public healthcare is often highlighted in political discourses (Government, 2017, 2018). For instance, as part of the recent "Coherence reform" from the Danish Government, it is argued; "Tasks have to be solved in collaboration – not in individual silos. Relevant employees and managers must therefore make their knowledge and resources available when we solve the core tasks in the public sector without distinction to the field or sector" (Government, 2018: 17). It is within this political agenda that our case on a local initiative of experimenting with cross-sector collaboration is situated.

Readmissions and Cross-Sectional Organization in Continuity of Care

In 2018, the Danish hospital – North Hospital and a large Danish municipality – North Municipality (both anonymized) decided to initiate a project on new ways of

organizing, which was to address problems with frequent readmissions of vulnerable elderly patients. The initiative was a response to a general interest in improving the collaboration between the hospital and the municipality, and prolonged the Government imposed National Quality Program within Healthcare (Government, 2017). The initiative was particularly targeting frequent users of the healthcare system, mainly citizens with forms of dementia or multiple deceases who were often being readmitted and continuously passing between hospital departments, the municipality (or a nursing home), the general practitioner, and the emergency unit in the hospital. The high frequency of readmissions were resource-intensive and several of the involved stakeholders (patients, relatives, professionals) considered these readmissions as often unnecessary and maybe even damaging. The group of directors from the hospital and the municipality granted 400.000 DKK to the project and assigned two internal consultants, one from the municipality (Mary) and one from the hospital (Ann) to lead the project. As the patients would mainly circulate between the municipality (primary sector), the hospital (secondary sector) and general practitioners it was suggested bringing together a number of professionals from selected units at the hospital (Renal Medicine Department, the Bio Clinical Department and the two Emergency Departments), selected units in the municipality (a nursing home, an acute unit, and a discharge unit), and general practitioners into a project organization, which were to try solving problems concerning frequent readmissions.

The process in the project organization unfolded through two times 24-hour seminars and eight half-day workshops with a group of 22 participants. The group consisted of four general practitioners, nine municipal participants (home nurses and care workers) and nine hospital participants (doctors and nurses). Besides the seminars and workshops, the group also had monthly audit meetings where they would interrogate patient journals in order to figure out what was causing readmissions.

An illustrative case in these audits became an elderly patient who may be discharged on a Friday, but the day after the patient become ill again. Usually the discharge summary would be digital and written into an electronic patient record within three days after the patient was discharged, hence, causing numerous problems. Since the elderly person may not be able to communicate prior treatment (e.g. due to dementia), they will have to contact the emergency unit who cannot see the discharge summary and have to readmit the elderly person again. The general practitioner was neither connected to the hospital's electronic patient record, hence, they would never be able to read the discharge summary, thus, often ending up with a readmission of the patient. To overcome such issues, a series of experiments was initiated in the project group. Among them, they (1) hired a coordination nurse, which would be responsible for complex patients in the municipality and for training the care workers. Moreover, (2) a hotline was established between the Emergency Department at the hospital and the municipality. (3) A mobile lab solution was advanced, which consisted of a car that could drive from the hospital to the nursing home to take blood-tests and make an electrocardiogram (ECG). And finally (4), a written discharge summary procedure was established, which contained the

description of the treatment and diagnosis that would follow the patient when discharged from the hospital as a sort of 'boundary object' (Star & Griesemer, 1989). The experiment involved that the discharge summary would be written right after treatment, hence, a patient would never be discharged without a discharge summary, which could be brought to the general practitioner, a nurse in the municipality or to the emergency unit, if needed.

Research Approach

Our analysis below is based on a single case study of the organizational change attempt described above. The case was purposefully chosen as instrumental to our analytical ambition in this chapter, to understand how organization is enacted in inter-organizational change attempts (Stake, 2005). We encountered the project, described above, through the head of continuity of care, who was participating in the national healthcare improvement program for managers, which was part of the National Quality Program (Government, 2017). The second author of the chapter worked as a consultant on the national healthcare improvement program for managers for a period of 8 months. As part of the educational programme, the head of continuity of care was working with the project we focus on. Due to a shared interest in distributed and material aspects of organizational learning, the second author asked the first author to take part in the project as an outside observer. This role worked to discuss and challenge the analysis of the situation by the second author, who took notes and recorded videos of project presentations, which was then shared with the first author. The approach was inspired by Bourgoin and Bencherki (2013).

In addition to these observations, we leverage additional sources in our inquiry. This include documents, and observations at two presentations of the project by the first author and four interviews about the program (with managers and consultants) conducted by the first author. Although all of these sources work as an important backdrop to our analysis, we mainly draw on interviews with the head of continuity of care and the two consultants to describe our case. Interviews were transcribed and in combination with field notes we analyzed our material through a process of "categorizing" and "condensing" (Kvale, 1996). We soon realized that a crucial element in this process was how a project organization targeting readmissions was mobilized and gradually stabilized through various human and non-human allies. Here we found the work of Latour (1999) revelatory and we started focusing on how this organization was enabled by a process of (1) mobilizing the world through data, how (2) colleagues were convinced about the work of the project organization, how (3) alliances were build and supported the project organization, how the project organization was (4) represented to patients, citizens, employees at the hospital and in the municipality, and how different actors started to discuss the project further, and finally (5) how it was all continuously knotted and linked together in the project group. We considered these five elements as translation loops, which all contributed to translating and stabilizing a network of learning. The loops are not sequential, but all takes place throughout the process.

Translation Loop 1: Mobilizing the World Through Data

The two consultants was in spring 2018 assigned by the top management to lead the program on readmissions. Ann worked as a consultant at the hospital, working with quality improvement, likewise, Mary was working as a quality improvement consultant, yet, in the municipality.

Although the project was partially mobilized by a government-mandated policy of improving, patient quality and continuity of care (Government, 2017), it was still rather unclear how to create such an improvement, as Mary noted, and 'there was no project description'. In order to pursue the readmission agenda, Mary and Ann started to generate data on readmissions. As Mary explained:

> We started by looking into patient journals to figure out what kind of reasons for readmission that was stated there [. . .] Further, we went out to visit the bio clinical department at the hospital, who do blood tests, we visited the emergency unit at the hospital, we visited a nursing home in the municipality, we talked to general practitioners, interviewed patients etc. in order to figure out what was going on and where the difficulties happened [. . .] (Interview, Mary).

Several instruments was crucial to Mary and Ann to mobilize the world further and create evidence to the current issues. Interviews became a key instrument to get multiple perspectives on the problem of readmissions. A second instrument became patient data, Mary and Ann mapped patients' journeys through patient journals and further contacted the business intelligence unit at the hospital who had access to patient data and data on readmissions. This data not only allowed the consultants to get numbers on readmissions, but also provided a benchmark for their work for use in the continuing process. Mary and Ann mapped the trajectories of several patients, for instance, they were able to trace the trajectory of a citizen with 72 admissions, who had been travelling the system passing from the municipality, to the general practitioner, to the hospital and back again several times. Based on this they produced a visual overview.

In total, all these instruments (interviews, patient data, patient journals) was important to Mary and Ann in mapping out how this problem was distributed between the hospital, the municipality and the general practitioners, thus, translating their interests and role in this problem.

Translation Loop 2: Autonomizing the Work of the Project Organization

The consultants were able to assemble the group of 22 practitioners (containing general practitioners, hospital and municipal employees) and this project mode of organization was given the budget of 400.000 DKK. In June 2018 the consultants had the first meeting with the participants where they presented their initial data. Then followed two seminars, where they would brainstorm and settle on

experiments to initiate, which would be further managed at eight half-day workshops during the fall of 2018. Moreover, the monthly 'auditing' meetings was scheduled, here, they would look into patient journals both within respectively; the municipal; the hospital, and the general practitioner journal system. The journals were not part of the same IT system, hence, there was a need to compare them manually to infer issues concerning readmissions and collaborative difficulties. For instance they found how the bioclinical department and general practitioners was lacking trust in the blood tests taken in the municipality, which caused several readmissions.

In continuation of this, the participants were encouraged to come up with suggestions for solutions. The plan was now to translate the various suggestions into concrete experiments, which the project organizational members would share responsibility leading. Several experiments was initiated, among them (the above presented) 'written discharge summary' that would follow the patient providing a solution to the lack of knowledge sharing between the hospital, the municipality and the general practitioners. Moreover, the 'mobile lab' consisting of a car connecting the hospital to the nursing home to take blood-tests and make electrocardiograms (ECG) providing a solution to the lack of trust in the blood tests taken in the municipality. These experiments provided an important vehicle for not only stabilizing the work done in the project group but also connecting to colleagues, hence, gradually autonomizing the work of the project organization. Each experiment would require changes to be made at the hospital, in the municipality and among the general practitioners. Hence, it was not just a matter of convincing people in the project organization about the issues with readmissions but also a matter of transposing these new insights back to their respective occupational communities. Using the metaphor of 'ripple effects', the consultants explained that the participants 'created ripple effects of the work in the project organization' (Interview). For instance, Mary had observed at a meeting in the municipality, from which she reported:

> Yesterday at a meeting in the municipality, several care workers was expressing difficulties in relation to the hospital and making the doctors collaborate. Then one of the nurses [member of the project organization] told that she had great success with collaborating with the doctors at the hospital based on calling the hospital [one initiatives from the project]. She continued and told, that it is because you have to approach them in a certain way, you have to highlight certain issues, then the doctors will listen.

Such stories animated other care workers to try again. Put differently, convincing colleagues in other communities about the relevance of the project and the need for changing procedures, was enabled by practitioners sharing occupational background speaking to each other about the need for change. As a charge nurse explained:

> I feel another presence when the project is something that I am shaping or the clinicians I am collaborating with are co-creating with me. It is not just a bureaucratic task that we are given, or maybe it is in some way a bureaucratic task but we are in charge of it. We are talking upwards into the bureaucracy rather than the other way around (Interview).

Indeed, several of the participants did stress that a new mode of organizing or 'a new interstitial community' (Interview, manager hospital) was getting established,

which was spanning the municipality, the hospital and the general practitioner – the project organization was achieving a new autonomous mode of organizing.

Translation Loop 3: The Importance of Alliances

The project organization would, however, probably not have made it of the ground if it was not due to some very important alliances. Indeed, the project had political support through the government initiated quality program and first started at the board level of the hospital and the municipality with an intention to enable cross-sectorial collaboration through the creation of a 'common finance, common goals and common framework' strategy (internal document). These actors translated the project into being in the first place and Mary and Ann was partially enrolled into the agenda of readmissions by those executives. In continuation of Mary and Ann's enrollment the design of the process started to emerge and two groups were enrolled to follow the project as support groups. One 'executive group' consisted of the municipal and hospital executives and the chairman of the general practitioners. A second 'expert group' was also following the project, this group consisted of a group of key stakeholders, such as, the head of quality improvement at the hospital and the head of quality improvement in the municipality. Mary and Ann underscored the importance of such strategic collaborators, not least, in the beginning of the project, as Mary noted:

> I don't think you should underestimate the importance of having the chairman of the general practitioners in the region enrolled and as part of the executive support group. It showed some kind of support and belief in the project [. . .] (Interview).

Having alliances with strategic stakeholders meant a lot in, for instance, convincing the general practitioners to participate in the project, as such, these alliances also contributed to enabling autonomization and convincing colleagues about the project.

Alliances to the project organization also meant money. Both the municipality and the hospital agreed to bring 200.000 to the table, thus, in total 400.000 DKK for projects in the project organization. Although this amount provided a relatively limited budget, this amount of money made it possible to pay the general practitioners to participate, 'without which it could have been difficult to convince them to participate', Ann argued, since general practice runs as private businesses in Denmark. It also made it possible to finance some of the initiatives, for instance, employing a coordination nurse to help educate some of the employees in the nursing home to prevent readmissions, or buying the ECG unit. The project group collectively decided how to spend the money and entitled the members to make decisions on behalf of the group. Moreover, the money also allowed the group to make more durable inscriptions of their work, for instance, the ECG unit became an important non-human ally as it together with the blood-tests composed the mobile lab.

Translation Loop 4: Stabilizing a New Mode of Organization Through Public Representation

The project had much awareness at executive level from the very start. Yet, Mary and Ann, and other participants in the project also had to explain along the way to the various supporters what they had found out. Hence, Mary and Ann were on an ongoing basis performing some articulation or maintenance work in relation to the support groups. The results from the experiments was also communicated in a report, which stated that the number of readmissions had decreased by 20% in the period from September to December 2018. Moreover the report provided a series of illustrative quotes from participants, for instance:

> With the discharge summary in my hand, as a doctor, I can make more qualified decisions and contribute to better and more appropriate patient pathways (chief physician, hospital).

By communicating the results to the broader public at the hospital and in the municipality, Mary and Ann, received extended support. The results of the project quickly spread and people outside the hospital became interested calling for Mary and Ann to tell about their work. As such, Mary and Ann was invited to a government agency, another hospital and a municipality, to speak about their findings. While this may be said to be of limited importance to the project, it nonetheless contributed by making a strengthened self-understanding of what they had actually achieved and it was neither unnoticed at the hospital or in the municipality. As Ann noted:

> Our director at the hospital has been speaking very positively about our work [and experiments], which among other things mean that the new procedure of discharge summary is now being inscribed in our strategy (Interview)

The discharge summary had appeared as such a great success that it became inscribed in the new strategy of the hospital. The hospital director started to speak about the results at public appearances and from 2019 the hospital would start to gradually initiate the discharge summary procedure at certain departments with an ambition to gradually scale it up to all departments. As such, the public representations were critical not only to the project's initial success but also translated the work of the project organization further, thus, making the project have increasingly lasting properties.

Translation Loop 5: Linking and Knotting

Although the four loops are crucial for enabling the work of the project organization, the linking and knotwork performed by the participants and the consultants across organizational communities is essential to the stabilization of the project. Through their auditing work and at the various seminars and workshops the project organization produced a number of new insights. This knotwork consisted in the first place

in connecting all the experiences from the participants and the auditing of the patient journals. What the project organization was doing in these situations was to negotiate what was important and the meanings of the future experiments. Further, during the auditing meetings, new reasons for readmissions were continuously discerned, hence, this animated experiments and small adjustments along the way, as a municipal nurse explained:

> The audits are a window into each other's worlds [. . .] through the audits we interrogate the patient trajectories and figure out the pitfalls, and whether a citizen should have been hospitalized, or if they were discharged before being ready.

While the audits were important, all these experiments were not performed without 'follow-up', and the knotwork in the project group changed slightly as new data was discernable, as Mary explained:

> The workshops has then been used to follow-up on how the experiments works. We provided new data, which we could benchmark with old data [. . .] We used the updated patient data along the way [. . .] we were able to show a statistically significant reduction in the number of readmissions through our experiments [. . .] these achievements was communicated back to the participants at the meetings. (Interview)

Hence, the data afforded new evidence on how to strengthen the collaboration across boundaries. Further, the participants performed much discursive linking and knotting between the work of the project organization and their home communities. This also meant, that when they found that something was working well, the participants would translate this between their everyday practice and the project organization. While the project organization would not work without the other 4 loops, it was due to the content produced in the project organization that the other loops became actualized.

Discussion and Concluding Remarks

Through the analysis we have provided a case of how a new (interstitial-) organization was built in a network of communities- at the hospital, the municipality and the general practitioners. In the case we see how the project organization became a 'tool' (Perrow, 1986) for 'reducing equivocality' (Weick, 1979: 3) in relation to readmissions. This state of organization stabilize through the translation of a heterogeneous chain of actors including durable material entities such as a mobile lab and a written discharge summary but also translations through colleagues, IT systems or patient journals and important allies in the top management. This circuit of actors and communities constitute, what we term, a network of learning where each actor and community depend on exchanges with others and their changes in knowledge and action (Eyal, 2013). This concept differ from prior studies of learning networks (Powell et al., 1996) by drawing inspiration from ANT and our analysis contribute novel insights to both literature on organizational learning and ANT-inspired organization studies.

To Argyris and Schön (1978) (inter-)organizational learning involved a new shared map or creation of a (inter-)organizational theory of action. Our study provides empirical credence to this work and how people are acting as agents of (their home) organizations or communities to revise a theory of action. As Argyris and Schön suggest in relation to interorganizational learning:

> The assumption is that whenever organizations interact, it is through their agents; these agents form a temporary organization in order to manage their interactions; and these agents can help their temporary organization to be more effective by using the same values, knowledge, and competences required to maintain effective internal environments in the respective organizations (Argyris & Schön, 1978: 268).

Yet, Argyris and Schön reduced the link between the temporary organization and their home communities to a cognitive matter. In contrast, we suggest that the new mode of (inter-)organization, is to be understood as a changed network configuration, which involves new entanglements of social and material worlds. Put differently, organizational learning requires the mobilization of a large network of actions, which is in need of incessant linking and knotwork. What was lacking in the theory of Argyris and Schön (as Levitt & March, 1988 also notes) was a more elaborate understanding of how a new mode of organization is composed and made durable (in not only cognitive terms).

Yet, by drawing inspiration from ANT our analysis make further translations. As Czarniawska (2014) notes, we must not conflate the construction of scientific facts with processes of organizing in general. In the studies of the constructing scientific facts we often end up with one community or what Latour (1987, 1999) calls a "center of calculation" where the knotting and linking is done (e.g. a community of scientists in a laboratory), which sensitize us to one actor becoming powerful (c.f. Fox, 2000: 864). Our study of organizing advance multiple centers of calculation, meaning multiple sites where problems, solutions and outcomes is calculated (e.g. the hospital, the project organization, the municipality, the chairman of general practitioners), which enroll each other in different ways. Our study do not have a center site like a laboratory but we see multiple actors speaking on behalf of the project organization and their home organizations, as such, making the whole learning process becomes a pluricentric endeavor. As such, Mary and Ann is not to be mistaken as kinds of practical scientists who become the sole representatives of the project organization (their lab). Indeed, the project organization has various organizational attachments, it is also the top management at the hospital, the municipality, and the various participants from diverse communities who all recursively take part in stabilizing the project organization within a network of learning.

In sum, although our analysis has certain boundary conditions, in terms of a relatively narrow focus and a small-N data source (Tsoukas, 2009), we believe it provides important and illustrative insights to the still important question 'what an organization is that it may learn' (Argyris & Schön, 1978) and how inter-organizational learning may be considered (Powell et al., 1996). Moreover, we imagine a focus on how an organization is assembled and made durable through

heterogeneous linking and knotwork should be of great interest to both scholars within organization studies and practitioners of organizational learning.

References

Argyris, C., & Schön, D. A. (1978). *Organizational learning. A theory of action perspective*. Addison-Wesley.

Bencherki, N., & Trolle Elmholdt, K. (2020). The organization's synaptic mode of existence: How a hospital merger is many things at once. *Organization*, Online first. https://doi.org/10.1177%2F1350508420962025.

Bourgoin, A., & Bencherki, N. (2013). The performance of authority in organizations: An example from management consulting. *Academy of Management Proceedings, 2013*(1), 10055.

Burnes, B. (2004). Kurt Lewin and the planned approach to change: A re-appraisal. *Journal of Management Studies, 41*(6), 977–1002.

Burnes, B., & Cooke, B. (2013). Kurt Lewin's field theory: A review and re-evaluation. *International Journal of Management Reviews, 15*(4), 408–425.

Callon, M., & Latour, B. (1981). Unscrewing the big Leviathan: How actors macro-structure reality and how sociologists help them to do so. In *Advances in social theory and methodology: Toward an integration of micro-and macro-sociologies, 1*. Routledge.

Callon, M. (1986). 1986: Some elements of a sociology of translation: Domestication of the scallops and the fisherman of St Brieuc bay. In J. Law (Ed.), *Power, action and belief: A new sociology of knowledge* (pp. 196–232). Routledge.

Czarniawska, B. (2013). Organizations as obstacles to organizing. In *Organization and Organizing* (pp. 27–46). Routledge.

Czarniawska, B. (2014). *A theory of organizing*. Edward Elgar Publishing.

Du Gay, P., & Vikkelsø, S. (2016). *For formal organization: The past in the present and future of organization theory*. Oxford University Press.

Easterby-Smith, M. (1997). Disciplines of organizational learning: Contributions and critiques. *Human relations, 50*(9), 1085–1113.

Elkjaer, B. (2017). Organizations as real and ephemeral. *Zeitschrift für Weiterbildungsforschung, 40*(1), 53–68.

Elkjaer, B., & Nickelsen, N. C. M. (2016). Intervention as workplace learning. *Journal of Workplace Learning, 28*(5), 266–279.

Eyal, G. (2013). For a sociology of expertise: The social origins of the autism epidemic. *American Journal of Sociology, 118*(4), 863–907.

Fenwick, T. (2015). Sociomateriality and learning: A critical approach. In *The SAGE handbook of learning* (pp. 83–93). Sage.

Fox, S. (2000). Communities of practice, Foucault and actor-network therory. *Journal of Management Studies, 37*(6), 853–868.

Government. (2017). *Nationale mål for sundhedsområdet*. https://www.sum.dk/Temaer/~/media/Filer%20-%20Publikationer_i_pdf/2018/Nationale-maal-version-2-2018/Nationale-maal-for-sundhedsvaesenet-2017-version-2.PDF

Government. (2018). *Sammenhængsreform: borgeren først—en mere sammenhængende offentlig sektor*. Finansministeriet.

Ingerslev, K., & Elmholdt, C. (2012). Grænsekrydsende innovationsfællesskab: et organisationspsykologisk blik på offentlig innovation. In N. C. Nickelsen & M. Bendixen, *Innovationspsykologi* (red.) (pp. 109–138) Dansk Psykologisk Forlag.

Kvale, S. (1996). *InterViews: An introduction to qualitive research interviewing*. Sage.

Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*. Harvard University Press.

Latour, B. (1999). *Pandora's hope: Essays on the reality of science studies*. Harvard University Press.

Latour, B. (2013). *An inquiry into modes of existence*. Harvard University Press.

Latour, B. (2005). *Reassembling the social—An introduction to actor network theory*. OUP.

Lave, J. (2009). The practice of learning. In K. Illeris (Ed.), *Contemporary theories of learning: Learning theorists... in their own words* (pp. 200–208). Routledge.

Levitt, B., & March, J. G. (1988). Organizational learning. *Annual Review of Sociology, 14*(1), 319–338.

Lewin, K. (1947). Frontiers in group dynamics: Concept, method and reality in social science; social equilibria and social change. *Human Relations, 1*(1), 5–41.

Michael, M. (2016). *Actor-network theory: Trials, trails and translations*. Sage.

Morgan, G. (1986). *Images of organization*. Sage.

Nicolini, D. (2012). *Practice theory, work, and organization: An introduction*. OUP Oxford.

Perrow, C. (1991). A society of organizations. *Theory and society, 20*(6), 725–762.

Perrow, C. (1986). *Complex Organizations: A Critical Essay* (3rd ed.). Random.

Powell, W. W., Koput, K. W., & Smith-Doerr, L. (1996). Interorganizational collaboration and the locus of innovation: Networks of learning in biotechnology. *Administrative Science Quarterly, 41*(1), 116–145.

Robichaud, D., & Cooren, F. (Eds.). (2013). *Organization and organizing: Materiality, agency, and discourse*. Routledge.

Robichaud, D., Giroux, H., & Taylor, J. R. (2004). The metaconversation: The recursive property of language as a key to organizing. *Academy of Management Review, 29*(4), 617–634.

Selznick, P. (1949). *TVA and the grass roots: A study in the sociology of formal organization* (Vol. 3). University of California Press.

Stake, R. E. (2005). Qualitative case studies. In: Denzin, Norman K./Lincoln, & Yvonna, S. (Eds.), *The Sage Handbook of Qualitative Research* (3rd ed., pp. 443–466). Thousand Oaks.

Star, S. L., & Griesemer, J. R. (1989). Institutional ecology,translations' and boundary objects: Amateurs and professionals in Berkeley's Museum of Vertebrate Zoology, 1907–39. *Social Studies of Science, 19*(3), 387–420.

Swan, J., Scarbrough, H., & Robertson, M. (2002). The Construction of `Communities of Practice' in the Management of Innovation. *Management Learning, 33*, 477.

Taylor, J. R., & Van Every, E. J. (2014). *When organization fails: Why authority matters*. Routledge.

Tsoukas, H. (2009). Craving for generality and small-N studies: A Wittgensteinian approach towards the epistemology of the particular in organization and management studies. In *The Sage handbook of organizational research methods* (pp. 285–301). Sage.

Weick, K. E. (1979). *The social psychology of organizing* (Topics in social psychology series). McGraw-Hill Humanities.

Williamson, O. E. (1975). *Markets and hierarchies*. Free Press. *2630*.

Chapter 10
Healthcare Technology and Telemonitoring: Overcoming Barriers to Collaboration Between Healthcare Contexts

Niels Christian Mossfeldt Nickelsen and Stine Rath

Abstract The use of telemonitoring services by patients with chronic illnesses is now increasing in many countries. This chapter scrutinises technologically driven rehabilitation services as a form of collaboration between municipal health centres, general practitioners and outpatient clinics at hospitals in Denmark. Three social worlds of care and their shared discursive spaces, commitment to action and infrastructures are identified. We arranged a workshop for a composite group of stakeholders to discuss care values in light of an impending mandatory national roll-out of telemonitoring. The workshop was based on 16 interviews and participants' photos and logbooks. The interviews focused on good practices at the sites in question, which we analysed before the workshop so we could start this workshop by presenting key interview themes. At the workshop three issues were discussed: (1) what makes good telemonitoring? (2) Possible future collaboration, and (3) Where are the obstacles? Based on interactionist ideas of learning as reflexism and joint action, we argue that workshops provide the opportunity both to learn and to develop collaboration between healthcare contexts. Collaboration (and obstacles) do not only include people: applications, gold standards, medication and financial arrangements are also involved in both creating and hampering collaboration. The contribution of the chapter is a critical discussion of the contemporary challenges involved in the increased use of technology in healthcare. Overcoming barriers to collaboration between contexts of healthcare is one of the main challenges to the currently strong focus on implementing technologies for chronic disease management. We conclude that the workshop participants learn to cope with telemonitoring as a contested arena inflicted with a number of different values and actions.

Keywords Social worlds analysis · Joint action · Telemonitoring · Care values · Collaboration · COPD

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Introduction

Healthcare services now include technology on a previously unseen scale (Mertz et al., 2014). Much is at stake because people live longer and a growing number of people live with chronic illness and co-morbidity. Healthcare technology is not only clinical and educational, but also political. We discuss the implications for healthcare professionals who are obliged by political requirements to develop collaboration between different areas of expertise. A number of researchers argue that telemonitoring may offer a safe form of care for people living with chronic illness (López Gómez, 2015; Moser, 2019; Nickelsen, 2019). In this chapter we investigate this by looking at collaboration between healthcare professionals from the perspectives of three different institutional contexts: a health centre, general practitioners (GPs), and an outpatient clinic focusing on the rehabilitation of patients suffering from chronic obstructive pulmonary disorder (COPD). In order to do this, we arranged a workshop to start a discussion on this particular collaboration. We prepared the workshop by gathering data on good patient flows, and we are inspired by interactionist notions such as learning as reflexism, joint action (Blumer, 1969), and infrastructure (Star, 1999). The research question guiding our study was: How can an experimental workshop on COPD telemonitoring involving professionals from different contexts help to overcome barriers to collaboration? There has been little focus on the irreconcilable values leading to uncertainties about the best way to coordinate chronic disease management, and research is needed about the barriers to collaboration between professionals. The purpose of this chapter is to understand and overcome the barriers to collaboration between the healthcare contexts in which telemonitoring is practised. In line with interactionist notions, we arranged a workshop to start a discussion on collaboration between health centre nurses, general practitioners (GPs), and healthcare professionals from a clinic focusing on the rehabilitation of patients suffering from COPD.

Background

In 2017, the National Board of Health in Denmark set up an expert panel to make recommendations for collaboration between healthcare professionals on telemonitoring for COPD patients, stating that the purpose of the national roll-out of COPD telemonitoring is:

> To contribute to potential positive effects with regard to both health and socio-economics. The aim is to help the individual COPD patient to act on their own symptoms in order to achieve increased quality of life, satisfaction, security and consequently fewer or shorter consultations and admissions and re-admissions to hospitals (translated by the authors) (Sundhedsstyrelsen, 2017).

The expert panel's report provides detailed recommendations in terms of target group, health professional content and collaborative routines. Among other things,

the experts propose principles to guide the division of labour between healthcare contexts. The recommendations deal primarily with so-called exacerbation (inflammation) at an early stage to avoid expensive admissions to hospitals. In the report, COPD is clinically classified into the categories A, B, C and D based on three parameters: spirometry, symptoms, and exacerbations[1] (Lange, 2020). According to these categories, telemonitoring services aim at category D patients (patients suffering the most). The experts further propose that GPs refer their patients to telemonitoring services, and that the GP and the telemonitoring nurse jointly make a plan of action for the patient's telemonitoring process. This includes weekly figures (oxygen saturation, heart rate, weight and a symptom score) sent from the patients' home to the telemonitoring nurse. After a few weeks, these figures should be evaluated collaboratively by the GP and the nurse (Sundhedsstyrelsen, 2017).

The expert report presupposes the existence of a coherent healthcare system which collaborates deliberately between professional groups in the interest of patients; and subscribes to a neo-liberal view of the individual (patients acting on their own symptoms) and a cost-reduction agenda (fewer admissions to hospitals). Unfortunately, there is a disturbing gap between the imaginaries of the experts (Jasanoff & Kim, 2015) and the actual level of collaboration between health centre nurses, GPs and clinic professionals. In order to help bridge this gap, and in light of the mandatory national roll-out of COPD telemonitoring, we thought it appropriate to hold a workshop with the explicit purpose of understanding more and pointing to better ways of collaborating between healthcare professionals and institutional contexts. In this connection, we wanted to confront the healthcare professionals with the expert group's proposals. In terms of the report, we wanted to understand what they have already done and what they plan to do together.

Barriers to Collaboration

Workshops as tools for learning about cross-professional collaboration are not new. There have been many experiments based on workshops focusing on social work (Edwards, 2009; Fatchett & Taylor, 2013) and healthcare (Boud & Garrick, 1999; Engeström, 2000; Gregory, Hopwood, & Boud, 2014; Kent, Courtney, & Thorpe, 2018). Nickelsen & Bal (2021) have studied how workshops may support the adaptation of health technology, but little is known about tools to support collaboration between institutional contexts and groups of professionals in relation to telemonitoring. Many obstacles to collaboration between professionals regarding telemonitoring have been described. Ten years ago May et al. argued that four key barriers hamper telemonitoring services for patients with chronic diseases: (1) Uncertainties about coherent service and business models; (2) Lack of coordination

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[1]In the section 'Social world 2. COPD rehabilitation as gold standards' we explain in detail what gold standards entail.

between primary and secondary care; (3) Lack of incentives to include telemonitoring within primary care services; and (4) Lack of a sense of continuity between previous service provision and self-care work undertaken by patients themselves (May et al., 2011). It seems that a lack of coordination between primary and secondary care always complicates collaboration. Uneven integration may well stem from incomplete understanding of the role of telemonitoring and subsequent deficient adaptation to different healthcare contexts.

We have structured the chapter as follows: First, we introduce the empirical focus, the analysis leading up to the workshop and the workshop participants. Second, we present the analytic approach, which is inspired by the framework of social worlds/arenas. We explore the social worlds involved in the COPD telemonitoring arena and sum up by focusing on the commitments of the social worlds that have been identified and the barriers to collaboration. The discussion focuses on how the workshop supported the development of collaboration, and we conclude that the participants became more aware of the larger structure, i.e. the ecology of telemonitoring services, through the discussions during the workshop.

Telemonitoring as Collaboration – Introducing the Field of Research

Telemonitoring involves activities that are intended to support patients at a distance. Many different terms are used in this field (for instance telemedicine, telecare and telehealth). These cover slightly different activities. We use the term 'telemonitoring' to focus on the rehabilitation of patients by monitoring figures sent from home via an app to a nurse. Similarly, we use the term 'patient' rather than 'citizen'. In doing so, we stress that the focus is on people needing help – not simply people with political rights. We then extract a number of social worlds involved in the COPD telemonitoring arena. We seek to understand the nature of relations between groups of people, things and actions that take place. The criteria for what constitutes a social world are: (1) shared discursive spaces, (2) shared commitment to action, and (3) shared infrastructure that connect members of social worlds both internally and in relation to other social worlds. As mentioned above, the empirical background of the analysis is the national roll-out of COPD telemonitoring in Denmark. However, due to security issues regarding the common ICT platform, the government has now postponed this roll-out several times. Therefore, this intervention begs the question of how to develop collaborative practices between the contexts of healthcare.

Before the workshop, we interviewed the 16 workshop participants using a semi-structured interview model. Six nurses, four GPs, two healthcare professionals from the clinic and four COPD patients were interviewed. The interviews focused on beliefs about good patient flows. A research assistant transcribed all the interviews verbatim. The analysis took place before the workshop. We also instructed the

participants to prepare for the workshop by taking pictures and making notes in a logbook of what they believe makes a good life with COPD telemonitoring (Warren & Shortt, 2017).

The workshop took place at the municipal health centre and lasted 3 h. The first author opened the workshop by presenting key themes relating to good patient flows which had been expressed in the interviews. The participants then took turns to present their pictures and notes indicating what makes a good life with COPD telemonitoring. Then followed a discussion of how to collaborate on telemonitoring services, and a discussion of barriers. A research assistant made a detailed summary of the workshop.

Results

We will now introduce three social worlds that appeared during the study by way of different ideas and practices to support COPD patients: (1) Telemonitoring in the form of weekly home measurements, (2) COPD rehabilitation as gold standards, and (3) COPD rehabilitation in the form of self-help treatment. By describing social worlds in detail as shared discursive spaces, commitment to action and infrastructure, we seek to identify the conditions for future collaboration between the three healthcare contexts involved in the telemonitoring support of COPD patients.

Social World 1. Telemonitoring in the Form of Weekly Home Measurements

At the health centre, the telemonitoring service is based upon patients' collaboration and the idea of 'Bring Your Own Device' (BYOD). Patients download an app ('Open Tele') on their own tablet or smartphone, and can then measure oxygen saturation and heart rate at home with an appliance provided by the health centre. Together with responses to a symptom score, the patients send figures to the health centre. No data is transferred to the GP or to the clinic. However, patients can use their own device to share figures with the GP and the clinic.

The patient interface explains how to carry out measurements and provides educative information about COPD. The nurse interface comprises a bell system. If a green bell appears, everything is fine. If a blue bell appears, the patient has forgotten to submit figures. If a yellow or red bell appears, there is a mismatch between current and former figures. A red bell indicates an impaired condition, and the nurse immediately has to call the patient to follow up on the problem. The nurse can analyse changes over time on a graph and and she can contact the patient by phone or by text messaging. All the workshop participants explain that they regard the set-up as safe. One of the biggest advantages, they explain, is that it ensures

continuous contact between nurse and patient. In many cases COPD patients are anxious about not being able to breathe – even of dying. To them, having continual contact with a nurse is invaluable. A health centre nurse explains this at the workshop:

> We don't worry too much about how good or bad the patients are. If they think there is a need for telemonitoring, we include them in the programme (translated by the authors).

The health centre, in other words, accepts all patients in need of telemonitoring. The unique feature of the health centre model is the division of patients into two programmes. (1) The self-monitoring patients simply download the app and start monitoring themselves. (2) The second group is monitored by a nurse and gets feedback every week. Patients can switch between the two programmes if they like.

According to the nurses and managers at the health centre, the municipality is a pioneer in Denmark when it comes to telemonitoring services for chronically ill patients. One of the reasons for this is that the director of health and care at the centre is actively involved in both national and regional boards. He also often acts as an informant in relation to health technology in the media. One nurse comments:

> We have a director who very much wants us to be telemonitoring first movers. This is something that requires commitment and a firm approach. There are some costs when you really want to do something new (translated by the authors).

This commitment relates interestingly to the issue of telemonitoring as a business case. According to the Danish organisation for the healthcare system (the DRG), municipalities are required to pay up to one-third of the expenses when regional hospitals admit a patient. So health centres have a strong financial incentive to build up telemonitoring services to reduce the number of patients being admitted to hospitals. By detecting inflammation at the earliest possible time, municipalities can save money. The cost of admissions to hospital is undoubtedly an important factor motivating municipalities to establish reliable telemonitoring services.

Social World 2. COPD Rehabilitation as Gold Standards

The GPs are difficult to access as informants. This became evident when we opted to invite them to the workshop. In several instances it was not possible to call a GP without identifying ourselves as patients. In addition, GPs' e-mail addresses are often not publicly accessible. When we showed up in person, we met secretaries because the GPs had waiting rooms full of patients. Nevertheless, we succeeded in having four 30–60 minute interviews with GPs before the workshop (one of them comprising two GPs). They all follow the accredited stratification of gold standards A, B, C and D prepared by the Danish Association for General Medicine (DSAM). These gold standards are presented in a chart demonstrating what characterises A, B, C and D in terms of symptoms and inflammation. In addition, the table's other fields show prescriptions of medication, advice on movement,

smoking cessation, etc. The gold standard allocates different tasks to the GPs and the clinic respectively. While the GPs take care of gold standards A, B and C, the clinic is responsible for gold standard D. A, B and C patients are offered one or two yearly lung function checks by the GP, and can visit their GP as often as they like.

All the GP services are reimbursed in relation to a detailed tariff agreement between the Ministry of Health and the GPs' association. These tariffs are negotiated based on operations such as a vaccination, a 5-minute phone call, or a 10-minute consultation. Not least, the GPs are assigned a number of mandatory conditions. For instance, a so-called chronic illness fee. They receive a one-off annual fee that covers chronically ill patients with diabetes, dementia and COPD. This fee covers all treatment, no matter how much or how little treatment the GP provides. According to our participants, telemonitoring requires engagement in chronic patients, while the chronic grant unfortunately withdraws engagement.

However, the GPs explain that they fear that telemonitoring is in danger of disrupting an effective, accredited practice (gold standards). During the workshop, it became apparent that the group of COPD patients is diverse. While some live 'normal' lives and can hold down a job, others are very ill. Some are ashamed of their condition and hide at home because they feel that their problem is self-inflicted (for instance if they are unable to stop smoking). When patients present their GPs with their telemonitoring figures on a tablet or phone, the GPs say that they do not have the time to assess the implications properly. This is because the standard consultation time is estimated at 10 minutes, which is not enough time to interpret results in an app that the GP does not immediately recognise. GPs are committed to gold standards which they find easily accessible and useful as instructions about what to do with COPD patients with various needs. The one-off annual chronic illness fee seems to be particularly demotivating, and it is clear that there is no financial incentive (or indeed any other incentive) for GPs to engage in COPD telemonitoring.

Social World 3. COPD Rehabilitation in the Form of Self-Help Treatment

During the pre-workshop interview with the specialist physician in charge at the clinic, he explains:

> The literature shows there is no reliable knowledge about which patients benefit from telemonitoring, what types of telemonitoring services work, and what preferences the patients have. However, a number of studies show significant improvement in quality of life in the telemonitoring treatment group compared with the control group. We cannot rule telemonitoring out, but there is a need for more research (translated by the authors).

This doctor believes that telemonitoring may be an important safety factor for COPD patients. However, there is no documentation that telemonitoring does in fact reduce the risk of re-admission to hospital. Although guidelines propose that clinics

ought to monitor gold standard D patients (Sundhedsstyrelsen, 2017), the clinic has not yet started to do this. As an alternative, the clinic launches collaboration projects with nearby municipalities with regard to self-help treatment. As part of self-help treatment, the doctor prescribes antibiotics and prednisolone in advance. So in case of inflammation, the medication is already in the home and the treatment can start immediately. According to the specialist physician in charge, the question is which is the quickest way to prevent further inflammation: telemonitoring or self-help treatment? The doctors at the clinic, he explains, regard telemonitoring as over-dimensioned in relation to the relatively simple aim of initiating treatment rapidly in case of inflammation.

At the workshop, the managing nurse at the clinic presents her pictures and notes. Her photos are all screenshots of referrals. She explains that the clinic engages in many cross-site collaborations regarding self-help treatment. Moreover, she emphasises that the clinic prioritises buying blood-purifying devices for the patients with the most serious illnesses. In short, the clinic does not do telemonitoring. Instead, it seeks to identify inflammation at an early stage by promoting self-help treatment through a number of cooperation channels.

Social Worlds/Arenas and Learning

Symbolic interactionism has its historical roots in the Chicago School of Sociology, drawing on pragmatist philosophers like Mead (1967) and Dewey (1922). Blumer is a student of and heir to Mead's intellectual project. He has made a ground-breaking contribution to understanding joint action (Blumer, 1969). He argues that objects (technologies) are constituted through the meaning they have for those in relation to whom they are objects. That is, objects arise out of the way persons interact with them. He proposes three theses for meaning making: (1) People relate to their surroundings on the background of the meaning the outside world has to them; (2) They create this meaning in social interaction; and (3) Social interaction is a continuous reinterpretation of meaning (Blumer, 1973; Hviid Jacobsen et al., 2014). The implicated self/world is vis-à-vis other selves/worlds instead of merely a being in the world. That is, one situational text speaks with the other (Mead, 1967 p. 135). In other words, symbolic interactionism is a truly relational approach. In collaboration, agents piece actions together by interpreting gestures, language and objects. Hence, they create joint actions to cope with the 'world' by fitting their conduct (Blumer, 1969 p. 70). Thus, joint action is conduct by way of the constant mutual interpretation of ongoing activities and effects. Mead called this 'learning as reflexism' (Blumer, 1969). This, we believe, is a useful theoretical background for our discussion about workshops, because it gives us both the opportunity to stay with the relationality of the field being studied, and to reflect on the role of mutual interpretation in developing collaboration between healthcare contexts.

Following from the above, the core idea of 'social worlds analysis' is that the meanings of phenomena lie in their embeddedness in relationships. Universes of

discourse (Mead, 1967) or social worlds (Strauss, 1978, 1984) are defined as shared discursive spaces through which common symbols and joint actions emerge. Social worlds may segment into multiple social worlds and eventually merge with other social worlds with which they share commitments. If the number of social worlds becomes large and conflictual, the whole may be analysed as an arena (Clarke & Star, 2008 p. 116). Thus, an arena is composed of multiple social worlds organised ecologically around issues of mutual concern (Clarke & Star, 2008). The social worlds/arenas framework seeks to understand the nature of relations between groups of people and things constituting the arena in question. It is a contingency and situated perspective on organising and learning (Brown & Duguid, 1991; Lave, 1991). Since the 1980s, interactionists have increasingly used the social worlds/arenas framework in studies of social and cultural aspects of technology (Clarke & Star, 2008 p. 115). The social worlds/arenas framework encourages the inclusion of the exploration of virtual and technical infrastructure as a deeply rooted aspect of social worlds analysis. The work of Star and colleagues has greatly influenced thinking about technologies and infrastructure (Bowker & Star, 1999; Star, 1999; Star & Ruhleder, 1996). Infrastructure involves big urban technological power networks, water pipes, the internet and situational interactions between people and things. It constitutes the building blocks that implicate who communicates with whom about what. Infrastructure is most often invisible and embedded in the background residing inside other structures and arrangements.

Infrastructure is interesting in relation to implementing telemonitoring services because figures (and other standards) sent from home form relations not only between patients and healthcare professionals, but also between different contexts of healthcare, and hence infrastructure forms the telemonitoring arena. Clarke suggests:

> To make a social worlds/arena map, one enters into the situation of values and tries to make sense of it starting with the question: What are the patterns of collective commitments and what are salient social worlds operating here (Clarke, 2005).

With additions and extensions from Foucault (1995), Haraway (1997) and Latour (1987), Clarke developed social worlds analysis as a methodology that is useful in the initial mapping of the heterogeneous character of the field being studied (i.e. including infrastructure) (Clarke & Star, 2008) Engaging in this epistemological hybrid, social worlds analysis provides a tool to stay with the relationality including the technology of the empirical site. This is helpful because it leads to questions like what symbols and social interactions enact when healthcare professionals act from various values and infrastructures in their work with patients (Hopwood & Nerland, 2019). 'To stay with the mess' is a good starting point for projects focusing on contested areas like collaboration between different healthcare contexts. Inspired by Blumer, we understand learning as the constant mutual interpretation of ongoing activities and their meaning and effects leading to joint action. Arguably, workshops constitute a medium for mutual interpretation of activities between the healthcare contexts and social worlds involved. Thus, we understand workshops as a powerful medium for intervention and learning (Zuiderent-Jerak, 2015).

Three Social Worlds of Care in COPD Telemonitoring – Discourse, Commitment and Infrastructure

The health centre has developed all the necessary applications and procedures for an effective telemonitoring service, and shares a discursive space and commitment to action based on the belief that the new infrastructure of the Open Tele app and the bell system provides a timely service to the patient. In this connection, the municipality is betting on preventive telemonitoring services to deliver care quality and save money in the long run.

The GPs, on the other hand, share a discursive space and commitment to action based on the infrastructure of gold standards. Their patients comprise gold standards A, B and C. The GPs generally have many patients (and too little time). Following negotiations between the Ministry of Health and the doctors' association, the GPs are required to take part in telemonitoring services. They also receive a chronic illness fee – a one-off payment that is independent of what they in fact do for chronically ill patients. These reforms force the GPs to perform certain centrally decided interventions more or less against their will.
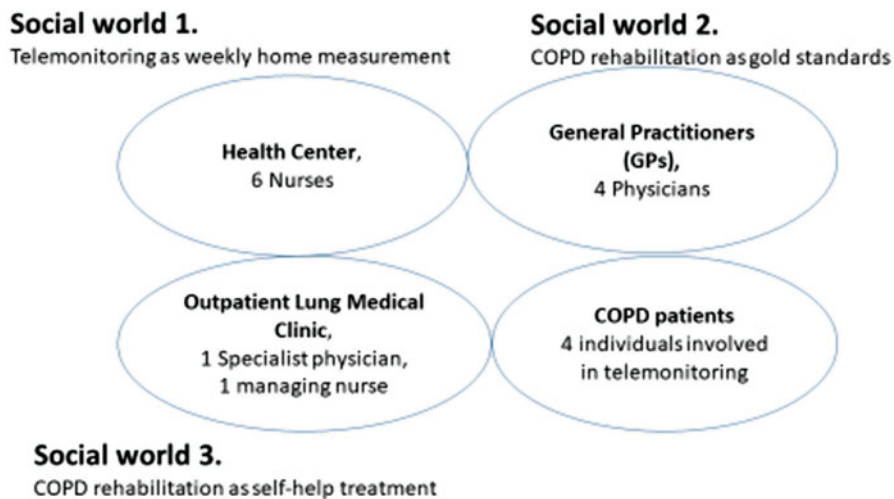
At the clinic, the government's plan to roll out COPD telemonitoring does not have any significance whatsoever. The clinic receives gold standard D patients. The specialist physician in charge raises doubts about whether telemonitoring is adequate in relation to these patients. Instead, the clinic promotes self-help treatment with a number of collaboration partners. The point is to initiate treatment quickly when there is a crisis by way of self-help treatment. Thus, the clinic provides a shared discursive space and commitment to action based on storing medicines in the home.

Table 10.1 gives an overview of the social worlds involved and the participants at the workshop. As mentioned above, we explore social worlds based on shared discursive spaces, commitment to action and infrastructure. Thus, the notion of social worlds differs from the concepts of 'professions' or 'institutions', for instance. The clinic comprises both doctors and nurses, and the group of GPs do not constitute an institution. The notion of social worlds thus comprises an analytic tool that helps us to stay with the real-world controversies in situ. In this chapter, we only include the municipal health centre, the GPs and the outpatient lung clinic. We will deal with the social world and different styles of chronically ill patients elsewhere (Nickelsen & Pols, forthcoming).

Discussion

The Danish government hopes to see a healthcare system that collaborates smoothly across professional boundaries to provide telemonitoring services for chronically ill patients. However, this is a demanding endeavour. It is a complicated task to prepare the professionals involved in primary and secondary healthcare to cope with the roles and tasks that are planned for them. An effective telemonitoring system can

Table 10.1   Three social worlds of care in COPD telemonitoring

Social world 1.
Telemonitoring as weekly home measurement

Social world 2.
COPD rehabilitation as gold standards

Health Center,
6 Nurses

General Practitioners
(GPs),
4 Physicians

Outpatient Lung Medical
Clinic,
1 Specialist physician,
1 managing nurse

COPD patients
4 individuals involved
in telemonitoring

Social world 3.
COPD rehabilitation as self-help treatment

only be established if all the healthcare professionals and patients involved find the services helpful. Unfortunately, this is not the case with regard to COPD telemonitoring, and the healthcare system does not collaborate coherently as envisioned by experts and the government agencies involved. Rather, different belief systems work as drivers for different healthcare contexts, so collaboration has to be produced by breaking down barriers.

We will now turn to the question of how the workshop did after all enable the development of collaboration between the groups of healthcare professionals. We have given a number of examples of incompatible infrastructure and different care values, but also examples of potential cooperation. Arguably, the mere act of attending the workshop involved reaching out. Moreover, all the workshop participants came well prepared. For instance, the nurses state unequivocally, both in interviews and at the workshop that they wish to have closer contact with the GPs. The GPs, on the other hand, state that they would like to know more about patient rehabilitation using the telemonitoring system. Some GPs note both in interviews and at the workshop that they worry that their patients' rehabilitation will be taken out of their hands. However, full waiting rooms and the pressure of work prevent them from presenting this problem in the relevant fora. Some GPs say that they regard the health centre's telemonitoring services as helpful. According to all the participants, it takes a certain amount of mental energy to switch your attention from tasks requiring your immediate focus to what is going on in other healthcare contexts.

The discussions at the workshop revealed that any commitment to collaborate is compromised by both belief systems and financial systems. Nevertheless, at the workshop, the participants representing different healthcare contexts listened with

interest to each other's presentations. By explaining why exactly they had used specific photos to illustrate what they meant by good rehabilitation, they shared their commitments and revealed the infrastructure they act from. Thus, they managed to focus on the question of what is 'good' from the perspective of the patient. They were apparently increasingly aware of events relating to telemonitoring as a whole – also in politics. The fact that policymakers have a strong voice attached to the organisation of telemonitoring services is not something nurses necessarily realise in a busy day. Thus, we propose that the many perspectives presented at the workshop occasioned learning about the ecology of telemonitoring, not that nurses are ignorant.

The diverse infrastructure undoubtedly creates commitment to action within the healthcare contexts identified here. However, at the workshop it also became apparent that the infrastructure also set pivotal barriers to collaboration between sites. For instance, the telemonitoring app is virtually unknown to GPs and the clinic; the gold standards do not make much sense in the health centre etc. Due to this complexity, the workshop participants occasionally felt discouraged. For instance, at one point several health centre nurses leaned comfortably back, crossed their arms and claimed they just had to wait for the pending ICT platform that would connect the sites. But the next moment they realised that the platform could only be used to circulate figures, and that they would still have to collaborate. So we witnessed switches between strong doubts as to whether it all made sense, and self-confident ambitions to develop cross-context collaboration.

The workshop ended with a focused discussion on mutual commitment to collaboration. What could they do together now? One GP announced that patients would benefit if GPs and nurses shared measurements systematically along the way and evaluated the progression together. For instance, could GPs and nurses have telephone meetings once every 3 months? Now the participants talked about the principles for keeping each other informed about patients as they transgress between the health centre, the GPs and the clinic. Although these initiatives may appear modest, we believe they illustrate that the workshop in fact created a space for breaking down barriers. After the workshop, the health centre nurses initiated three meetings with GPs to define and implement a number of new procedures.

The GPs and the clinic professionals explained that before the workshop they had heard about telemonitoring, but they knew nothing about the Open Tele app. In addition, one health centre nurse said that it was a revelation to learn that the GPs are in fact entitled to a chronic illness fee that limits their efforts. Before learning this, she had been unable to understand the GPs' reluctance to use telemonitoring services. The reason for this was now clarified. Finally, yet importantly, it came as a surprise that the clinic promotes self-help treatment as an alternative to telemonitoring. Clinic doctors and nurses probably do not do this in opposition to the government's announcements on telemonitoring. Rather, this makes an ongoing controversy about what is after all the best rehabilitation practice. The workshop after all generated a complex understanding of the tricks of the trade in the telemonitoring arena. According to Blumer (1969), common conduct is created by mutual interpretation of activities and slowly piecing action together. Due to the

discussions at the workshop, the participants now framed their own contribution in relation to other contributions in the telemonitoring arena. We believe that this kind of reflection is an important step to overcome barriers to collaboration between healthcare contexts.

Conclusion

Much is at stake in relation to the implementation of telemonitoring services. Very ill patients may live good lives for years supported by sensible healthcare technology. Therefore, overcoming barriers and developing collaboration between contexts of care in relation to technology intervention is one of the most pressing challenges within chronic disease management.

We studied the implementation of COPD telemonitoring services (basically an app) from the perspective of collaboration between a health centre, GPs and a clinic. Previous research has indicated the presence of some uncertainty with regard to coordination between the primary and secondary healthcare sector. In scrutinising this area, we found inspiration in one of the classical perspectives in social psychology: symbolic interactionism. In collaboration, humans piece action together by interpreting gestures, language and objects – which is why they need structured time together to develop collaboration. We advance knowledge and contribute to this book by considering a contemporary problem by means of a classical approach. By connecting classical ideas of learning to a social worlds/arenas analysis, we demonstrate that learning indeed enmeshes in current healthcare processes. The study reveals that healthcare is a sector that is swamped by technologies with different aims and affordances implicating endless imaginaries from political and managerial levels about what technology can do for us. We discuss the mutual adaptation of telemonitoring services as a collective challenge facing three contexts of healthcare. We then discuss the research question: How can an experimental workshop on COPD telemonitoring help to overcome barriers between healthcare contexts?

The workshop considered the clinical goals and values that each social world aims to achieve. The workshop was set up as a social experiment for discussions of care values in terms of what the participants believe is good COPD telemonitoring. The purpose was both to understand and overcome barriers. The workshop revealed the presence of infrastructural barriers, as well as helping to overcome these barriers. The discussions at the workshop: (1) Laid out clear differences between social worlds and helped distinguish between them in terms of differences between discursive spaces, commitment to action and infrastructure. (2) Revealed that belief systems and financial incentives compromise collaboration. (3) Helped to open up the three social worlds of care towards each other and led to conversation between sites of barriers and future collaboration. (4) Provided concrete ideas and initiatives about what to do together. We will conclude by proposing that the workshop participants learned to cope with telemonitoring services as a relentlessly contested arena inflicted with many intersecting values and practices. Based on this

understanding of the telemonitoring arena and its conflicts, the participants started a discussion of collaboration that they will have to continue.

References

Blumer, H. (1969). *Symbolic interactionism: Perspective and methods*. Prentice-Hall.

Blumer, H. (1973). A note on symbolic interactionism. *American Sociological Review, 38*(6), 797–798. https://doi.org/10.2307/2094141

Boud, D., & Garrick, J. (1999). *Understanding learning at work*. Taylor and Francis.

Bowker, G. C., & Star, S. L. (1999). *Sorting things out: Classification and its consequences*. MIT Press.

Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization Science, 2*(1), 40–57.

Clarke, A. (2005). Situational analysis: Grounded theory – Mapping after the postmodern turn. *Symbolic Interactionism, 26*(4), 553–576. Retrieved from https://onlinelibrary.wiley.com/doi/pdf/10.1525/si.2003.26.4.553

Clarke, A., & Star, S. L. (2008). *The social worlds framework: A theory/method package* (Vol. Third edition). The MIT Press.

Dewey, J. (1922). *Human nature and conduct: An introduction to social psychology*. Henry Holt and Co.

Edwards, A. (2009). *Improving inter-professional collaborations: Multi-agency working for children's wellbeing*. Routledge.

Engeström, Y. (2000). Activity theory as a framework for analyzing and redesigning work. *Ergonomics, 43*(7), 960. https://doi.org/10.1080/001401300409143

Fatchett, A., & Taylor, D. (2013). Multidisciplinary workshops: Learning to work together (PROFESSIONAL AND RESEARCH: PEER REVIEWED). *Community Practitioner, 86*(3), 21.

Foucault, M. (1995). *Discipline and punish: The birth of the prison* (2. Vintage ed. ed.). Vintage.

Gregory, L. R., Hopwood, N., & Boud, D. (2014). Interprofessional learning at work: What spatial theory can tell us about workplace learning in an acute care ward. *Journal of Interprofessional Care, 28*(3), 200–205. https://doi.org/10.3109/13561820.2013.873774

Haraway, D. J. (1997). *Modest0332Witness@Second0332Millennium: FemaleMan©0332meets 0332OncoMouse2122: Feminism and technoscience*. Routledge.

Hopwood, N., & Nerland, M. (2019). Epistemic practices in professional-client partnership work. *Vocations and Learning, 12*(2), 319–339. https://doi.org/10.1007/s12186-018-9214-2

Hviid Jacobsen, M., Jørgensen, A., & Kristiansen, S. (Eds.). (2014). *Hverdagslivet: sociologier om det upåagtede* (2. udgave ed.).

Jasanoff, S., & Kim, S.-H. (2015). *Dreamscapes of modernity, sociotechnical imaginaries and the fabrication of power*. University of Chicago Press.

Kent, F., Courtney, J., & Thorpe, J. (2018). Interprofessional education workshops in the workplace for pre-registration learners: Aligning to national standards. *Nurse Education Today, 62*, 58.

Lange, P. (2020). Kronisk Obstruktiv Lungesyndrom (KOL) https://pro.medicin.dk/sygdomme/sygdom/318294.

Latour, B. (1987). *Science in action, how to follow scientists and engineers through society*. Open University Press.

Lave, J. (1991). *Situated learning: Legitimate peripheral participation*. Cambridge University Press.

López Gómez, D. (2015). Little arrangements that matter. *Rethinking autonomy-enabling innovations for later life. Technological forecasting & social change, 93*, 91–101. https://doi.org/10.1016/j.techfore.2014.02.015

May, C. R., Finch, T. L., Cornford, J., Exley, C., Gately, C., Kirk, S., . . . Mair, F. S. (2011). Integrating telecare for chronic disease management in the community: What needs to be done? *BMC Health Services Research, 11*(1), 131–131. https://doi.org/10.1186/1472-6963-11-131

Mead, G. H. (1967). *Mind, self and society* (Vol. 1). Chicago University Press.

Mertz, M., Inthorn, J., Renz, G., Rothenberger, L. G., Salloch, S., Schildmann, J., . . . Schicktanz, S. (2014). Research across the disciplines: A road map for quality criteria in empirical ethics research. *BMC Medical Ethics, 15*(1), 17–17. https://doi.org/10.1186/1472-6939-15-17

Moser, I. (Ed.). (2019). *Velferdsteknologi – ressursbok* (1st ed.). Cappelen Damm.

Nickelsen, N. C. M. (2019). The infrastructure of telecare: Implications for nursing tasks and the nurse-doctor relationship. *Sociology of Health & Illness, 41*(1), 14. https://doi.org/10.1111/1467-9566.12781

Nickelsen, N. C. M., & Bal, R. (2021). Workshops as tools for developing collaborative practice across professional social worlds in Telemonitoring. *International Journal of Environmental Research and Public Health, 18*(1). https://doi.org/10.3390/ijerph18010181

Nickelsen, N. C. M., & Pols, J. (forthcoming). *Self-tracking styles as justification – Adaption of diabetes 2 telemonitoring among patients needing support to enact their will*.

Star, S. L. (1999). The ethnography of infrastructure. *The American Behavioral Scientist, 43*(3), 377–391.

Star, S. L., & Ruhleder, K. (1996). Steps toward an ecology of infrastructure: Design and access for large information spaces. *Information Systems Research, 7*(1), 111–134. https://doi.org/10.1287/isre.7.1.111

Strauss, A. L. (1978). A social world perspective. *Studies in Symbolic Interaction, 1*, 119–128.

Strauss, A. L. (1984). Social worlds and their segmentation processes. In N. K. Denzin (Ed.), *Studies in symbolic interaction* (Vol. 5, pp. 123–139). JAI Press.

Sundhedsstyrelsen. (2017). *Telemedicinsk understøttelse af behandlingstilbud til mennesker med KOL – anbefalinger for målgruppe, sundhedsfagligt indhold samt ansvar og samarbejde (Telemedicine support for treatment services for people with COPD)*. Retrieved from www.sst.dk.: https://www.sst.dk/da/udgivelser/2017//-/media/Udgivelser/2017/Telemedicinsk-underst%C3%B8ttelse-af-behandlingstilbud-til-mennesker-med-KOL.ashx

Warren, S., & Shortt, H. (2017). Grounded visual pattern analysis: Photographs in organizational field studies. *Organizational Research Methods, 22*(2), 539–563. https://doi.org/10.1177/1094428117742495

Zuiderent-Jerak, T. (2015). *Situated intervention: Sociological experiment in healthcare*. The MIT Press.

Chapter 11
Self-managing Teams in a Public Library: Learning Arrangements at Work

Sari Yli-Kauhaluoma

Abstract This study is an examination of a work innovation, self-managing teams and how such teams learn to operate in a newly established organization. The successful functioning of self-managing teams requires learning by both team members and managers to act differently than in organizations with more hierarchical structures. The existing research has identified several critical elements that can enhance learning in teams, such as managerial and team communication, participation in decision-making and psychological safety. However, more understanding is needed on the details of how such arrangements can facilitate learning in general and in self-managing teams at work in particular. This study is based on empirical research on the working and learning by self-managing teams in a public organization, the Helsinki City Library, and it focuses particularly on teams in its flagship library, Oodi, the Helsinki Central Library. Three important learning arrangements that facilitate working and learning by self-managing teams in everyday organizational life at the Oodi Library have been identified in this study. These consist of appreciative communication, inclusive decision-making, and mentoring. The chapter contributes to the anthology by suggesting that work innovations such as self-managing teams require learning arrangements that enable and lend support to their implementation and functioning. Essential in the application of work innovations like self-managing teams is the development of a series of changes in organizational and social practices that prepare for and support self-managing teams in their daily activities at work. This is important since learning is a social activity and strongly underpins everyday activities, as emphasized by classic understandings of learning. The study presents examples of the ways appreciative communication, inclusive decision-making and mentoring facilitate learning and working of self-managing teams.

Keywords Self-managing teams · Public library · Learning arrangements · Work innovations · Appreciative communication · Inclusive decision-making · Mentoring

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Introduction

Fast information flows, rapid technological developments and growth in knowledge work are some examples of the ongoing trends in society that call for innovative organizational structures and practices. Such structures allow individuals at all organizational levels to contribute their knowledge and ideas fullest in a timely manner for their organizations to thrive in turbulent and complex environments (Lee & Edmondson, 2017). Public organizations face even bigger challenges due to increasing budgetary restrictions and changing societal demands. This means that organizations need to think about and implement work innovations, that is, new ways of conducting everyday activities that allow organizations to carry out their tasks more efficiently.

This study is an examination of a work innovation, self-managing teams (e.g. Manz & Sims Jr., 1987), and how such teams learn to operate in a newly established organization. A self-managing team consists of "a group of individuals with diverse skills and knowledge with the collective autonomy and responsibility to plan, manage, and execute tasks interdependently to attain a common goal" (Magpili & Pazos, 2018: 4). Importantly, the successful functioning of self-managing teams does not take place overnight but takes time (see Lee & Edmondson, 2017). It requires learning by both team members and managers to act differently than in organizations with more hierarchical structures (Pearce II & Ravlin, 1987). The existing research has identified several critical elements that can enhance learning in teams, such as managerial and team communication (Douglas et al., 2006), participation in decision-making (De Dreu & West, 2001) and psychological safety (Edmondson, 1999). However, more understanding is needed on the details of how such arrangements can facilitate learning in general and in self-managing teams at work in particular.

This study is based on empirical research on the working and learning by self-managing teams in a public organization, the Helsinki City Library, and it focuses particularly on teams in its flagship library, Oodi, the Helsinki Central Library. At the Oodi Library, everyday work is carried out by six teams, one management team and five other teams focusing on the development of services in digitalization, space and participation, client experience, service content, and children and youth. In the studied case, the work environment of the self-managing teams was challenging mainly due to the long opening hours, large range of services, and massive number of daily clients.

Learning arrangements mean context specific solutions in organizations that facilitate the learning processes in practice (Franken et al., 2016; Lappia, 2011). Three important learning arrangements that facilitate working and learning by self-managing teams in everyday organizational life at the Oodi Library have been identified in this study. These consist of appreciative communication, inclusive decision-making, and mentoring. The chapter contributes to the anthology by suggesting that work innovations such as self-managing teams require learning arrangements that enable and lend support to their implementation and functioning.

Essential in the application of work innovations like self-managing teams is the development of a series of changes in organizational and social practices that prepare for and support self-managing teams in their daily activities at work. This is important since learning is a social activity and strongly underpins everyday activities, as emphasized by classic understandings of learning (Brown & Duguid, 1991; Lave & Wenger, 1991). The study presents examples of the ways appreciative communication, inclusive decision-making and mentoring facilitate learning and working of self-managing teams.

Literature Review

A self-managing team is considered to be a "work innovation" (e.g. Manz & Sims Jr., 1987: 107) that is used "to delegate managerial authority to groups of individuals who are close to, and expert in, the work that must be carried out on behalf of the organization and its customers" (Lee & Edmondson, 2017: 37). The application of self-managing teams is not a new phenomenon (e.g. Trist & Bamforth, 1951), but recently there has been an increasing interest in their use in both public (e.g. Yang & Guy, 2011) and private organizations (e.g. Andrés et al., 2015; Driedonks et al., 2014; Druskat & Pescosolido, 2002). Their intended benefits are extensive and widely recognized, ranging from individuals' sense of control, to increased job satisfaction, motivation and organizational commitment. However, their success in performance is acknowledged to be dependent on several factors (see Lee & Edmondson, 2017). Existing studies suggest that team members need to have extensive self-management skills (see Magpili & Pazos, 2018) as well as the ability to accept shared responsibility and take the initiative (e.g. Andrés et al., 2015; Perry Jr et al., 2013; Vanderburg, 2004). It is important that team members put a lot of effort into the team's work (e.g. Driedonks et al., 2014), but at the same time, they should show resilience. In other words, they should remain determined and willing to perform tasks in complex and uncertain decision-making situations (Gray, 2012).

However, working in self-managing teams is not necessarily easy. It involves complex questions about how to self-organize and work together as a team. The result may not always be empowering but can also end up in tight control based on a subtle system of normative rules and peer surveillance (Barker, 1993). The balance between individual and team autonomy (Langfred, 2000), issues of trust (Langfred, 2004) as well as questions about how to deal with conflicts (DeLeon, 2001; Langfred, 2007) are additional matters that need careful attention when work is organized in the form of self-managing teams.

The role of management is significant when the work is carried out in the form of self-managing teams. The managers act as facilitators of work processes, which means that at best they encourage and support teams to manage their own efforts (Manz & Sims Jr., 1987). Here, the caring and trusting relationships between the managers and teams is essential, particularly as encouragement by the management can build skills and confidence of self-managing teams (Druskat & Wheeler, 2003).

Importantly though, the managers need to be careful not to interfere but act as a resource for the teams. This requires consultative communication style through which management asks questions, promotes discussion and shares information with the team (Courtright et al., 1989).

The shift to well-functioning self-managing teams does not occur automatically in organizations. However, it is not necessarily easy to unlearn old habits and behaviours such as expecting managers to solve problems and make decisions. Therefore, it is a continuous learning endeavour to make self-managing team work effective (Druskat & Pescosolido, 2002).

Knowledge of learning is necessary when trying to implement work innovations such as self-managing teams in organizations. Classic ideas state that learning takes place while people engage in practical activities such as solving problems (Anzai & Simon, 1979). Learning is then a practical accomplishment and fundamentally built into everyday activities in organizations. The goal of the learning is "to discover what to do; when and how to do it, using specific routines and artifacts; and how to give, finally, a reasonable account of why it was done" (Gherardi et al., 1998: 274).

Classic understanding of learning also notes that learning is not only a cognitive activity, but is also an important social activity (Lave & Wenger, 1991). It requires personal investment and it can only be acquired through active participation in practice with others (e.g. Blackler, 1993; Brown & Duguid, 1991). Learning then means engagement with others in an ongoing practice (Gherardi et al., 1998). Professionals are able to participate in reflective conversations, i.e. to think about what they are doing and why, and to talk about it with others (Schön, 1983). Therefore, learning takes place through and with other people (Gherardi et al., 1998).

Members of self-managing teams then need to be able to participate fully in everyday learning activities. High levels of task specialization (Bunderson & Boumgarden, 2010), soft managerial communication tactics (Douglas et al., 2006), and psychological safety (Edmondson, 1999) are important elements that have been found to contribute to the learning endeavours of self-managing teams. This is because they encourage team members to share knowledge, seek feedback and help, experiment as well as admit and talk about errors and mistakes. Some of these elements like high task specialization in teams have been found to function in stable work settings (Bunderson & Boumgarden, 2010). However, the work settings of self-managing teams are not always stable but many self-managing teams engage in practical activities in hectic environments and solve problems that are complex (e.g. Stray et al., 2011; Renkema et al., 2018).

All in all, self-managing teams are a way of organizing work that at best can offer a range of benefits both for individuals and organizations (see Lee & Edmondson, 2017). However, the implementation of self-managing teams requires that team members learn to accept shared responsibility, take the initiative, and perform tasks in complex and uncertain decision-making situations (e.g. Andrés et al., 2015; Gray, 2012; Perry Jr et al., 2013; Vanderburg, 2004). The research to date has noted that managerial and team communication (Douglas et al., 2006), participation in decision-making (De Dreu & West, 2001) and psychological safety (Edmondson, 1999) are some of the elements that advance learning in teams.

However, there is still little understanding of the details of how such arrangements can facilitate learning in self-managing teams at work. This is where this study aims to make a contribution. In particular, the study provides knowledge about the learning of self-managing teams that operate in a newly formed organization in a hectic work environment.

A Study on Self-managing Teams at Oodi, the Helsinki Central Library

This is a case study (e.g. Gillham, 2010; Yin, 2003) on self-management teams and the learning arrangements in a public library in Finland. Budgetary restrictions, rapid technological advances and changing societal role of libraries are examples of the challenges that push public libraries to continuously think about and develop how they organize everyday practices. Public libraries are said to be in the business of client experience (Circle, 2018) through which library work needs to meet people's cultural, social and even economic needs (Reardon, 2016). Current trends in public library innovation emphasize active engagement with various local communities in the form of collaboration, participation and partnerships to facilitate and enable citizens' learning, creativity and technological skills (Nicholson, 2019). Different work innovations including self-organizing teams can be seen as one way to support public libraries in acting purposefully and achieving their goals in times of their increasingly important role in society.

In Finland, legislation gives guidelines and defines the tasks of the public libraries. The New Library Act became effective in 2017 placing even greater emphasis on the societal role of public libraries than before. This means that besides advancement of reading culture, versatile literacy skills and opportunities for life-long learning, the task of the Finnish public libraries is also to contribute to active citizenship, democracy and freedom of expression.

The research site of this study is Oodi, the Helsinki Central Library in downtown Helsinki. The construction of the Oodi Library celebrated the centenary of Finland's independence in 2017. The €98 million project represented a flagship library in the country and the library was opened to the public in December 2018. The Oodi Library is a three-story building (17,000 gross square metres) consisting of areas designed not only for books but also for meeting, doing and organizing events. To promote active citizenship, to advance collaborative knowledge creation and to produce a user-friendly library, citizens were closely involved in the planning phase of the library as active co-designers (Miettinen, 2018).

The budgetary restrictions related to the running of the Oodi Library forced the management to think carefully about the organization of library work in the overall public library network in the City of Helsinki, which resulted in the decision to implement self-managing teams.

"These are all development teams. We could say that we try to increase our skills for innovation. When people think about the substance with new people, it may happen that some [ideas] that did not succeed in one library may succeed [in another library] in the area." (Management, Public library services)

The 54 employees of the Oodi Library were recruited from the existing library network in Helsinki. At the Oodi Library, there are six teams as the library management forms an additional team. All employees at the Oodi Library carry out tasks and do development work beyond the area that their teams are responsible for. Additionally, everyone serves library clients in turn, such as at the front desk in lending or in the makerspace at the Urban Workshop. All librarians also do back-office work related to the return and circulation of books.

Before the opening of the Oodi Library, the management and staff had a couple of weeks to learn about each other. The construction work was delayed for several weeks and therefore, they were unable to enter the new library building as planned. While waiting for the construction to be finalized, they organized meetings in office spaces available to them around the city. In these meetings, they discussed topics relevant to their upcoming work and they even had training sessions on how to work in self-managing teams. Since its opening, the Oodi Library has been open to the public on weekdays from 8 a.m. to 10 p.m. and on weekends from 10 a.m. to 8 p.m. During its first year, there were roughly three million visits to the library. The hectic work environment together with the new way of organizing work, i.e. the self-managing teams, set new requirements for the staff.

"This requires a new type of knowledge and skills from our personnel. Here, nobody tells you what to do but you have to know yourself what you should do. . . . We have so few personnel in relation to the services and opening times that this would never succeed if people were not so self-regulating and responsible." (Management, interviewee #1)

Methods

The original aim of the study was to examine innovation in public libraries in Finland. For this purpose, the study began in January 2019 with two in-depth interviews with three experts or managers of public library services both at the national level and in Helsinki. The interviews revealed that Oodi, the Helsinki Central Library is an innovation and therefore, the decision was made to focus on the innovative spaces and activities taking place there. The first interview at the Oodi Library was with its manager. The questions still focused on the innovative aspects of the library, but it soon became clear that the library work was conducted in the form of self-managing teams, which was an innovative way of organizing and managing public library services in Helsinki. Therefore, the focus shifted to the examination of self-managing teams in the Oodi public library.

The empirical material collected at the Oodi Library comprised seven in-depth interviews that were conducted from March to August 2019. Two interviewees were members of the management team and five interviewees were members of other

self-managing teams. Two of them were team leaders. The interviewees were identified through the snowball method (e.g. Patton, 2002). The aim was to seek informants who could provide rich and diverse perspectives to self-managing teams at the library.

The interview questions dealt with the management and organization of self-managing teams at the Oodi Library including decision-making and communication in such teams. The aim was to gain an understanding of the learning and functioning of self-managing teams, which is an innovative way of organizing work in the extremely busy public library context. The interviews were semi-structured in format, to allow for an open-ended approach to research (e.g. Whitehead, 2005). This means that the use of 'natural' conversation (see Gillham, 2010) played an important role in the interviews. It was important to be an active listener and to pose further questions to explore interesting issues emerging in the course of the interview to gain a better understanding of the context and meaning of the responses. Interviews lasted from 50 to 90 min. All the interviews were recorded and later transcribed verbatim. Participation in free public workshops and talks at the Oodi Library, and analysis of websites and video recordings on library work in general and at the Oodi Library in particular added to the understanding of different features and requirements of work in the public library context.

To analyse the data, interview transcripts and notes made on empirical material were carefully read through. The reading was guided by the aim of identifying the key elements at the Oodi Library that facilitate the learning of teams to function in the form of self-managing teams. Special attention was paid to those aspects that the existing research has identified to enhance learning in teams such as managerial and team communication (Douglas et al., 2006), participation in decision-making (De Dreu & West, 2001) and psychological safety (Edmondson, 1999). Several rounds of reading suggested three themes: appreciative communication, inclusive decision-making and managerial support through mentoring. These played an important role in the daily functioning of self-managing teams. Therefore, all empirical data were thematically coded and categorized in these three themes (see Eriksson & Kovalainen, 2008). Each theme was then analysed with the aim of gaining understanding on the ways how these might act as learning arrangements that facilitate the everyday working of the self-managing teams at the Oodi Library.

Learning Arrangements at the Oodi Library

The interviews with the library professionals at the Oodi Library suggest that there are practices that appear to enable and support the functioning of self-managing teams. These are appreciative communication, inclusive decision-making, and mentoring. This chapter is an examination of the ways these practices act as learning arrangements and facilitate the working and learning by the self-managing teams at the library.

Appreciative Communication

At the Oodi Library, the organization has to operate with a relatively small number of personnel in comparison to the number of clients, services and opening hours. The implementation of self-managing teams was an attempt to organize work with a limited number of personnel. However, it requires the teams to have learnt to take the initiative and share knowledge both within and between teams. Communication is important to keep the activities of the various teams coordinated and to prevent the teams from disintegrating into separate entities.

Open plan office space as well as regular team and staff meetings offer opportunities for personal encounter and communication. Teams also use a range of technologies for communication. In the first operational months of the Oodi Library, the continuous information load was enormous.

> "We should [learn] how to communicate and share knowledge. . . . WhatsApp is fast and handy, but its problem is . . . that [the information] disappears in it. . . . If you are away for only two days or on sick leave, you cannot [search any information there and find out] what is going on. I had over 300 messages during the four days when I was away!" (Management, interviewee #2)

Personal encounters and technologies set up the context for learning both within and between self-managing teams. The context alone is not enough, and teams need to learn to operate in these contexts in the ways that enhance functioning of self-managing teams. The interviews suggest that an appreciative and supportive communication climate facilitates learning by self-managing teams. The management and staff at the Oodi Library have worked systematically from the beginning to create a positive communication climate in their workplace. They have developed key principles together in internal workshops that guide their behaviour including communication at work. These principles consist of an open communication climate, consideration, responsibility, respect and self-determination, and appreciation.

> "An open communication climate is the starting point for everything else. If people do not talk about things, nothing will happen. . . . Everybody was able to get involved to decide on how we want to work." (Staff, interviewee # 1)

The key principles have been communicated to all employees at the Oodi Library and the principles were also mentioned in interviews by those in management positions indicating that there is strong management back-up for the principles in the library. The principles act as important learning arrangements as they include elements that encourage all team members to take the initiative and cope with uncertainties as they can rely on support and even forgiveness in cases of errors and mistakes.

> "All of us are pretty much out of our comfort zone here.. . . There are situations when people start to think: am I able to do this? What am I supposed to do now? Where can I find [the stuff that I need]? . . . Then, they come to our office space, tell [others] about the situation they faced, and convey how they managed it. And hey, it is OK, if everything does not go well." (Management, interviewee #2)

Interestingly, the interviews revealed that an important part of the learning is to start seeing communication as an essential way of sharing knowledge about tasks that have been accomplished and decisions that have been made instead of as a form of self-praise of team achievements.

> "At first, it felt a bit like self-praise. Hey, we have done this and that. Then I realized that others need the information. I need the information from other teams about what they have done." (Staff, interviewee # 2)

The interviews then suggest that appreciative communication not only means an open communication climate in which members of self-managing teams learn to talk freely and respectfully, but also active knowledge sharing without counterproductive modesty.

Inclusive Decision-Making

According to the management, the small number of personnel was one of the key driving factors that led to careful thinking about the decision-making processes at the Oodi Library.

> "There are so few of us here in comparison to our number of clients and opening hours. That's why we knew immediately that we wanted, and we had to start working in the way that those people who work here decide about everything themselves. We cannot have the bottlenecks here that the hierarchies often cause." (Management, interviewee #2)

The management explained that the teams themselves decide what services they will offer to the clients, how they work, when they meet as a team, and how they make decisions. The interviewees emphasized that hierarchical decision processes would take too long and that the staff at the client interface know best how the services ought to be offered and further developed.

> "The staff here is smart and capable. It would be a waste of resources if management would tell us that now you sit here or stand there. It is really rewarding that [management] trust us to make decisions." (Staff, interviewee # 3)

The management conveys that it paid careful attention to people's abilities to work independently and take the initiative starting with the recruitment phase. However, even if the teams have the power to act independently and to decide largely on matters by themselves, the key question is how to include all team members in active participation in decision-making processes.

Material arrangements such as open plan office and white boards are some attempts to produce inclusion in decision-making. Open plan office space allows for new ideas to emerge for development and debate. Anybody can write down issues that they want to raise for discussion and decision-making on the white boards.

However, the material arrangements alone do not generate or ensure inclusion. At the Oodi Library, the team leaders have a significant role in stimulating active

participation in team decision-making processes and making sure that all team members can have their voices heard when decisions are made. The team leaders do not have a management position. Neither do they have any additional decision-making power over other members of the team. Instead, one of the most important roles of the team leaders is to make sure that all members of the team have the opportunity to participate in teamwork and that everyone is included in decision-making processes.

> "Fast people overrule the slower ones. When there is a need to do or to develop something there are always people who are eager and say quickly that they can do it. It is the role of the team leader to make sure . . . that everybody has the opportunity to participate and that those who are quiet and slow also get involved." (Management, interviewee #2)

As it is not easy to generate inclusive decision-making, training sessions on decision-making in self-managing teams were organized for all personnel before the opening of the Oodi Library. The teams had training sessions about voting practices that could facilitate participation and learning in decision-making situations. When voting, 'thumbs up' implies agreement, 'thumbs down' implies disagreement, and 'holding the hand palm down and rocking it slightly sideways' says that they don't know or have not decided or have concerns. In the voting system, the rocking sideways movement seems particularly important as it offers even those team members who are shy and introverted better options for bringing their perspectives into discussion and thus it allows them to express their concerns and doubts.

> "There are people who are quieter or who are not able or do not want to take the space in the same way [as those who are more vocal]. This is a way for them to express if there is something that bothers them in the matter and then we discuss it." (Staff, interviewee # 1)

This voting system is applied both at team meetings and when decisions are made at meetings including all members of management and staff. Voting is then used as a way to encourage active participation of all team members in decision-making and to bring out different opinions for discussion and debate in decision-making situations.

Mentoring

All five teams at the Oodi Library have a mentor from the management team. Mentors have an important role in supporting the teams, particularly in decision-making. One of the mentors says that the toughest decisions for teams to make are somehow related to resources, particularly to time or money. This is because management has typically made decisions on these matters in libraries. At the Oodi Library, the teams have a budget and they are free to make decisions on how they spend it on the organization of services or events. This new way of making decisions on resources is a learning event for both the teams and mentors.

> "We do not know if the budget that we have given to the teams is enough. . . . This is a learning exercise for all of us. Just make the decisions and we will see. If it goes over the

budget, nothing bad happens. We simply spend less on something else." (Management, interviewee #2)

One of the mentors provided a tangible example of the mentoring process that facilitated the learning of the team in a tough decision-making situation. She explained about the external training session that all members of one team wanted to participate in. The session took place just before the opening of the Oodi Library. It was a hectic period to get the library ready to the public and all team members understood that it was not possible for all of them to participate in the session at the same time. However, it was difficult for the team to decide what to do.

"I asked them what they thought. What will happen if you all go? What would the consequences be here? And, what would the consequences be if you don't go." (Management, interviewee #2)

The mentor posed questions to stimulate further discussion and new perspectives, but the team was still not able to decide how to proceed. Therefore, the team asked the mentor to make the decision for the team. The mentor decided that everybody should be able to attend which would be fair for all team members. Half of the team could participate in the first half of the training session and the other half of the team could participate in the latter half of the training session. According to the mentor, the team was excited about the decision but soon e-mailed back saying that they would not follow the mentor's decision. The team had realized that travelling to the event would take too much time. Nevertheless, the decision was helpful for the team in the way that it pushed the team to analyse the situation from new perspectives and to make the decision independently as a team. In that way, mentoring facilitated learning in the team.

In addition to team support in decision-making, the mentor also helps individual team members to deal with different uncertainties at work.

"It is necessary to have somebody who you can trust. Somebody who you think knows how these things work and how to help you. Often the case is that you need somebody to sit there and listen to you and support you to find a solution to the problem or make a decision." (Staff, interviewee # 1)

The interviews suggest that the role of mentors is important as they support self-managing teams and individual members to learn to navigate in tough decision-making processes through listening to the different perspectives and reflecting with the team.

Discussion

Due to budgetary restrictions, rapid technological advances, and changing societal tasks many public organizations want to carry out work innovations such as self-managing teams. However, the implementation and functioning of self-managing teams is neither self-evident nor straightforward (e.g. Lee & Edmondson, 2017;

Magpili & Pazos, 2018; Pearce II & Ravlin, 1987; Perry Jr et al., 2013). The extant research notes that members of self-managing teams need to learn to accept shared responsibilities, take the initiative (e.g. Andrés et al., 2015; Perry Jr et al., 2013; Vanderburg, 2004), and also be determined to take action in complex environments (Gray, 2012; Renkema et al., 2018; Stray et al., 2011).

Classic understanding of learning adds to the understanding of the implementation of work innovations like self-managing teams by emphasizing that learning is a social activity and embedded in everyday activities (Brown & Duguid, 1991; Gherardi et al., 1998; Lave & Wenger, 1991). This means that to learn to operate in self-managing teams, team members need to be able to engage in problem solving, decision-making, and other practical activities in everyday organizational life. This study suggests that appreciative communication, inclusive decision-making and mentoring act as important learning arrangements that support people to engage themselves fully in the daily work in self-managing teams. This is because they give people courage to take the initiative and engage in everyday practical activities with others in a complex working environment such as a hectic and innovative public library space. Additionally, they create a context that facilitates knowledge sharing, seeking help, and talking about problem-solving activities including errors and mistakes.

The results suggest that first, appreciative communication may trigger learning by encouraging all team members to take the initiative and cope with uncertainties as they can rely on support and even forgiveness in cases of errors and mistakes. Appreciative communication may also boost knowledge sharing and thereby learning as there is encouragement for information to be distributed freely but respectfully within and between teams. Here, it is important that talk about accomplishments is not considered to be self-praise but as necessary knowledge supplied to everyone in the organization. The results then suggest that in transition to self-managing teams, it is not enough to pay attention only to the amount or content of work-related communication (e.g. Renkema et al., 2018). The ways and style of communication matter too. In addition to soft managerial communication tactics (e.g. Courtright et al., 1989; Douglas et al., 2006), an appreciative communication climate in an organization encourages members of self-managing teams to take the initiative and participate in complicated or previously unfamiliar activities without having to be afraid of punishment or humiliation.

Second, inclusive decision-making practices like voting puts the focus on the removal of bureaucratic hierarchies and stimulates active participation in team decision-making and thereby learning. Applying carefully thought and implemented voting practices in decision-making situations offers possibilities for reflective conversations (see Schön, 1983) and thereby helps teams to consider the opinions and perspectives of also shyer and more introverted employees. Active participation by all team members in decision-making advances learning in self-managing teams. Participation in decision-making may also result in innovations as differences of opinion stimulate creativity and divergent thought (e.g. De Dreu & West, 2001). However, the prerequisite is that individual members of self-managing teams indeed bring their perspectives into the discussion and express their concerns and doubts

openly without the fear of tight control by the team to ensure conformity (see Barker, 1993).

Finally, the results suggest that mentoring supports both entire teams and individual team members in tough decision-making processes. This is because it offers psychological safety to self-managing teams in risk taking (see Edmondson, 1999) and encourages teams to engage fully in decision-making processes and make decisions independently as a team. Here, a caring and trusting relationship is essential (Druskat & Wheeler, 2003). At best, mentoring offers a supportive context for reflective conversations (see Schön, 1983) which advances working and learning of self-managing teams. However, there can be a fine line between over-direction and under-direction and therefore, the mentor needs to consider the appropriate level of involvement to enhance learning constantly (see Manz & Sims Jr., 1984).

The extant literature has noted that the role of management is significant as a facilitator of the working and learning processes of self-managing teams (e.g. Druskat & Wheeler, 2003; Manz & Sims Jr., 1984, 1987). At the Oodi Library, the management had already laid the foundations for learning to operate in the form of self-managing teams systematically before the opening of the new library. This means that attention was paid to shared mental models emphasizing "ownership, learning and heedful interrelating" that have been found to be important in the functioning of self-managing teams (Druskat & Pescosolido, 2002: 310). The recruited personnel were librarians in the City of Helsinki, but they had not necessarily worked together before starting at the Oodi Library. In recruitment, careful attention was paid to people's mindset and the skills needed to work in self-managing teams. The delay in construction work and opening of the library for the public was used in the form of discussions on the upcoming work arrangements, communication and behaviour principles at work as well as training sessions on relevant topics, such as decision-making.

Concluding Remarks

The Oodi Library was essentially a new organization operating in new premises. It has been noted that the implementation of self-managing teams is a different manoeuvre in a newly formed organization compared to an established organization with long existing hierarchies and routines (see Renkema et al., 2018). This does not mean that the learning arrangements - appreciative communication, inclusive decision-making and mentoring - would not also be relevant in the implementation and functioning of self-managing teams in established organizations. Presumably the shift from traditional organization to self-managing teams requires a variety of even more versatile learning arrangements that would generate the participation of all members in self-managing team activities. Similarly, it is likely that learning arrangements facilitating the working and learning of self-managing teams would be manifested differently in contexts other than in public libraries. Tolerating

mistakes and errors to advance learning of self-managing teams, for example in health-care settings (e.g. Renkema et al., 2018), is a much more complex issue.

At the Oodi Library, the shift to self-managing teams was an enormous change in the management of public library services. The study did not focus on an examination of the change of the management system at the institutional level. We can only speculate that this type of change is not necessarily easy in the context of a large public organization. However, scarce resources both in personnel and in finance provided momentum for the management in this case to start developing the organization based on self-managing teams.

Overall, the implementation and functioning of self-managing teams at the Oodi Library seemed to take place surprisingly smoothly. This may not always be the case but instead, a range of conflicts can be involved in self-managing teams (see e.g. Barker, 1993; DeLeon, 2001; Langfred, 2007). However, the appreciative communication climate that was identified as an important learning arrangement in this study may help to deal with conflicts in a constructive way and thereby advance active problem-solving and learning in self-managing teams.

To conclude, the implementation and functioning of work innovations such as self-managing teams require development of practices that can act as learning arrangements that prepare for and support teams in their daily activities at work. An interesting avenue for further research would be to study the maintenance of learning arrangements along with the development of self-managing teams.

References

Andrés, M. R., Broncano, S. G., & Monsalve, J. N. M. (2015). Could innovative teams provide the necessary flexibility to compete in the current context. *Cuadernos de Gestión, 15*(1), 145–164.

Anzai, Y., & Simon, H. A. (1979). The theory of learning by doing. *Psychological Review, 86*(2), 124–140.

Barker, J. R. (1993). Tightening the Iron cage: Concertive control in self-managing teams. *Administrative Science Quarterly, 38*(3), 408–437.

Blackler, F. (1993). Knowledge and the theory of organizations: Organizations as activity systems and the reframing of management. *Journal of Management Studies, 30*(6), 864–884.

Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization Science, 2*(1), 40–57.

Bunderson, J. S., & Boumgarden, P. (2010). Structure and learning in self-managed teams: Why "Bureacratic" teams can be better learners. *Organization Science, 21*(3), 609–624.

Circle, A. (2018). Customer experience in public libraries. *Public Library Quarterly, 37*(4), 356–374.

Courtright, J. A., Fairhurst, G. T., & Rogers, L. E. (1989). Interaction patterns in organic and mechanistic systems. *Academy of Management Journal, 32*(4), 773–802.

De Dreu, C. K. W., & West, M. A. (2001). Minority dissent and team innovation: The importance of participation in decision making. *Journal of Applied Psychology, 86*(6), 1191–1201.

DeLeon, L. (2001). Accountability for individuating behaviors in self-managing teams. *Organization Development Journal, 19*(4), 7–19.

Douglas, C., Martin, J. S., & Krapels, R. H. (2006). Communication in the transition to self-directed work teams. *Journal of Business Communication, 43*(4), 295–321.

Driedonks, B. A., Gevers, J. M. P., & van Weele, A. J. (2014). Success factors for sourcing teams: How to Foster sourcing team effectiveness. *European Management Journal, 32*(2), 288–304.

Druskat, V. U., & Pescosolido, A. T. (2002). The content of effective teamwork mental models in self-managing teams: Ownership, learning and heedful interrelating. *Human Relations, 55*(3), 283–314.

Druskat, V. U., & Wheeler, J. V. (2003). Managing from the boundary: The effective leadership of self-managing work teams. *Academy of Management Journal, 46*(4), 435–457.

Edmondson, A. (1999). Psychological safety and learning behavior in work teams. *Administrative Science Quarterly, 44*(2), 350–383.

Eriksson, P., & Kovalainen, A. (2008). *Qualitative methods in business research*. Sage.

Franken, M., Branson, C., & Penney, D. (2016). A theory-to-practice leadership learning arrangement in a university context. *International Journal of Leadership in Education, 21*(4), 491–505.

Gherardi, S., Nicolini, D., & Odella, F. (1998). Toward a social understanding of how people learn in organizations. *Management Learning, 29*(3), 273–297.

Gillham, B. (2010). *Case study research methods*. Continuum International Publishing.

Gray, D. (2012). The influence of complexity and uncertainty on self-directed team learning. *International Journal of Learning and Change, 6*(1/2), 79–96.

Langfred, C. W. (2000). The paradox of self-management: Individual and group autonomy in work groups. *Journal of Organizational Behavior, 21*(5), 563–585.

Langfred, C. W. (2004). Too much of a good thing? Negative effects of high trust and individual autonomy in self-managing teams. *Academy of Management Journal, 47*(3), 385–399.

Langfred, C. W. (2007). The downside of self-management: A longitudinal study of the effects of conflict on trust, autonomy, and task interdependence in self-managing teams. *Academy of Management Journal, 50*(4), 885–900.

Lappia, J. K. (2011). Towards design guidelines for work related learning arrangements. *Journal of European Industrial Training, 35*(6), 573–588.

Lave, J., & Wenger, E. (1991). *Situated learning. Legitimate peripheral participation*. Cambridge University Press.

Lee, M. Y., & Edmondson, A. C. (2017). Self-managing organizations: Exploring the limits of less-hierarchical organizing. *Research in Organizational Behavior, 37*, 35–58.

Magpili, N. C., & Pazos, P. (2018). Self-managing team performance: A systematic review of multilevel input factors. *Small Group Research, 49*(1), 3–33.

Manz, C. C., & Sims, H. P., Jr. (1984). Searching for the "Unleader": Organizational member views on leading self-managed groups. *Human Relations, 37*(5), 409–424.

Manz, C. C., & Sims, H. P., Jr. (1987). Leading workers to lead themselves: The external leadership of self-managing work teams. *Administrative Science Quarterly, 32*(1), 106–128.

Miettinen, V. (2018). Redefining the library: Co-designing for our future selves and cities. *Public Library Quarterly, 37*(1), 8–20.

Nicholson, K. (2019). Collaborative, creative, participative: Trends in public library innovation. *Public Library Quarterly, 38*(3), 331–347.

Patton, M. Q. (2002). *Qualitative research and evaluation methods*. Sage Publications.

Pearce, J. A., II, & Ravlin, E. (1987). The design and activation of self-regulating work groups. *Human Relations, 40*(11), 751–782.

Perry, E. E., Jr., Karney, D. F., & Spencer, D. G. (2013). Team establishment of self-managed work teams: A model from the field. *Team Performance Management, 19*(1/2), 87–108.

Reardon, S. A. (2016). Public library futures – Reality – Recognition – Reimagination. *Public Library Quarterly, 35*(4), 276–281.

Renkema, M., Bondarouk, T., & Bos-Nehles, A. (2018). Transformation to self-managing teams: Lessons learned: A look at current trends and data. *Strategic HR Review, 17*(2), 81–84.

Schön, D. A. (1983). *The reflective practitioner. How professionals think in action*. Basic Books.

Stray, V. G., Moe, N. B., & Dingsøyr, T. (2011). Challenges to teamwork: A multiple case study of two agile teams. In A. Sillitti, O. Hazzan, E. Bache, & X. Albaladejo (Eds.), *Agile processes in*

software engineering and extreme programming (pp. 146–161). Proceedings of the 12th International Conference XP 2011, Madrid, Spain.

Trist, E. L., & Bamforth, K. W. (1951). Some social and psycological consequences of the longwall method of coal-getting. *Human Relations, 4*, 3–38.

Vanderburg, D. (2004). The story of Semco: The company that humanized work. *Bulletin of Science, Technology & Society, 24*(5), 430–434.

Whitehead, T. L. (2005). Basic classical ethnographic research methods. In *Ethnographically informed community and cultural assessment research systems* (Working paper series). Cultural Ecology of Health and Change.

Yang, S.-B., & Guy, M. E. (2011). The effectiveness of self-managed work teams in government organizations. *Journal of Business & Psychology, 26*(4), 531–541.

Yin, R. K. (2003). *Case study research. Design and methods* (3rd ed.). Sage Publications.

Chapter 12
Making Schools into Learning Organizations – Building Capacity for Organizational Learning Through National Competence Programs

Thomas Dahl and Eirik J. Irgens

Abstract Organizations around the world, from the OECD to various national education programs, have called for schools to become learning organizations. In this article, we present a study of the Norwegian government's strategy to change schools into learning organizations. This strategy was launched in 2004 as part of a national plan to reform schools and has since been present in a series of governmental development programs for improving the quality of schools in Norway. We have studied the implementation of the strategy in one of the programs, a school-based competence development program that involved more than 1200 schools and a total budget of almost 200 million Euros. We followed the program from its pilot phase in 2013 to its end in 2018. The main finding from our study is that schools hardly developed their capacity for organizational learning, in spite of the strong call for turning schools into learning organizations and the vast resources invested in the program. In this chapter, we discuss different explanations for why these goals were left unmet. We argue that the strategy in several aspects was incommensurable with the organizational learning theories found in early organizational learning literature as well as in the Scandinavian Collaborative Model. We conclude that the unmet goals can be explained by a lack of understanding of the need for inquiry and local construction of knowledge, as well as a lack of understanding of what sort of leadership would foster such knowledge production. Since the call for schools to become learning organizations is transnational, as voiced by an influential institution such as the OECD, this study also has relevance beyond the Norwegian context.

Keywords Scandinavian model · Co-creation of knowledge · Learning oriented leadership · School development · Collective inquiry

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Introduction: The Call for Schools to Become Learning Organizations

In the early 2000s, the Ministry of Education and Research in Norway made a survey on how much learning took place in Norwegian workplaces and found that schools had "low learning intensity" (Ministry of Education and Research, 2004, 94). This low learning intensity was explained as "a lack of tradition for reflections on and distribution of knowledge between employees, traditional views on competence development and traditional ways of organizing work" (Ministry of Education and Research, 2004, 94). The ministry thus deemed it necessary for schools to change their way of organizing work in order to develop a "culture for learning" that would affect students' learning as well: "If we are to succeed, the school has to become a learning organization" (Ministry of Education and Research, 2004, 3). This call was followed up in 2006, when the Norwegian government launched a large reform, the Knowledge Promotion (Kunnskapsløftet), intended to reshape the whole educational system, both primary and secondary.

Within the context of this nationwide reform, a large school development program called Lower Secondary in Development (LSiD), which involved all lower secondary schools in Norway, also had the goal of changing schools into learning organizations. In this program, lower secondary schools were expected to involve all teachers and leaders in collective competence development in order to improve teaching as well as the school's collective capacity for learning. From the program's start in 2013 to its completion in 2018 more than 1200 schools and more than 15 000 teachers had been involved.

We have studied this project from its very beginning. In this chapter, we present an analysis of the main strategy documents and discuss some of the findings from our empirical research that are relevant to our research question: How did the governmental strategy succeed in developing the learning capacities in schools as organizations?

The answer from our research is that the goal of making schools into learning organizations changed the learning processes in schools to a small degree. We discuss why schools didn't develop their capacity for organizational learning in spite of the strong call for turning schools into learning organizations, and whether the leadership style that was called for aligned with early theories of organizational learning as well as the Scandinavian Model. The reason that we focus on the application of early organizational learning theory in the LSiD program is simply that one should expect a program with a goal to develop learning organizations to be informed by organizational learning theory. The reason we also focus on the Scandinavian Model is that the LSiD program took place within this cultural context, and the research behind model dealt with the same challenges that local schools were facing when they took part in the program.

However, the call for schools to become learning organizations is not specifically Scandinavian or Norwegian. It has lately been voiced by the OECD, an international organization that has as a main goal to build policies. The OECD has developed

"practical guidance on how schools can transform themselves into a learning organization and ultimately enhance student outcome" (Kools & Stoll, 2016, 3), and in the Committee on How People Learn within the US, the National Academy of Sciences also argues that schools ought to become learning organizations (Committee on How People Learn II, 2018, 218). Thus, this article has relevance beyond the Norwegian context.

The Scandinavian Model, Organizational Learning, and the Co-Creation of Knowledge

Organizational learning became a theme in Norwegian work research in the 1980s (Ebeltoft, 1991, 1993; Finsrud, 2009; Thomassen, 2012). Work research in Norway was already strongly involved in the development of what has been defined as "the Scandinavian model" of work organization (Gustavsen, 2007) or the "Nordic Collaboration Model" (Øyum et al., 2010). At the core of this model is the assumption that it is possible as well as beneficial for both employees and employers to cooperate in some areas even if there are legitimate conflicts in others. The roots go back to collective agreements between industrial partners in the late nineteenth century (Elvander, 2002), and the model has been strengthened through a series of labor legislations that have made the Nordic countries become more collectively oriented than in the rest of Europe (Evju, 2010, 4).

In the 1960s this model was further developed, especially through industrial experiments with autonomous work groups, first in Norwegian industrial firms and then by parallel initiatives in Sweden and Denmark (Gustavsen, 2007, 652; Emery & Thorsrud, 1976, Emery et al., 1974). These experiments gave workers more opportunity to make decisions on their own regarding how the work should be carried out, allowing them to produce new knowledge through what has been known as the co-creation learning processes (Øyum et al., 2010; Elden & Levin, 1991; Qvale, 2003; Klev & Levin, 2009). In their analysis of how work is organized in European industrial companies, Lorenz and Valeyre associate this way of organizing work with theories of organizational learning, finding learning organizations to be most strongly represented in Scandinavian countries (Lorenz & Valeyre, 2004, 14). They note that in the Scandinavian countries, "Learning is continuous as employees are expected to take initiative and to exercise autonomy in resolving the production and service related problems they confront" (Lorenz & Valeyre, 2004, 18).

The theory of co-generative learning (Klev & Levin, 2012) or co-generation of knowledge (Elden & Levin, 1991) may be understood as an integration of organizational learning theories and ideas of collaboration embedded in the Scandinavian model of work organization. Co-generative learning can be seen both as a theory on how to make organizations more effective and a learning theory where learning is contextual and occurs in interaction between different actors. Klev and Levin's theory draws strongly on the concept of inquiry from John Dewey (1938) and

resembles Senge's (1990a, b) notion of generative learning. As a process view on learning, it argues that learning in organizations should be seen as the "creation of common knowledge through solving concrete problems" (Klev & Levin, 2012, 67).

Inquiry at Work

In organizational learning in the tradition of Argyris and Schön, learning is strongly related to inquiry and "the testing and restructuring of organizational theories of action" (Argyris & Schön, 1978, 11). In this view, one learns not merely by observing what one or others already do but by trying out new ways of doing things. With double loop learning, one also modifies the "organization's underlying norms, policies, and objectives" (Argyris & Schön, 1978, 3).

Such a modification calls for inquiry, and the work of Argyris and Schön thus references John Dewey and his concept of inquiry: "Inquiry for Dewey combines mental reasoning and action. The Deweyan inquirer is not a spectator but an actor who stands within a situation of action, seeking actively to understand and change it. When inquiry results in a learning outcome, it yields both thought and action, at least in some degree new to the inquirer" (Argyris & Schön, 1996, 31).

The concept of inquiry in Dewey's work is not primarily about learning; it is about knowledge. Dewey's monumental work Logic: The theory of inquiry only mentions learning eight times and has no explicit learning theory. The term knowledge, however, is found 317 times (Dewey, 1938). Dewey's focus is on epistemology: How is knowledge made? His theory of inquiry is a critique of traditional epistemology, opposing what he calls a "doctrine of immediate knowledge" wherein that knowledge could be gained by "seizing or grasping, intellectually without questioning" (Dewey, 1938, 143). Dewey argues that "direct knowledge" instead should be understood as a "a product, mediated through certain organic mechanisms of retention and habit, and it presupposes prior experiences and mediated conclusions draw from them" (Dewey, 1938, 143). To Dewey, knowledge is something that is produced, and the main mechanism for this production is inquiry: "A person, or, more generically, an organism, becomes a knowing subject in virtue of engaging in operations of controlled inquiry" (Dewey, 1938, 526).

In the Scandinavian Model, dialogue conferences (also known as dialogue seminars, search conferences, or mapping conferences) were developed among industrial work researchers in the late 1970s to 1980s as a method for collective inquiry. These conferences applied the double loop learning strategy in order to establish a more common ground for development work and as a means to generate local knowledge (Ebeltoft, 1991). An important goal of the conferences was to establish a "democratic dialogue" (Finsrud, 2009, 71) and to "give all relevant stakeholders a voice" (Klev & Levin, 2012, 152). These conferences or seminars were often organized in the start-up phase of challenging change projects and when facing other challenging situations in which there was a need for workers' expertise and know-how (Irgens, 2018).

Learning Oriented Leadership

Inquiry calls for learning oriented leadership, which Argyris and Schön (1974) call Model 2. Model 2 was depicted as an alternative to Model 1, which typically led to defensive routines and a lack of productive communication and learning. The governing values of Model 1 were, among others, trying to win and not lose, ignoring negative feelings and emphasizing rationality, and achieving one's goal or purpose based unilaterally on one's own understanding. These values typically led to strategies such as trying to control a situation and a task one-sidedly, achieving unilateral control, and protecting oneself and others through, for example, face-saving maneuvers. Model 2, on the other hand, stressed the importance of shared power and mutual influence, common goals, open communication, and the open testing of beliefs and assumptions.

Model 2 was governed by values such as free and informed choice and valid information, leading to strategies such as sharing control, increasing the prospect of internal commitment to decisions, and collaborating not only on implementing action but also on the design of the change process (Argyris & Schön, 1974, Argyris et al., 1985). As such, the Model 2 strategies to a large degree align with the co-creation strategies that were so central in the Norwegian version of the Nordic Collaboration Model that Einar Thorsrud and his associates represented.

Scandinavian work researchers, influenced by American pragmatism, took an interest early on in the ideas of Argyris and Schön (Ebeltoft, 1991). The influence from Argyris and Schön can be seen in the understanding of epistemology and in the form of leadership that is valued. According to these researchers, management should share control and power, involve organization members in development work, and establish a collaborative culture, and organizational development should be based on knowledge, which must be produced locally by the organization members (Elden, 1983).

The LSiD Case: Turning Schools into Learning Organizations Through National Programs

The call for schools to become learning organizations has been in the forefront of all the nationally initiated school development programs in Norway since the large reform in 2006 (Dahl et al., 2012). The authors of this article were part of a research team that studied one of the largest of these programs, the government-initiated Lower Secondary in Development (LSiD) program. The program was piloted in 2012–2013 and ran officially from 2013 to 2018. It involved more than 1200 Norwegian lower-secondary level schools and had a total budget of almost 200 million Euros. Each school participated for three semesters. The program built on a "school-based competence development" strategy, which meant that all the teachers

and leaders in each school were supposed to participate in collective in-school competence measures (Ministry of Education and Research, 2012).

To take part in the program, schools had to collaborate with what was defined as an external competence partner. Universities and university colleges were assigned the role as partners and were responsible for contributing "knowledge about organizational development which can contribute to strengthen the routines for collaboration in schools" (Directorate of Education and Training, 2013, 6). In the early phase of the LSiD program, these competence partners, typically teacher educators, were defined as "offerers" assigned to "deliver" the knowledge that schools ordered so that the teachers could improve the quality of their classroom management and their teaching in basic skills.

Assessment for learning and learning as an organization were defined as overriding themes (Directorate of Education and Training, 2013). The latter was important for strengthening the quality of the school as an organization and enhancing the probability of having a lasting effect. The program called for collective capacity building that involved a "knowledge-building process, intended to lead to increased student achievement in every school" (Sharratt & Fullan, 2009, 8). As a whole system approach that resembled the education reform in Ontario, Canada, it also stressed that capacity building should encompass all levels in the education system (Levin, 2010). Not only the schools but also the universities and university colleges should learn through the teacher educators who assisted the schools (Directorate of Education and Training, 2013).

The expectations were particularly strong when it came to turning schools into learning organizations. The goal of becoming learning organizations was set for all participating schools and hence all Norwegian schools with lower secondary education. In a policy document, the directorate stated, "the purpose of the program is to change practice and to develop the school as a learning organization, so that all school leaders and employees can collaborate well to enhance students' learning" (Directorate of Education and Training, 2013, 4).

Methods and Results

We examined governmental policy for school development through several studies of a series of programs (Bungum et al., 2002, Dahl et al., 2004, Buland et al., 2008, Irgens & Ertsås, 2008), as well as the large Knowledge Promotion curriculum reform (Dahl et al., 2012). In particular, we studied the LSiD program in the pilot phase (Postholm et al., 2013; Dahl et al., 2013), during the operation of the main program (Postholm et al., 2017a, b), and at the end of the program (Postholm et al., 2018). We used a mixed method approach, and we generated data from actors at all levels in schools, from school administrators to students.

Our empirical data from studies of the LSiD program show that many schools hardly developed their understanding and practice of organizational learning and that the local start-up phase in schools and teachers' codetermination were crucial for

how each school developed its capacity to learn as an organization (Postholm et al., 2018). There were certainly differences between schools. In some schools, the decision process was centralized, where both the subjects (mathematics, reading, etc.) and how to carry out the local program were decided on levels above the teachers, leaving little space for local co-generation of knowledge. In other schools, it was up to individual teachers to find ways to transform what they had learned in the program into improved teaching, and consequently little collective learning took place. That seemed also to be the case when principals more or less solely decided how the local development work was to be carried out by the teachers. Many schools established what often was called a development team, a group of teachers and leaders that the principal could draw on or that may be assigned a coordination role. This way of organizing the program in schools seemed to facilitate local generation of knowledge to a larger degree than the centralized model or the model where it was up to individual teachers to transform new knowledge into improved teaching.

But across all schools, the general picture was nevertheless the same: Few schools seemed to have an espoused theory of action to enhance and develop organizational learning. We found few if any traces of organizational learning theory or the Scandinavian Collaboration Model in use, and many schools hardly developed their capacity to learn as an organization.

Our studies of the first years of the program also showed that the universities and university colleges assigned the role of competence partners were largely sending people, often newly employed teacher educators, out in schools, often alone, to give courses to the teachers (Postholm et al., 2013; Dahl et al., 2014). Later, the Directorate of Education changed the name of these partners from "offerers" to "development partners" and stressed that their main task was to facilitate and to give support rather that to give lectures. However, our final study of the program showed that the actual practice didn't change much (Postholm et al., 2018). It was still quite common among principals to order "deliverables" from the teacher educators and for these "development partners" to deliver lectures to teachers in schools like they probably would have done to their students in teacher education (Dehlin & Irgens, 2017). In other words, while the directorate changed the program's espoused theory of action, the program's theories-in-use (Argyris & Schön, 1974, 1978) and an "order and deliver" model seemed to prevail.

When studying the "development partners", we found a picture similar to the one we found in schools: The "order and deliver" model seemed to prevail, and new activities that were established through the program seldom seemed to imply any change in the work organizations. As in the schools, not much organizational learning was going on in the universities and university colleges (Postholm et al., 2018).

There were, of course, variations in the way these development partners and schools worked, and among both groups we found not only examples of different forms of collaboration and learning in communities but also some experiments and inquiries into established practices. However, these differences could seldom be explained by the effort of the program as such. Rather, it seemed that the capacity to learn collectively was already inherent in some of the school organizations and that

these schools could draw on this capacity when taking part in the new LSiD program. In other cases, the program did little to build capacity for organizational learning in schools that did not already have such a capacity. The traditional ways of working that the government had intended to change (Ministry of Education and Research, 2004, 94) seemed to persist in these schools. In the following section, we will discuss why.

Why Did Schools Fail to Develop Collective Learning Processes?

So how come many schools did not develop forms of learning that are associated with learning organizations? Is it because organizational learning does not deliver what it promises? Or should there be a degree of skepticism towards the very idea of organizational learning among teacher trainers as well as teachers and school leaders?

Call for "Strong and Powerful Leadership"

When Argyris and Schön launched their book Organizational learning in 1978 (Argyris & Schön, 1978), they were met with criticism from "distinguished social scientists" who claimed that it is only "individuals who may be said to learn, just as to think, reason, or hold opinions" (Argyris & Schön, 1996, 4). "To them", Argyris and Schön noted, "it seemed paradoxical, if not perverse, to attribute learning to organizations". Although we often hear similar arguments among educational scientists and teachers when presenting theories of organizational learning, we cannot credit this lack of change and development in schools to a distrust among teachers towards collective inquiry and co-creation of knowledge when carrying out educational change. In our study of the pilot program, we found that the teachers themselves regarded the ways of working associated with organizational learning as the most promising when it came to changing established ways of collaboration and improving students' learning. Furthermore, survey data from all the teachers in all the piloting schools as well as case studies of nine different schools showed that collective learning processes wherein teachers planned, evaluated, and taught in teams had an effect on how the schools developed and changed their practices (Postholm et al., 2013). This comes hardly as a surprise, as there are numerous studies from other countries showing the same (Silins et al., 2002, Kraft et al., 2016, Richter & Pant, 2016, Bryk et al., 2010, Collinson et al., 2006). We concluded that some sort of organizational learning could indeed contribute to school development: Our study as well as other researchers' studies gave support to the governmental aim to change schools into learning organization. In other words, the government was

not wrong in thinking that moving schools towards the ideal of the learning organization would contribute to schools' capacity to improve. Rather, there seemed to be a lack of understanding of what it takes to involve teachers and other local actors constructively in such a collective endeavor.

The LSiD program's espoused theory of action (Argyris & Schön, 1974, 1978) stressed the need for involvement and collaboration in local school-based competence development (Directorate of Education, 2013). One should consequently expect that the principals as well as the teacher educators who were designated to assist the schools would draw on organizational learning theory and the knowledge of co-creation developed in the Nordic countries in general and in Norway in particular regarding how to initiate and conduct change programs (Øyum et al., 2010, Elden & Levin, 1991, Qvale, 2003, Klev & Levin, 2009). That was not the case.

A general feature of the LSiD program was weak anchoring and a lack of involvement of the different actors in schools and of the development partners in the universities. One study showed that one out of five teachers did not even know that they took part in the program (Markussen et al., 2016). Among the teacher educators who were engaged as development partners, a large number of people were just given a job to do (Dahl et al., 2014). Hence, there was a lack of involvement from what might be called the shop floor, both in schools and in universities and university colleges.

Instead of opting for a democratic and dialogic way of organizing work in the co-creation tradition, the government, in response to the so-called PISA shock in 2001, chose a strategy that demanded that schools become learning organizations, and they charged school leaders with ensuring that this transformation took place, instructing them to show "strong and powerful leadership" (Ministry of Education and Research, 2004, 27). There was no reference to the Scandinavian Model. From the 1960s on, the development of the Scandinavian Model, aiming to democratize work organizations, was a fight against unilateral top-down management control (Thorsrud & Emery, 1970, Emery et al., 1974). The strategy from the government in response to the PISA results was a return to hierarchical thinking about organizations. Although Norway did not rigorously opt for the philosophy of New Public Management (NPM) (Christensen & Lægreid, 2007), there are elements – especially in the thinking about management – that found their way into policy thinking and governmental white papers. When it comes to the role of management, NPM may be seen as a rupture with the idea of democracy at work (Irgens, 2018, 27). This turn may, at least to some degree, explain why anchoring and involvement of actors in the schools were weak (Postholm et al. 2018). Empirical studies of the industrial experiments – studies whose results showed the importance of participation for generating learning at the workplace – were forgotten or ignored when the government's strategy was set out in practice (Irgens, 2018).

From Vertical Collaboration to Learning in Network for School Leaders

In the LSiD program's policy document issued by the Directorate of Education on behalf of the government, we find a reference to the dialogue conferences that were developed within the Scandinavian Model. However, the concept of dialogue conferences as used in the LSiD program was not in the tradition of this model and had no reference to this line of research. Instead, it referred to a tradition of dialogue conferences that had been adapted by education researchers working with school development. The concept had kept some of its original meaning from work research, as the conferences should create "good communicative structures which gives the participants the possibility to participate in a community" (Lund et al., 2010, 51).

However, there is one notable difference between how dialogue conferences were carried out in industry and the way they were used in the LSiD program. In industry, they were primarily a dialogue arena within organizations and between managers and employees as a collective inquiry into a challenging situation, as well as a means of facilitating co-generative knowledge production. In the school setting, meanwhile, dialogue conferences were seen as arenas for school leaders from different schools and different levels to meet. Teachers were not included. The intention of securing involvement of all levels in the organization in a co-generative process of knowledge creation vanished. Management learning was prioritized at the expense of organizational learning, and teachers were left out: "Leaders need a professional language to mirror each individual's practice" (Lund et al., 2010, 54).

This transformation of the purpose and the form of the dialogue conference did to some extent reflect changes in the work research in Norway. During the 1990s, there was a shift in the focus from "single organizations to various configurations of organizations as the prime unit of change" (Gustavsen, 2011, 474). Instead of having the single work organization as a focal point and studying processes within organizations, Norwegian work research developed a wider perspective on business development. Instead of work organizations, clusters became the trend word, and Michael Porter's book The Competitive Advantage of Nations (Porter, 1990) was not without influence. The shift represented a move from the old idea of development through participation to development through innovation (Thomassen, 2012). Instead of working to improve the conditions for learning at the workplace, as was one of the main goals in the Scandinavian Model, it was now a question of learning in networks as an inter-organizational process. This implied a transformation from organizational learning to management learning, a transformation that took place in industrial work research as well as in research on school development.

Co-Production of Knowledge

The LSiD program failed to ensure that schools developed their own local theory of action and did not grant the local actors ownership of the process. There was also an underlying understanding of knowledge that made the goal of changing schools into learning organizations difficult to reach.

In the governmental documents on the school as learning organization, there is almost no reference to the literature when speaking about the learning organization. The only exception is a reference to Peter Senge's The Fifth Discipline in a white paper for the large educational reform in 2006 (NOU, 2003, 16, 63). Senge is explicit on which learning theory he builds his theory of learning organizations on: "generative learning". Senge sees learning as a creative process that generates knowledge (Senge, 1990a, b, 8).

Initially, the LSiD program had a different view on learning: Referring to research, it stated that "reflection based on observation is the best way to develop practice" (Directorate of Education and Training, 2016, 6). Observation and reflection became frequently used concepts in the program. Teachers were told to observe each other's practices and reflect together on what they were doing.

This mode of learning resembles what Senge characterizes as "adaptive learning" (Senge, 1990a, b, 8). While generative learning is a process that explores the unsolved, unknown, or unexpected, adaptive learning deals with what is already known: It is "about adapting". The observation and reflection method was to a larger degree intended to identify best practice and then adapt it. Instead of exploring new ways of doing things and developing local theories, teachers should observe existing practice and then copy it.

This adaptive character of learning in the LSiD program was even more present in how the external partners, the "development partners", worked with schools. These partners were meant to "facilitate reflection at the school for further development of practice. This involves bringing in existing research-based knowledge" (Directorate of Education and Training, 2016, 10). And so they did: Many development partners gave lectures to teachers in schools, bringing in state-of-the-art research. Others worked by modeling teaching processes, with or without the participation of teachers, so that teachers could learn a new practice.

The LSiD program also used so-called national knowledge centers that had been established with the Knowledge Promotion reform. Their mission was to carry out research in specific school-related subjects, like mathematics and reading. In the LSiD program, these centers were supposed to develop what was referred to as "resources" for the schools and the development partners. These resources were in general like manuals for how to work as a teacher based on research evidence that supported the specific way of teaching.

Organizational Learning Through Adaption Rather than Inquiry

We conclude that the LSiD program, in spite of the call for schools to function as learning organizations, did not have a generative character and did not make the ground for experimentation with new ways of doing things in schools. Inquiry was not a central topic. Reflection and adaption were the main means for learning. The program operated with a theory of knowledge where knowledge tended to be seen as an asset. Knowledge was, to quote Bruno Latour, "ready-made", only to be distributed in schools (Latour, 1987, 1991), while inquiry asks for what Latour would call knowledge "in the making".

With this implicit understanding of knowledge as an asset or "ready-made", the LSiD program in its early stage adapted a learning theory that resembles what Carl Rogers defined in a discussion with Gregory Beatson as the "jug-and-mug theory", an understanding of learning where "the instructor is the jug and pours knowledge into the passive receptacle which is the mug, which is the students, with no place for their feelings, with no chance to choose or initiate their own learning" (Kirschenbaum & Henderson, 1990, 180). In the LSiD program, the experts tended to take on the role of instructors and the teachers the role of students, a model that proved hard to alter when the directorate asked for a change from "offerers" who gave lectures to "development partners" who facilitated and gave support. The underlying view of knowledge prevailed and did little to help schools inquire into their practice or to prompt teachers and leaders to work together to generate new local knowledge.

This view of knowledge had also implications for the local start-up phase. In our final study, conducted in the last year of the program, we concluded that the initiation phase in the local school and how teachers from the very beginning were engaged in collective inquiry seemed decisive for how the school succeeded in developing collective and organizational learning. However, we found few examples if any of schools where the teachers participated together with their leaders in the design of the local program in a way that resembled a Scandinavian tradition of "dialogue seminars", "dialogue conferences", or "search conferences" (Qvale, 2003). In this model of co-creation, local knowledge is created through collaborative inquiry. Instead, we found an "order and deliver" rhetoric and practice among principals and their university collaborators that seemed to reflect agency theory (Jensen & Meckling, 1976) and a static view of knowledge where competence development was seen as transaction and implementation (Irgens, 2018). We suspect that this preference for one kind of knowledge over another, for a static view over a practice view (Blackler, 1995, Dehlin & Irgens, 2017), has favored an understanding of organizational learning that has left out the importance of process, involvement, and co-creation of local theory and knowledge. Accordingly, these are aspects that organizational learning theory should give more attention to.

Conclusion

In this article, we have drawn on the LSiD program as an illustrative case to show how the ambitious goal of turning Norwegian schools into learning organizations proved more prominent in the strategic plans than in practice. This is not to say that organizational learning as such is not relevant in schools. Teachers themselves reported that they regarded work forms associated with organizational learning as important when it came to improving the quality of schooling (Postholm et al., 2013). Thus, one should expect that organizational learning as a co-creative and collective inquiry process should be relevant and gain attention. However, we found that this was not the case in the LSiD program, a finding that also seems to echo studies of other national competence programs (Blossing et al., 2010; Dahl et al., 2012; Markussen et al., 2015).

To state that it is important to become a learning organization is nothing more than to describe an ideal (Finger & Brand, 1999, 136); by itself, it does not denote what it takes to move an organization such as a school towards that ideal. We have maintained that this would require a stronger emphasis on collective inquiry and the development of context-relevant theories of action to be tested out by local actors in the local context. In the Norwegian tradition of co-creation, this would typically require local processes that involve both teachers and leaders in dialogue seminars, in which the ideal principal would be a democratic leader who facilitates communication, cooperation, and shared control (Elden, 1983). However, the LSiD program was initiated soon after white papers described "strong and powerful leadership" as an ideal (Ministry of Education and Research, 2004, 27). What we found in the LSiD program was a rhetoric and a practice that did not resemble democratic co-creation, but management theory in general and agency theory in particular (Jensen & Meckling, 1976). This orientation implied an understanding of knowledge as an asset where competence development tended to be seen as a question of transfer and transaction of knowledge rather than knowledge creation. Instead of developing the capacity to learn collectively and improve the school as a learning organization, local development work in schools tended to become a question of efficient implementation rather than a search for ways to design processes to create tentative solutions to local and specific challenges. In other words, instead of improving the capacity to learn collectively and to create knowledge through shared inquiry, knowledge tended to be seen as a static phenomenon, an asset that could be ordered, delivered, and applied, and the learning organization something to be implemented rather than created.

Improving how schools develop their capacity to learn as a collective thus calls for more than merely introducing co-creative techniques of collaboration. Co-creation is a concept with many connotations and traditions (Iversen, 2017). We have pointed to the general Nordic tradition and in particular the Norwegian tradition, where knowledge is not a given thing, but something in the making. This is a view that may challenge other paradigmatic assumptions and understandings of knowledge and leadership. If co-creation is applied based on an implicit view of

knowledge as an asset, co-creation will mean nothing more than implementing ready-made knowledge, and schools will be far from becoming the learning organizations that various governments have opted for. The local construction of knowledge will be hampered, and co-creation may end up as a management tool for executing unilateral power rather than a way of distributing it. In that case, we fear that organizational learning may engender processes that do not contribute to inquiry and the building up of organizational knowledge. In other words, the likelihood that co-creation will succeed as a strategy for developing schools' organizational learning capacity depends on a practice view of knowledge and how leadership is carried out.

What we have learned from studying the attempts to change schools into learning organizations through competence programs may thus be summarized as follows: There is still a need for a better understanding of the relation between organizational learning and knowledge, as well as how knowledge is produced when the intention is to develop organizations (Easterby-Smith & Lyles, 2011). Dewey described knowledge as "the fruit of the undertakings that transform a problematic situation into a resolved one", where the challenge may, for example, be how to transform a problematic situation, resolve a difficulty, find answers to a question, or clarify a confusion (Dewey, 1929, 236–7). However, such a transformation and undertaking must necessarily take other forms when the intention is to build capacity for organizational learning and to develop knowledge that is not only individual, but also organizational. The LSiD case shows that even in organizations such as schools, organizations that have the development of learning and knowledge as primary goals, this kind of knowledge seems to be lacking.

References

Argyris, C., & Schön, D. A. (1974). *Theory in Practice. Increasing professional effectiveness*. Jossey-Bass.

Argyris, C., & Schön, D. A. (1978). *Organizational learning. A theory of action perspective*. Addison-Wesley.

Argyris, C., & Schön, D. A. (1996). *Organizational learning II: Theory, method, and practice*. Addison-Wesley.

Argyris, C., Putnam, R., & Smith, D. D. (1985). *Action science. Concepts, methods and skills for research and intervention*. Jossey Bass.

Blackler, F. (1995). Knowledge, knowledge work and organizations: An overview and interpretation. *Organization studies, 16*(6), 1021–1046.

Blossing, U., Hagen, A., Nyen, T., & Söderström, Å. (2010). *Kunnskapsløftet: fra ord til handling: Sluttrapport fra evalueringen av et statlig program for skoleutvikling* (Vol. 2010:01, FAFO-rapport). Fafo.

Bryk, A. S., Sebring, P. B., Allensworth, E., Easton, J. Q., & Luppescu, S. (2010). *Organizing schools for improvement: Lessons from Chicago*. University of Chicago Press.

Buland, T., Dahl, T., Finbak, L., & Havn, V. (2008). *Det er nå det beginner!: sluttrapport fra evalueringen av tiltaksplanen «Gi rom for lesing!»*. SINTEF.

Bungum, B., Dahl, T., Gullikstad, B., Molden, T. H., & Rasmussen, B. (2002). *Tid til en kollektiv og attraktiv skole. Evaluering av sentralt initierte forsøk med alternative arbeidstidsordninger i skoleverket*. SINTEF.

Christensen, T., & Lægreid, P. (2007). *Transcending new public management: The transformation of public sector reforms*. Ashgate.

Collinson, V., Cook, T. F., & Conley, S. (2006). Organizational learning in schools and school systems: Improving learning, teaching, and leading. *Theory into Practice, 45*(2), 107–116.

Committee on How People Learn II. (2018). *How people learn II. Learners, contexts, and cultures*. The National Academies Press.

Dahl, T., Klewe, L., & Skov, P. (2004). *En skole i bevægelse. Evaluering af satsning på kvalitetsudvikling i den norske grundskole*. Danmarks Pædagogiske Universitets Forlag.

Dahl, T., Buland, T., Mordal, S., & Aaslid, B. E. (2012). *På de samme stier som før. Kunnskapsløftet i fag- og yrkesopplæringen.* SINTEF.

Dahl, T., Engvik, G., Fjørtoft, H., Postholm, M. B., & Wæge, K. (2013). *Å bidra til skolebasert kompetanseutvikling. En kartlegging av lærerutdanningsinstitusjoners ressurser*. Oslo.

Dahl, T., Engvik, G., & Holter, T. (2014). *Kartlegging av kompetansemiljøenes arbeid med skolebasert kompetanseutvikling – høsten 2013*. Program for lærerutdanning, NTNU.

Dehlin, E., & Irgens, E. J. (2017). Kunnskap som struktur i møte med kunnskap som praksis: Dilemma og spenninger i norsk skoleutvikling. In M. B. Postholm (Ed.), *Kunnskap for en bedre skole. Etter- og videreutdanning som strategi* (pp. 161–188). Fagbokforlaget.

Dewey, J. (1929). *The quest for certainty: A study for the relation of knowledge and action*. G. P. Putnam.

Dewey, J. (1938). *Logic: The theory of inquiry*. Holt, Rinehart and Winston.

Directorate of Education and Training. (2013). *Rammeverk for skolebasert kompetanseutvikling på ungdomstrinnet 2013–2017* [Framework for School-based Competence Development on the lower secondary level]. The Norwegian Directorate for Education and Training. https://lesesenteret.uis.no/getfile.php/13293604/Lesesenteret/G1_Vedlegg1_Udir_Rammeverk.pdf. Accessed 25 Apr 2019.

Directorate of Education and Training. (2016). *Rammeverk for skolebasert kompetanseutvikling på ungdomstrinnet 2013–2017* [Framework for school-based competence development on the lower secondary level]. Directorate of Education and Training. https://www.udir.no/kvalitet-og-kompetanse/nasjonale-satsinger/ungdomstrinn-i-utvikling/Rammeverk-skolebasert-komputv-utrinnet2012-2017/. Accessed 21 Oct 2019.

Easterby-Smith, M., & Lyles, M. A. (2011). The evolving field of organizational learning and knowledge management. In M. Easterby-Smith & M. A. Lyles (Eds.), *Handbook of organizational learning and knowledge management*. Wiley.

Ebeltoft, A. (1991). *Dialogkonferanser: teori og praksis i utvikling av det psykososiale arbeidsmiljøet* (Vol. 1/91). Arbeidsforskningsinstituttet.

Ebeltoft, A. (1993). Et postmodernistisk syn på organisasjon. *Tidsskrift for organisasjonspsykologi, 1*(1).

Elden, M. (1983). Democratization and participative research in developing local theory. *Journal of Occupational Behaviour*, 21–33.

Elden, M., & Levin, M. (1991). Cogenerative learning: Bringing participation into action research. In W. F. Whyte (Ed.), *Participatory action research* (pp. 127–142). SAGE.

Elvander, N. (2002). The labour market regimes in the Nordic countries: A comparative analysis. *Scandinavian Political Studies, 25*(2), 117–137.

Emery, F., & Thorsrud, E. (1976). *Democracy at work: The report of the Norwegian industrial democracy program*. Martinus Nijhoff Social Sciences Division.

Emery, F. E., Thorsrud, E., & Trist, E. (1974). *Form and content in industrial democracy: Some experiments from Norway and other European countries*. Tavistock.

Evju, S. (2010). Kollektiv autonomi, 'den nordiske modell' og dens fremtid. *Arbeidsrett*, (01–02), 1–29.

Finger, M., & Brand, S. B. (1999). The concept of the 'learning organization' applied to the transformation of the public sector: Conceptual contributions for theory development. In M. Easterby-Smith, L. Araujo, & J. Burgoyne (Eds.), *Organizational learning and the learning organization: Developments in theory and practice*. SAGE.

Finsrud, H. D. (2009). Den norske modellen og regionalisering av forskningen: Et nytt utviklingstrinn eller styrt avvikling? *Sosiologi i dag, 39*(1).

Gustavsen, B. (2007). Work Organization and the Scandinavian Model. *Economic and Industrial Democracy, 28*(4), 650–671.

Gustavsen, B. (2011). The Nordic Model of work organization. *Journal of the Knowledge Economy, 2*(4), 463–480. https://doi.org/10.1007/s13132-011-0064-5

Irgens, E. J. (2018). Historical amnesia. On improving Nordic schools from the outside and forgetting what we know. *Nordic Journal of Comparative and International Education, Special issue, 2*(2–3), 25–38.

Irgens, E. J., & Ertsås, T. I. (2008). Higher education as competence program providers in a nationwide school reform. In C. Nygaard & C. Holtham (Eds.), *Understanding learning-centred higher education*. CBS Press.

Iversen, A.-M. (2017). *Det paradoksale begreb: Hvad vi taler om når vi taler om samskabelse. Og det vi gør*. Ph.D.-serien for Det humanistiske fakultet. Aalborg universitetsforlag: Aalborg universitet.

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of financial economics, 3*(4), 305–360.

Kirschenbaum, H., & Henderson, V. L. (1990). *Carl Rogers: Dialogues: Conversations with Martin Buber, Paul Tillich, B.F. Skinner, Gregory Bateson, Michael Polanyi, Rollo May, and others*. Constable.

Klev, R., & Levin, M. (2009). *Forandring som praksis: endringsledelse gjennom læring og utvikling* (2nd ed.). Fagbokforlaget.

Klev, R., & Levin, M. (2012). *Participative transformation: Learning and development in practising change*. Routledge.

Kools, M., & Stoll, L. (2016). *What makes a school a learning organisation?* (Education Working Paper No. 137). OECD.

Kraft, M. A., Marinell, W. H., & Yee, D. (2016). *School organizational contexts, teacher turnover, and student achievement: Evidence from panel data*. The Research Alliance for New York City Schools.

Latour, B. (1987). *Science in action: How to follow scientists and engineers through society*. Harvard university press.

Latour, B. (1991). *Nous n'avons jamais été modernes. Essai d'anthropologie symétrique*. La Découverte.

Levin, B. (2010). *How to change 5000 schools. A practical and positive approach for leading change at every level* (2nd ed.). Harvard Education Press.

Lorenz, E., & Valeyre, A. (2004). *Organisational change in Europe: National models or the diffusion of a new "one best way"?* (DRUID working papers 04-04). Copenhagen Business School.

Lund, T., Rotvold, L. A., Skrøvset, S., Stjernstrøm, E., & Tiller, T. (2010). Dialogkonferansen som læringsarena og pedagogisk utviklingsverktøy. *FoU i praksis, 4*(1).

Markussen, E., Carlsten, T. C., Seland, I., & Sjaastad, J. (2015). *Fra politisk visjon til virkeligheten i klasserommet: Evaluering av virkemidlene i Ungdomstrinn i utvikling. Delrapport 2*. NIFU.

Markussen, E., Carlsten, T. C., Seland, I., & Sjaastad, J. (2016). *Fra politisk visjon til virkeligheten i klasserommet. Evaluering av virkemidlene i Ungdomstrinn i utvikling. Delrapport 2*. NIFU.

Ministry of Education and Research. (2004). St. Meld. nr. 30 (2003–2004). *Kultur for læring* [Culture for learning]. Ministry of Education and Research.

Ministry of Education and Research. (2012). *Strategi for ungdomstrinnet- Motivasjon og mestring for bedre læring. Felles satsing på klasseledelse, regning, lesing og skriving* [Strategy for the lower secondary school level – Motivation and mastering for better learning. Joint effort for

classroom management, mathematics, reading and writing]. Ministry of Education and Research.

NOU. (2003). *16. I første rekke: forsterket kvalitet i en grunnopplæring for alle. Vol. NOU 2003:16, Norges offentlige utredninger*. Departementenes servicesenter, Informasjonsforvaltning.

Øyum, L., Finnestrand, H. O., Johnsen, E., Lund, R., & Ravn, J. E. (2010). *PALU: Utvikling og praktisering av den norske samarbeidsmodellen* [PALU – Development and practice of the Norwegian collaboration model]. SINTEF, NHO, LO and Hovedorganisasjonenes Fellestiltak.

Porter, M. E. (1990). *The competitive advantage of nations*. Macmillan.

Postholm, M. B., Dahl, T., Engvik, G., Fjørtoft, H., Irgens, E. J., Sandvik, L. V., & Wæge, K. (2013). *En gavepakke til ungdomstrinnet? En undersøkelse av piloten for den nasjonale satsingen på skolebasert kompetanseutvikling*. Akademika forlag.

Postholm, M. B., Dahl, T., Dehlin, E., Engvik, G., Irgens, E. J., Normann, A., & Strømme, A. (2017a). *Ungdomstrinn i utvikling : skoleutvikling, lesing, skriving og regning : funn og fortellinger*. Universitetsforlaget.

Postholm, M. B., Dahl, T., Dehlin, E., Engvik, G., Irgens, E. J., Normann, A., & Strømme, A. (2017b). *Ungdomstrinn i utvikling: Skoleutvikling og ledelse. Funn og fortellinger*. Universitetsforl.

Postholm, M. B., Nordmann, A., Dahl, T., Dehlin, E., Engvik, G., & Irgens, E. (2018). *Skole- og utdanningssektoren i utvikling*. Fagbokforlaget.

Qvale, T. U. (2003). New concepts in work organization: A case from the Norwegian offshore petroleum industry. In M. Gold (Ed.), *New frontiers of democratic participation at work* (pp. 177–201). Ashgate.

Richter, D., & Pant, H. A. (2016). *Lehrerkooperation in Deutschland. Eine Studie zu kooperativen Arbeitsbeziehungen bei Lehrkräften der Sekundarstufe I*. Bertelsmann Stiftung, Robert Bosch Stiftung, Stiftung Mercator, Deutsche Telekom Stiftung.

Senge, P. M. (1990a). The leader's new work: Building learning organizations. *Sloan Management Review, 32*(1), 7.

Senge, P. (1990b). *The fifth discipline. The art and practice of the learning organization*. Bantam Doubleday.

Sharratt, L., & Fullan, M. (2009). *Realization: The change imperative for deepening district-wide reform*. Corwin Press.

Silins, H. C., Mulford, W. R., & Zarins, S. (2002). Organizational learning and school change. *Educational Administration Quarterly, 38*(5), 613–642.

The International Foundation for Information Technology. (2009). *Term definition(s)*. https://www.if4it.com/SYNTHESIZED/GLOSSARY/K/Knowledge_Transaction.html. Accessed 19 Sept 2019.

Thomassen, O. J. (2012). På tide med en vending mot en 'offentlig sosiologi' i norsk arbeidslivsforskning? *Sosiologisk tidsskrift, 02*, 160–182.

Thorsrud, E., & Emery, F. E. (1970). Industrial democracy in Norway. *Industrial Relations: A Journal of Economy and Society, 9*(2), 187–196.

Chapter 13
The Communicative Organisation of Reflexivity in Management Education: A Case of Learning to Be "Right" by Becoming Wrong?

Roddy Walker and Mie Plotnikof

Abstract In this chapter, we explore the organisation of reflexivity across management education and work practices, considering the implications of this for managerial work and organisational learning. This addresses the privileged status of 'professional reflexivity' – as a fundamental element of management education, both in the educational process and as a key learning goal and competence in itself. While extant organization studies on reflexivity often focus on the cognitive and social aspects of reflexivity, this chapter relocates focus to the organization of reflexivity as a discursive-material performativity by proposing a communicative constitution of organization perspective (CCO). We contend that CCO offers new insights to extant approaches prevalent in the literature by enabling specific examination of the organisation and situated accomplishments of reflexivity. This offers analytical tooling, showing how reflexive practices are communicatively organised, investigating which resources are made present in the accomplishment of reflexivity, and the implications of this for practices and participants. Through an ethnographic case study of a management education programme, we analyze the communicative practices that organize 'reflexivity', the precarious work of performing reflexivity in management education, and the un/intended implications of this across educational and managerial contexts. The analysis of our case study elucidates not just the potentials, but also the side effects of organizing professional reflexivity as a target in management education. Grappling specifically with the practices of organising reflexivity in management education in this way, as well as the implications this may have for managerial work, offers insight into the scope such practices establish for organisational learning.

Keywords Management education · Reflexivity · Critical Management Studies · Communicative Constitution of Organization · Ventriloquism · Becoming Wrong

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Introduction

Following the 35th anniversary of its publication, this chapter takes the opportunity to recognise the legacy of Donald Schön's seminal work "The Reflective Practitioner" (1983) and consider some of the current implications of bringing reflexivity to the forefront in management education in a Scandinavian context (Alvesson et al., 2017; Elkjaer & Nickelsen, 2015; Ratner, 2013). Here, reflexivity has gained a prominent role in many management education programmes (MEPs), often mentioned explicitly in learning goals. As Cunliffe and Jun (2005) has stressed, this invites managers "to become reflexive practitioners – to work out their relationship to other individuals (including employees and citizens), to understand their role in a diverse and complex society, and to understand the need for organisational members to act in more critical, responsive, and ethical ways" (p. 226). Thus, reflexivity is often charged with promoting ideals of more responsible managerial practices, in contrast to mainstream management concepts and quick fixes (Cunliffe et al., 2002; Parker, 2001). The potential for reflexivity to enable managers to critically consider their work, both in educational practices and in everyday organisational life, is therefore pivotal for managers and scholars working with such ideals (Ratner, 2013; Reynolds, 1999).

Since Schön's work, the ideals of reflexivity – with potentials and challenges – have been heavily discussed in particular within the broader field of critical management studies (CMS) (Cunliffe & Jun, 2005; Parker, 2001). Reflexivity has been reconceptualised: from a cognitive action science of organisational learning (Argyris, 1976; Robinson, 2001; Schön, 1987) to a more relational, social constructivist understanding of it as dialogic practice (Shotter, 2010), and fundamental in enabling so-called critical performativity in practice (Alvesson & Spicer, 2012; Parker & Parker, 2017). While these debates emphasize the importance of reflexivity in management education and its slippery function in organisational life, more practice-based approaches are surprisingly underexplored (Elkjaer & Nickelsen, 2015). Therefore, grappling with practices of organising reflexivity – for example in MEPs – and their practical implications, offers insight into the scope such practices establish for organisational learning.

This chapter builds on critical efforts (Elkjaer & Nickelsen, 2015; Parker, 2001) to further our understanding of reflexivity, by developing a practice-based perspective inspired by Communicative Constitution of Organisation (CCO) (Ashcraft et al., 2009). We do so by exploring the communicative organizing of reflexivity across a MEP and associated work practices – how is reflexivity thus constituted and with which implications? CCO offers analytical concepts pertinent to such a practice perspective, as it views communication as both discursive and material practices that – in dynamic processes – construct, negotiate and transform meaning and matter. Importantly, in this view communication is "axial – and not peripheral" to the existence of organisation and organising (Ashcraft et al., 2009, p. 22). Drawing on this, we unfold the analytical potential of CCO, specifically the concepts of text/conversation dialectics and ventriloquism (Cooren, et al. 2005, 2013) to scrutinize

the organisation of reflexivity in an empirical case of a MEP across educational and organisational settings.

This chapter contributes with unpacking a CCO approach to studying reflexivity across MEPs and work practices – thereby adding to extant developments within this field (Elkjær & Brandi, 2014; Ratner, 2013). Our analysis shows how reflexivity becomes organised communicatively across various (non-)human actors (e.g. management theory, teaching, exams, meetings) in a particular manner. Findings show that communicative practices of reflexivity engaging critically with pressing organisational initiatives are organized solely around exposing individual shortcomings in managing these initiatives. Organisational initiatives related to reforms become excluded from critical reflexive practices, obscuring problems arising from the initiatives themselves. This suggests that – in our case – an unintended implication of this organisation of reflexivity is that actors *learn to be right* as managers, by becoming "wrong." The legitimate managerial identity constituted through the MEP is constructed by taking responsibility for failings in the implementation of pressing organisational initiatives, with any critical reflexivity about those becoming illegitimate. By redacting problematic elements of organisational initiatives from the arena of critical reflection, the identification of managerial shortcomings becomes the point of departure for understanding and tackling organisational challenges. The content and design of the MEP, and the manner in which reflexivity is organised, constitutes organisational failings as de-facto managerial failings.

This chapter offers both theoretical and empirical insights that expands existing approaches to reflexivity – as individual cognition schemes and action skills (Schön, 1983), and as relational dialogism and social constructions often stressed in CMS (Alvesson et al., 2017). This is achieved through a detailed account of the ongoing, but fragmented communication practices that precariously organise reflexivity. The chapter begins by considering how literature on reflexivity in management education has developed, making the case for our analytical approach. Thereafter, we present our methods and empirical case. Next, we unfold our analysis, and conclude by discussing this in relation to extant research and exploring practical implications.

The Reflective Practitioner and the Critical Quest for Reflexivity

CMS highlight reflexivity as a decisive element in marrying theory and practice, and therefore its critical performativity in enhancing accountability and responsibility in management work (Alvesson & Spicer, 2012; Fairhurst & Grant, 2010; Reynolds, 1999). This builds on the early work of Argyris and Schön (Argyris, 1976; Schön, 1983) emphasizing the "reflective practitioner" for organisational learning. Based on a more individual-centred and cognitive understanding, this early work developed an action science, in which managers and co-workers learn to reflect over and theorise

their actions, thereby enhancing organisational development while they work (Schön, 1987; Robinson, 2001). These understandings have been hugely influential across the fields of organisational learning, change and innovation – including from a CMS perspective. Particularly the perceived utility of reflexivity in changing actors' cognitive schemes and allowing them to interact in not just single, but more desirable double-loop learning processes have been important to critical approaches. This stresses the demand for management education to facilitate a shift from single-loop forms of reasoning and learning, to more expansive double-loop learning – where developing reflexivity can provide the fulcrum for such a shift (Alvesson & Spicer, 2012; Cunliffe et al., 2002; Shotter, 2010). This privileged status of reflexivity emphasises the importance of continued efforts to grapple with the character and organisation of reflexive practices in managerial work and education.

As such, reflexivity is critical to scholars and practitioners influenced by Schön & Argyris, not least within CMS. Here, focusing on managers' abilities in bridging theory and practice is broadly accepted as being fundamental in qualifying managerial work (Bell et al., 2002; Elkjaer & Nickelsen, 2015). While inspiration from Schön and Argyris is obvious, the linguistic turn and thereby a more social constructivist version of reflexivity has prevailed (Fairhurst & Grant, 2010). In particular, a strand of CMS makes the case for reflexivity to improve management education and practice, for example by conceptualizing dialogic and authoring practices (Shotter, 2010); and critical reflexive communication (Holmes et al., 2005). Broadly defined, these studies argue for reflexivity as in "self-reflexivity – a rigorous critique of habitual practices, and in critical reflexivity – questioning and complexifying his or her thinking and experience,"(Cunliffe & Jun, 2005, p. 226). Furthermore, Hibbert and Cunliffe (2015) apply the notion of "threshold concepts" (Land et al., 2008) to consider the influence of theory in shaping such reflections. Although various concepts are used, they relocate the focus on reflexivity from cognitive schemes and action skills in individuals, to the interactions and dialogic practices of managers, making reflexivity a relational concept. This relates the manager to experiences and local organisational conditions by the way they author, communicate and socially construct reflexivity: to concrete work situations, work relationships, current challenges, and to theories and learning assignments.

In summary, extant research changes its focus on reflexivity from an individual-centred, cognitive phenomenon to a more socially constructed and language-centred construction between the manager and other actors. Much concentration, therefore, has been on reflexivity as individual cognition or social talking and interactions, overlooking the not only individual or social, but also materialized communications and practices of reflexivity and their related performativity in organizing everyday work. A few studies have argue for the necessity of a practice perspective to further unpack the works of reflexivity – it's *doing* in everyday work (Elkjær & Nickelsen, 2015; Ratner, 2013). In adding to these, we seek to advance insights by engaging with the communicative organizing of reflexivity, following practices across MEP's and students' associated work. Below, we unfold how a CCO approach can unpack the organizing of reflexivity across MEP and related management practices, thereby

sharpening our understanding of the constitution and influence of reflexivity across education and work. In so doing, we approach reflexivity as communicatively accomplished (through both discursive and material practices), focusing on what is being communicated as 'reflexivity', by whom or what, and how that constructs and organizes meanings and matters of involved managerial work and identity. This includes taking an open approach to studying reflexivity, making the degree to which such is critical and towards what, an empirical question.

Approaching Reflexivity as a Question of Communicatively Constituted Organisation

In this chapter, then, we elaborate a CCO perspective on the organisation of reflexivity, drawing on a stream of studies that stresses the relationality of discursive and material practices when studying organisation (Ashcraft et al., 2009; Cooren et al., 2013). As stressed earlier, communication is considered a complex process of discursive and material practices that constitute organisational meaning and matter.[1] The fundamental idea that "organisations are embodied in interaction, textually and conversationally" (Ashcraft et al., 2009, p. 21), emphasises a dynamic relation between locally emerging interactions in-situ, and more trans-local, transportable texts. In following this, we can approach the organizing of reflexivity as a question of communicative constitution across various (non/human) actors, including their accomplishment of what becomes reflexive work practice and identity.

A central concept is thus text-conversation dialectic (Cooren et al., 2005), which coins how organising processes constitute across multiple (non/human) agencies, spaces and times, providing the means to explore how organisation is accomplished *in situ*. We follow the definition that: "Conversations are observable interactions – the 'site' where organisation is accomplished and experienced [. . .] Texts, in turn, are the symbolic 'surface' upon and through which conversations develop; they are how organisational forms are identified, described, and represented." (Koschmann et al., 2012, p. 335). This focuses analytical attention upon unfolding dialectics between interactions and texts to appreciate how their relationality organize work practices and identities (Koschmann, 2013; Plotnikof & Pedersen, 2019). Thereby, this concept facilitates analytical unpacking of how situated organising practices are co-constructed, where texts are regarded as significant actors amongst multiple non/human agencies. This enables a close empirical exploration of situated communication practices and their emerging organising, making a CCO approach valuable to study the organising and implications of targeting reflexivity in a MEP.

Further, the concept of ventriloquism (Cooren, 2010; Cooren et al., 2013) is also useful to investigate how multiple non/human actors co-construct organising

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[1]CCO refers to a variety of approaches – amongst which multiple 'schools' have been discussed. Here we especially align with 'the Montreal school' (see e.g. Schoeneborn et al., 2019).

processes by including resources and making them present in interactions. This is particularly relevant for our analysis of organising reflexive practices, and the plethora of material and discursive practices involved. The analogy of a ventriloquist performing through, and with, their 'dummy' illustrates the manner in which particular "figures" can become central and made present as actors (Meier & Carroll, 2019). Such figures can be locally present in material form or extra-local, evoked and activated in and through discourse; made present in order to legitimise actions and accomplish particular identities – e.g. to be recognized as reflexive. An important distinction should be made here: rather than foregrounding subjugation to hegemonic discourses, ventriloquism brings analytical focus upon how meaning and matter become across a plenum of agencies making certain figures present, enabling them to do and say things in particular situations. This draws analytical attention to the ways in which work practices and identities gets interacted across (non-)human actors, and as such identities too are situated accomplishments (Koschmann, 2013; Plotnikof, 2016), and so we analyse how these are achieved through multiple actors' performativity.

Based on this, the CCO concepts guiding present analysis are text-conversation dialectics and ventriloquism of figures to unfold the communicative organising of reflexivity across MEP and management work. Adding to extant CMS of reflexivity (Cunliffe & Jun, 2005; Elkjær & Nichelson, 2015), this allows us to establish another vantage point for studying the organising and implications of reflexivity empirically, by focusing on what local communications of reflexivity *do* across educational and managerial practices. So, our chapter engages with central themes of this book by elaborating on the coordination and control of work through MEPs, and by revisiting a major theme within the broader fields of organisational learning and CMS. This offers theory and analytical tooling to gain insight into the organising of reflexivity in situ – as a precarious communicative accomplishment encompassing multiple discursive and material practices. Furthermore, it unfolds becoming implications of such practices. In doing so, the coordination and performativity of knowledge production and sharing is highlighted by bringing the organisation of reflexivity across learning and work practices to the forefront.

Research Methods and Setting

Aligned with CCO approaches, the first author conducted fieldwork inspired by institutional ethnography (Smith, 2005). This focused on the significance of texts in the coordination of situated activities; beginning in the lived lives and interactions of situated (non)human actors, where a specific experiential standpoint provides the point of departure for ethnographic investigation. By identifying and following an actors' interactions and their everyday problematics, an "entry point" into the activities and accomplishment of organising is achievable, where both human and non-human actors (texts, visuals, appurtenances etc.) can be appreciated. This approach informed fieldwork, allowing reflexivity and its organisation to be

considered across a variety of (non-)human actors and practices within and between the contexts of a MEP and participants' 'home organisations.'

The empirical data was gathered within and around an in-service diploma programme in leadership provided for middle managers in the municipality of Copenhagen, for a research project aiming to illuminate the organisational influence of leadership development programmes in the public sector (Walker, 2018). Access to documents detailing negotiations between the municipality and the MEP provider allowed insight into how the content and scope of the programme aligned to broader organisational restructuring processes taking place within the municipality. The MEP focused primarily on participants' reflexivity, to be supported by engaging critically with theoretical perspectives and models offered on the course, as well as their experiences and understandings of their own managerial practices. To do so, participants were to use their own organisation as "a developmental laboratory" (Academic Regulations, 2014) in which they could engage resources offered on the MEP with actual organisational problematics. The MEP comprised a series of modules focusing on different organisational and managerial areas, culminating with an extended and summative written assignment in which participants were to design and conduct empirical investigations within their own organisations, applying resources from the MEP to inform analysis and reflection. These written exam papers were to be structured in a particular manner, including specifically focused sections where participants were invited to reflect on their learning process as a whole, and particularly on their own professional development.

Participants in the MEP were followed in their movement between sites of educational and managerial practices, with close attention paid to the texts present and produced in these settings. Examples of such texts include the guidelines and curriculum of the MEP, exam papers produced by participants, as well as protocols and minutes of meetings witnessed during observations. Therefore, continual cycles of reflexivity organised textually by the MEP, and performed by the practitioners, could be traced and investigated. One of the participants on the MEP, Eve[2], provides the standpoint within these activities, from which the analysis proceeds forthwith.

By shadowing (Czarniawska, 2007) interactions over several intervals covering a period of more than two years, interviewing Eve, her staff, superiors, as well as analysing her exam documents produced in the programme, data about practices in educational and broader organisational settings was produced. This provides a vantage point from which the organising of reflexivity can be studied. In line with CCO thinking, 'Eve' as a standpoint includes more than the human body of the person Eve. Thus the multiple (non)human actors and communicative practices (e.g. co-workers, peers, theories, meeting agendas, posters, exam reports)

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[2]Following CCO a human actor is not necessarily a centre of analysis – however as our paper explores the organising of reflexivity in MEP and management practices, we have chosen to focus on practices surrounding Eve to unfold the multiple (non-)human actors that communicatively organise reflexivity around and through her.

surrounding her to organize and accomplish 'reflexivity' in specific ways, also become relevant data.

Due to economically-driven structural reforms in the municipality within which she worked, Eve's role as the manager of a day-care organisation had changed with implications for her autonomy – she became subordinate to a "cluster manager" responsible for a collection of institutions within a catchment area. Throughout her exam papers within the MEP, Eve reflects critically upon reactions to these changes, and the new initiatives introduced by the cluster manager. She describes overcoming an instinctive resistance to these initiatives, and an increased willingness in engaging more actively with them (see Walker, 2016). Furthermore, she repeatedly bemoans the standard of her managerial work and organisational understanding prior to participation in the MEP, which is described – only half-jokingly – as providing a "religious" experience. Eve attributes great significance to the value of the MEP, and its influence in improving her performance and organisational awareness.

With this standpoint established, focusing on the organizing of reflexive practices around Eve (encompassing other actors and practices communicating and appropriating her and her management work as 'reflexive'), our analysis is unpacked in three parts below. Firstly we explore how the MEP offers particular theoretical resources with which to communicate reflexivity to appropriate a legitimate managerial identity. Secondly, we explore how these resources ventriloquize in managerial practice, and thirdly we elucidate how those practices of organizing reflexivity have un/intended implications on managerial work and identity.

Organizing Reflexivity to Accomplish Legitimate Managerial Identity

Now, we will examine how reflexivity is organised in the MEP in specific examples of its textual materials, such as notes and exam papers produced by participants. These provide insights into central figures and resources from the MEP that organise reflexivity in specific ways, and the implications of this for situated reflexive identity work.

Analysing Eve's exam texts throughout the MEP unfolds a triumvirate of discursive and material resources (e.g theories, books, models) that becomes an important part of how reflexivity in managerial work is articulated and enacted.[3] This triumvirate can be summarised thus: firstly, subscription to a social constructionist ontology emphasises the importance of language-use in developing relations fundamental to the creation of the experienced organisational reality. Secondly, theories based on principles of positive psychology are influential. In particular, the "Heliotropic Principle" is emphasised, where, to encourage growth, the discussion of

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[3]Comparison with other participants in the data collection suggests that this was telling for the cohort of the MEP.

solutions rather than problems should be paramount in managerial work. It is therefore unproductive to reflect upon and discuss specificities of organisational problems, only narratives concerning dreams and desired futures of staff should be encouraged. Thirdly, and as an underlying method, Appreciative Inquiry (AI) is to provide the motor for a renewed approach to managerial work, aiming to bring forth productive (organisationally desirable) narratives from staff in order to identify potential solutions, rather than dwelling on problems.

In exam papers, reflexivity is organised in a particular way. The MEP calls forth a particular type of managerial identity, energetically displaying how theories offered on the curriculum are foregrounded in reflections. Attention is drawn to how particular resources, or *figures*, are made present within these texts, in order to display the accomplishment of an appropriate managerial identity. The theories and models offered on the programme are *ventriloquized*, enabling reflexivity of a particular kind to be performed in a particular way. Closer study of Eve's final exam paper underlines how the theoretical resources offered on the programme have a normative influence on what is to be deemed as the legitimate scope and object of reflection, allowing the identity work taking place to be examined.

A broader term for the managerial approach appropriated throughout the MEP, is that of Trust Based Management (TBM). This is promoted at the bequest of the municipality funding the programme, fitting the broader "agenda of trust," informing ongoing organisational reforms. These reforms were geared towards supporting a purported departure from ingrained principles of New Public Management; aiming to reduce bureaucracy, documentation and direct control by assigning a greater degree of trust and responsibility to individual employees. The goal was to maximise resources and enable staff to concentrate upon their core tasks, thereby providing a better service to citizens. This collective orientation towards TBM was traceable discursively in observations made within the MEP and analysis of exam texts, suggesting that this had been faithfully implemented within the programme. Eve draws on TBM throughout the MEP.

In the final exam project, Eve explicitly describes how TBM informed her approach to the specific organisational challenge with which she engaged – the implementation of a team restructuring initiative introduced by the cluster manager. This replaced smaller teams with a single, fluid constellation. Based on the cluster manager's experience of success with this structure in other institutions within the cluster, it was transferred to Eve's day-care institution, despite significant differences between these institutions being evident. Disparities in architectural design and the vastly different socio-economic backgrounds of the children attending were seemingly deemed inconsequential. The restructuring proved difficult amongst Eve's staff, who regarded it is an invasion of their professional practices.

In the final exam project, Eve articulates a managerial strategy for engaging with this difficult team restructuring, in a manner greatly informed by the previously described triumvirate of resources appropriated from the MEP. She describes how subscribing to a social constructionist ontology brings an understanding of the world as being produced through relations, and the language used in the formation of them, to the fore. Therefore, an awareness and guidance of language and dialogue

surrounding the team restructuring can conceivably influence how it is embraced and enacted by the staff at work. To encourage engagement with the initiative, AI becomes the foundation for her approach, providing the capacity to shape this kind of discourse, proactively *managing* the production of narratives:

> By encouraging and focusing on the experience of success I can get the team to grow and focus even more on the parts of the organisation and their jobs that work. The Heliotropic Principle supports that new and positive stories about the team structure in the institution create a shared future because the employees in the process will strive for positive aspects, like the flower that turns towards the light. (p. 44)

Here, the influence of resources appropriated from the MEP, and how these are made present in her exam project, is displayed. Eve commits to the "Heliotropic Principle"; shaping her managerial approach and the very understanding of the central tasks within it. The "Heliotropic Principle" is presented as being fundamental to a legitimate managerial approach in such situations, and Eve is actively communicating the conviction to manage in this way. It is, of course, important to note that these articulations do not take place within a personal diary. Rather, these are reflections deliberately responding to the coordinated pedagogical provocation of the programme; they are answering questions. In order to answer these questions correctly, Eve displays her managerial identity work, actively aligning to the theoretical normativity of the triumvirate of resources appropriated from the MEP.

The influence of positive psychology as a "science of positive subjective experience, positive individual traits, and positive institutions"(Seligman & Csikszentmihalyi, 2000, p. 5) on the curriculum and pedagogical design of the MEP – and therefore the scope of reflection –is clear. This is presented as the fundamental approach to understanding the tasks at hand, normatively shaping contemplation on how to tackle them. This delineates which aspects of work in engaging with these tasks can, and should, be the object of critical reflection, and how this should be undertaken. As will be unfolded in more detail later, the heliotropic principle emphasises a positive attitude to engaging with such reform agendas, effectively removing these from the scope of critical reflection. Instead, the focus of legitimate critical reflection within the MEP becomes trained on the managerial self and engagement with broader organisational initiatives. Conducting enquiry from the standpoint of Eve opens up for the exploration of these dynamics and conditions. However, rather than focusing on Eve's cognitive activities as an individual, or the character of her relations with other participants, an entry point is achieved which allows exploration of the ways in which reflexivity is *organised*. By studying the exam texts produced by Eve, how theories and models introduced on the MEP are made present, *ventriloquized*, provides insight into how a specific reflexive managerial identity and approach fitting to the programme becomes communicatively accomplishable.

Organizing Reflexivity Through Positive Psychology – Unpacking Text-Conversation Dialectics

Faithful to the MEP guidelines, "using the organisation as a developmental laboratory," the final exam project examined the relationships between staff and their teamwork under the new structure, in order to gain insight into the overall performance of the new team. To do so, Eve's project was organized around the implementation of a management tool to which she had been introduced on an earlier module of the MEP: replacing compulsory individual staff performance appraisals with *team* performance appraisals (TPA's). In doing so, these practices invited Eve to put organisational emphasis on team restructuring and present coherence in the managerial approach to it. In organizing these TPA's, an AI model[4] from the MEP offered itself as useful. This involved dividing the meetings into five sections, directing the production of narratives on different areas of particular organisational interest – specifically the team's engagement with the restructuring initiative. Individual posters were prepared for each of the five sections and hung onto the walls in the room, upon which notes could be written during the meeting. These posters were to guide the reflections of staff, producing qualified material that Eve could then use to reflect upon their understandings and her management of these. Therefore, the textual coordination offered within the MEP manifests tangibly, organising the reflexive practices of the staff and the manager in the workplace. Focusing on these text-conversation dialectics allows detailed consideration of the implications of organising reflexive practices in this way. Observations from one such meeting are detailed below.

The meeting was organised to open with a session in which the strengths of team members were to be discussed. In turns, each member became the object of attention, their strengths debated in plenum – collectively "clarifying the competences" of each member, and reflecting upon how these individual capabilities could best be utilised by the team. In interviews, staff members described this as an uncomfortable but nonetheless positive experience. After these introductory manoeuvres, a TPA was conducted following the AI model, focusing specifically on their implementation of the new structure, allowing the work of the team as a whole to be discussed in plenum. This was significantly less jovial and proved a source of frustration for all involved. The team members expressed challenges with the restructuring itself, detailing confusion around the basic logics of the new system – who was to be where, and when? With which children? Doing what? Why? Frustrations with inconsistency in the team voiced, where routines and rhythms from prior iterations of smaller teams competed against one another in the new constellation.

Due to the organizing of the meeting, criticism of the restructuring itself was not legitimate. Eve consistently strived to guide team-members towards the posters, to produce narratives of how they perceived optimal solutions, rather than focusing on

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[4]This was appropriated from secondary literature offered in the course, drawing on the 5D model: "Define," "Discover" "Dream" "Design" "Deliver/Destiny." (Cooperrider et al., 2008).

experiences of problems with the structure. Due to time limitations, the meeting ended without any workable solution as to how they should engage more effectively with the new structure; therefore Eve appealed for the team to hold an emergency meeting after working-hours later that day. The suggestion was poorly received by the staff, explaining that they had "no interest in staying any longer than absolutely necessary, when things were as they were." Eve exited the room quickly at this point, explaining that she had to attend another meeting. However, she later confided that she had in fact been close to tears, frustrated with inertia in the team and their continued resistance to restructuring.

The analysis of text-conversation dialectic unfolds how the organizing of reflexivity is directed in particular ways across the MEP teaching and literature informed by positive psychology, e.g. materialized in wall posters. These guide narratives produced by staff to engage positively with the restructuring. The staff, however, are unmoved by this, and instead question the fundamental implications these changes have in everyday work. Such questions, are nevertheless not constructive enough to be included on the posters. Thus, the text-conversation dialectics within and around this meeting illuminate how the situated managerial work and reflexive practices are connected discursively and materially to the MEP. The material traces of the MEP's theoretical discourse saturate the posters hanging in the room, shaping the legitimate focus and communication of reflexivity. Here, the positive psychology promoted on the MEP is ventriloquized, becoming a dominant figure in the meeting, through which some things are made communicable, others incommunicable. In effect, team members are not to reflect upon frustrations and confusion; such voices are quickly identified as organisationally undesirable. Questions about the team restructuring – those from her staff, but also those that Eve may have herself – are nullified, regardless of their salience. The restructuring initiative is removed from the arena of critical reflection, only the practitioners' implementation of it is debateable. Thereby, positive aspects become the only legitimate *matters of concern* (Elkjaer & Nickelsen, 2015) by this communicatively organized reflexivity – manifesting in how Eve can perform a legitimate managerial identity, as well as how the staff can engage in collective reflexivity in legitimate ways.

Organising Reflexivity by Becoming "Wrong" in Order to Be "Right"

A compulsory element of the final exam paper is that participants should explicitly reflect upon how their professional competence has developed over the course of the project. At this point, Eve focuses on the difficulties she faced during the team performance appraisals (TPA), reflecting particularly on events surrounding the meeting detailed above.

> I was emotionally very affected by one of the TPA's, where there was huge frustration about the new pedagogical structure, which was expressed very clearly in the conversation. At first,

> I felt disappointed in the employee's experiences and opinions and thought that I had failed by not establishing meaning for them. Afterwards I chose to analyse both my own and my employees' reactions and frustrations. Thereafter I made a judgement about what I could have done – and henceforth must do- differently, to implement the structure in an easier and better manner. My education has played a part in enabling me to remain focused on the task and the professional point of departure, and not be so strongly affected emotionally. (p. 67)

The theoretical perspectives appropriated from the MEP are central to organizing reflexivity. Eve articulates her culpability for the team's reluctance in engaging with the new initiative; her failure in assisting their sense-making processes is identified as the cause of this inertia. Thus, she reflects upon how to reconfigure her approach, so the process can become more effective in the future. The emotional discomfort expressed is reflected upon, where theoretical armoury is described as enabling a distancing, fortifying her in significant opposition from the staff. The passage of time, coupled with theoretically informed reflexivity appears to have softened her recollection of the incident. In answering the latent question of how she has developed professionally, the legitimate managerial identity presented is capable and prepared to pursue the organisational agenda relentlessly, regardless of such discomfort. The "right" manager becomes more robust in meeting resistance to this endeavour.

The manner in which the MEP organises reflexive practices is summarised at the conclusion of Eve's exam project. Just as certain elements became communicable and incommunicable through the narratives encouraged during the team meeting, a similar constitution is evident in Eve's summary of her own managerial competence development, provided here.

> I am a big supporter of trust-based management, but have discovered that I need to exercise trust in a more reflected manner than I have had a tendency to. . . In the case of some of the employees, I have been too quick to let go, trusting that they could handle their tasks, and that they would approach me for assistance if in doubt. I have experienced the need for me to follow up more closely, to study and support the different employees and teams. (p. 68)

Once again, the managerial approach and organisational understanding framed by the triumvirate of resources from the MEP has a significant influence on what can legitimately become the object of critical reflection. Eve takes responsibility for the inertia of the team in adapting to the restructuring. Her inability to work correctly with TBM, specifically her inadequate reflection in this work, becomes the fundamental flaw in the process. Eve emphasises her culpability, articulating that she has – in fact – displayed *too much* trust in her application of Trust Based Management. Shortcomings in her managerial work become the explanation for difficulties in implementing the team restructuring initiative introduced by her cluster manager. Through participation in the organised reflexive practices of the MEP, Eve learns to communicate that – and how – she was "wrong," and express how she may become "right."

Discussion

This chapter responds to calls to revisit the classic concept of reflection (Schön, 1983, 1987) and its later developments within CMS (Cunliffe et al., 2002; Cunliffe & Jun, 2005) and practice-based perspectives (Elkjaer & Nickelsen, 2015, Ratner, 2013). As shown above, we unpacked communicatively constituted reflexivity across practices of a MEP, through literature, exams, posters and meeting agendas – highlighting both intended and unintended implications. In doing so, the influence of theories offered in the MEP on reflexive practices was striking. Hibbert and Cunliffe (2015) considered the manner in which the reflections of managers may be influenced by "threshold concepts" (Land et al., 2008) – understood as "a concept that alters the way we think about knowledge that is central to understanding a discipline" (Hibbert & Cunliffe, 2015, p. 180). By focusing on the text-conversation dialectics and ventriloquism across the MEP and within a workplace meeting, the influence of the "Heliotropic Principle" as a threshold concept is emphasised. Reflections pertaining to problematic elements of the change initiative itself become inappropriate.

While strengths of organisational interventions based on positive psychology have been identified (Meyers et al., 2013), its implications have also been questioned. Fineman (2006) specifically highlights the risk that blinkered focus on positivity can truncate learning processes, citing Argyris to highlight the risk of "closing access to data for double loop learning" (ibid, p. 275). Our analysis aligns with these concerns, drawing attention to potential pitfalls. In particular, the impact that positive psychology has on the scope of reflexivity must be examined more carefully. By considering the "Heliotropic Principle" as a threshold concept, and representative of the broader thrust of positive psychology informing the theoretical resources offered on the MEP, the manner in which the exercise of reflection becomes trained in a particular direction is made clear. Here, it is not legitimate for the manager to reflect upon the character and details of organisational reforms, or indeed the instruments provided to work with these. Only managerial limitations – and ultimately failings – in their application of organisationally prescribed tools are to be reflected upon. The outcome of reflexivity communicatively organized around Eve concludes that she has displayed too much trust. No critical reflection upon TBM as a managerial approach arises, nor the organisational circumstances that make the team restructuring difficult – Eve has simply failed in applying TBM correctly.

The tunnel vision created by targeting and organising reflexive practices in this way becomes problematic when contemplating the facilitation of opportunities for organisational learning. The denial of "a legitimate organisational space where it is possible to speak the truth about experience" (Vince, 2002, p. 71) limits the possibility of reflecting upon, saying and sharing things that organisational politics make unsafe, as evident in our case. The broad acceptance that public institutions must strive to ensure the continuous development of the welfare services provided (Elkjaer & Nickelsen, 2015) necessitates these institutions to react appropriately

when required. If managers are trained to focus critical reflection solely on their application of tools provided by the organisation then there is a risk that any underlying issues will go unaddressed.

As shown, a CCO approach elucidates how reflexivity is far from neutral, and far from just a question of individual practitioners' use of theory or application of tools. Rather, it is a precarious accomplishment, communicatively organised across multiple discursive and material practices involving various (non-)human actors. As such, this chapter contributes to debates on reflexivity across the fields of organisational learning and CMS. By unfolding a CCO perspective, we address the lack of empirical studies into the organising and performativity of reflexivity across MEPs and work practices. This takes reflexivity down from its pedestal within management education for a moment, in order to scrutinize how it is organised and what that does. As such, this chapter unfolds not just the esteemed critical performativity of reflexivity that is central to much discussion in CMS (Parker & Parker, 2017); indeed, it also unpacks the unforeseen consequences of reflexive practices and their (targeted) criticality. This is no crusade to unseat reflexivity from its privileged position within management education, but rather an attempt to attend to important concerns with its implications in practice. In furthering this, future studies may well engage in debates around the co-constitutive relations of order-disorder and power-resistance (Mumby & Plotnikof, 2019; Plotnikof et al., 2019; Plotnikof & Pedersen, 2019; Vásquez & Kuhn, 2019), thereby also unfolding how reflexivity is not just communicatively organized, but indeed might also become disorganized or an act of resistance.

Conclusion: The Communicatively Constituted Organisation of Reflexivity

In this chapter, we explored the organisation of reflexivity across MEP and work practices, and the implications of this for managerial work and organisational learning. We argue that CCO offers new insights to the extant approaches prevalent in the literature (Schön, 1983; Parker, 2001; Elkjaer & Nickelson, 2015) by enabling specific examination of the organisation and situated accomplishments of reflexivity. This offers analytical tooling, showing how reflexive practices are communicatively organised, investigating which resources are made present in the accomplishment of reflexivity, and the implications of this for practices and participants.

The analysis unfolds the multiple (non/human) agencies and communicative practices that are connected by and around Eve through her participation in a MEP. This shows the organising of a certain form of reflexivity, encouraging her to perform as a reflective practitioner according to specific organisational agendas. The theoretical resources appropriated from this MEP – textualized in exam papers – are then considered; where a managerial approach and reflexivity explicitly informed by positive psychology is consistently made present. This approach is found to shape

the manner in which Eve tackles a specific organisational challenge, addressed in her final exam project, where specific techniques and models for directing and controlling individual and collective reflexivity are introduced to the workplace.

The implications of the material and discursive accomplishment of reflexivity in this situation leads to certain reflections becoming legitimate, and others illegitimate. Namely, critical reflection around a problematic organisational initiative (team restructuring) is deemed counterproductive – only the manner in which the participants as a group can secure a solution to challenges arising from its introduction are legitimate. From here, Eve's reflections on these events, presented in her final exam project, offer another textualization of the scope of legitimate reflexivity. Eve accepts culpability for inertia in the team, and the members' resistance in adapting to restructuring, diagnosing her ineptitude in applying trust-based management as the cause. While this may very well be the case, it is striking that throughout this organised reflexivity, the character and implications of the organisational initiative itself – the team restructuring – are removed from the scope of critical reflection. Only managerial and staff shortcomings become discernible; critical reflection upon wider conditions shaping managerial work becomes redundant within both educational and organisational practices. Reflexive practices focused through the theoretical prism of positive psychology burden the manager with identifying areas in which they and their staff are culpable for organisational failings. Eve's reflexive practices are harnessed, prohibiting salient questions to the conditions within which she work. The legitimate managerial identity, accomplished across text-conversation dialectics and ventriloquism of MEP resources, must be prepared to pinpoint their own professional failings and address them. This provides a rote answer to any organisational question, limiting the opportunity to address wider organisational issues in other ways than bemoaning the incompetence of middle managers.

References

Alvesson, M., & Spicer, A. (2012). Critical leadership studies: The case for critical performativity. *Human Relations, 65*(3), 367–390. https://doi.org/10.1177/0018726711430555

Alvesson, M., Blom, M., & Sveningsson, S. (2017). *Reflexive leadership: Organizing in an imperfect world*. SAGE.

Argyris, C. (1976). Single-loop and double-loop models in research on decision making. *Administrative Science Quarterly, 21*(3), 363. https://doi.org/10.2307/2391848

Ashcraft, K. L., Kuhn, T. R., & Cooren, F. (2009). Constitutional amendments: "Materializing" organizational communication. *The Academy of Management Annals, 3*(1), 1–64. https://doi.org/10.1080/19416520903047186

Bell, S. J., Whitwell, G. J., & Lukas, B. A. (2002). Schools of thought in organizational learning. *Journal of the Academy of Marketing Science, 30*(1), 70–86.

Cooperrider, D. L., Whitney, D., & Stavros, J. M. (2008). *Appreciative inquiry handbook: For leaders of change* (2nd ed.). Crown Custom.

Cooren, F. (2010). *Action and Agency in Dialogue: Passion, incarnation and ventriloquism* (Vol. 6). John Benjamins Publishing Company. https://doi.org/10.1075/ds.6

Cooren, F., Taylor, J. R., & Van Every, E. J. (Eds.). (2005). *Communication as organizing: Empirical and theoretical approaches into the dynamic of text and conversation*. Lawrence Erlbaum.

Cooren, F., Matte, F., Benoit-Barné, C., & Brummans, B. H. J. M. (2013). Communication as ventriloquism: A grounded-in-action approach to the study of organizational tensions. *Communication Monographs, 80*(3), 255–277. https://doi.org/10.1080/03637751.2013.788255

Cunliffe, A. L., & Jun, J. S. (2005). The need for reflexivity in public administration. *Administration & Society, 37*(2), 225–242. https://doi.org/10.1177/0095399704273209

Cunliffe, A. L., Forray, J. M., & Knights, D. (2002). Considering management education: Insights from critical management studies. *Journal of Management Education, 26*(5), 489–495. https://doi.org/10.1177/105256202236722

Czarniawska, B. (2007). *Shadowing, and other techniques for doing fieldwork in modern societies*. Copenhagen Business School Press; Universitetsforlaget.

Elkjær, B., & Brandi, U. (2014). An organisational perspective on professional learning. In S. Billett (Ed.), *International handbook of research in professional and practice-based learning*. Springer.

Elkjaer, B., & Nickelsen, N. C. M. (2015). Researching critical management education. In V. C. Fook, F. Ross, G. Ruch, & L. West (Eds.), *Researching critical reflection: Multidisciplinary perspectives* (pp. 145–157). Routledge.

Fairhurst, G. T., & Grant, D. (2010). The social construction of leadership: A sailing guide. *Management Communication Quarterly, 24*(2), 171–210. https://doi.org/10.1177/0893318909359697

Fineman, S. (2006). On being positive: Concerns and counterpoints. *Academy of Management Review, 31*(2), 270–291. https://doi.org/10.5465/amr.2006.20208680

Hibbert, P., & Cunliffe, A. (2015). Responsible management: engaging moral reflexive practice through threshold concepts. *Journal of Business Ethics, 127*(1), 177–188. https://doi.org/10.1007/s10551-013-1993-7

Holmes, P., Cockburn-Wootten, C., Motion, J., Zorn, T. E., & Roper, J. (2005). Critical reflexive practice in teaching management communication. *Business Communication Quarterly, 68*(2), 247–256. https://doi.org/10.1177/1080569905276668

Koschmann, M. A. (2013). The communicative constitution of collective identity in interorganizational collaboration. *Management Communication Quarterly, 27*(1), 61–89. https://doi.org/10.1177/0893318912449314

Koschmann, M., Kuhn, T. R., & Pharrer, M. (2012). A communicative framework of value in cross-sector partnerships. *Academy of Management Review, 37*(3), 332–354.

Land, R., Meyer, J. H. F., & Smith, J. (2008). *Threshold concepts within the disciplines* (Vol. 16). Sense Publishers. http://dro.dur.ac.uk/10085/

Meier, F., & Carroll, B. (2019). Making up leaders: Reconfiguring the executive student through profiling, texts and conversations in a leadership development programme. *Human Relations, 001872671985813*. https://doi.org/10.1177/0018726719858132

Meyers, M. C., van Woerkom, M., & Bakker, A. B. (2013). The added value of the positive: A literature review of positive psychology interventions in organizations. *European Journal of Work and Organizational Psychology, 22*(5), 618–632. https://doi.org/10.1080/1359432X.2012.694689

Mumby, D., & Plotnikof, M. (2019). Organizing power and resistance: From coercion, to consent, to governmentality. In J. McDonald & R. Mitra (Eds.), *Movements in organizational communication research: Current issues and future directions*. Routledge.

Parker, M. (2001). Fucking management: Queer, theory and reflexivity. *Ephemera, 1*(1), 36–53.

Parker, S., & Parker, M. (2017). Antagonism, accommodation and agonism in Critical management studies: Alternative organizations as allies. *Human Relations, 70*(11), 1366–1387. https://doi.org/10.1177/0018726717696135

Plotnikof, M. (2016). Letting go of managing? Struggles over managerial roles in collaborative governance. *Nordic Journal of Working Life Studies*, *6*(SI), 109–128. https://doi.org/10.19154/njwls.v6i1.4888

Plotnikof, M., & Pedersen, A. R. (2019). Exploring resistance in collaborative forms of governance: Meaning negotiations and counter-narratives in a case from the Danish education sector. *Scandinavian Journal of Management*, *35*(4), Online First. https://doi.org/10.1016/J.SCAMAN.2019.101061

Plotnikof, M., Mumby, D. K., Vásques, C., & Kuhn, T. (2019). Dis/organization and mis/management: Exploring relations of order and disorder in critical organization studies. *Ephemera*, *CfPs*, 1–4.

Ratner, H. (2013). The social life of learning theory: The "ideal" and "real" of reflective learning. *International Journal of Public Administration, 36*(3), 200–209. https://doi.org/10.1080/01900692.2012.749280

Reynolds, M. (1999). Critical reflection and management education: Rehabilitating less hierarchical approaches. *Journal of Managament Education, 23*(5), 537–553.

Robinson, V. M. J. (2001). Descriptive and normative research on organizational learning: Locating the contribution of Argyris and Schön. *The International Journal of Educational Management, 15*(2), 58–67.

Schön, D. A. (1983). *The reflective practitioner: How professionals think in action*. Basic Books.

Schön, D. A. (1987). *Educating the reflective practitioner: Toward a new design for teaching and learning in the professions*. Jossey-Bass.

Schoeneborn, D., Kuhn, T. R., & Kärreman, D. (2019). The communicative constitution of organization, organizing, and Organizationality. *Organization Studies, 40*(4), 475–496. https://doi.org/10.1177/0170840618782284

Seligman, M. E. P., & Csikszentmihalyi, M. (2000). Positive psychology: An introduction. *American Psychologist, 55*(1), 5–14. https://doi.org/10.1037/0003-066X.55.1.5

Shotter, J. (2010). Situated Dialogic action research disclosing '"beginnings"' for innovative change in organizations. *Organizational Research Methods, 13*(2), 268–285. https://doi.org/10.1177/1094428109340347

Smith, D. E. (2005). *Institutional ethnography: A sociology for people*. AltaMira Press.

Vásquez, C., & Kuhn, T. (Eds.). (2019). *Dis/organization as communication: Exploring the disordering, disruptive and chaotic properties of communication*. Routledge.

Vince, R. (2002). Organizing reflection. *Management Learning, 33*(1), 63–78. https://doi.org/10.1177/1350507602331003

Walker, R. (2016). Investigating the influence of a leadership development programme within the Danish public sector. *Tidsskrift for Professionsstudier, 12*(23), 62. https://doi.org/10.7146/tfp.v12i23.96756

Walker, R. (2018). *Leadership development as organisational rehabilitation: Shaping middle managers as double agents.* Doctoral Dissertation. Copenhagen Business School Frederiksberg 2018. ISBN: 978-87-93744-16-5.

Chapter 14
Rethinking Transfer of Training: Continuing Education as Collaborative Practice

Nikolaj Stegeager and Peter Sørensen

Abstract Transfer of training is a well-established field of research within organizational learning, and the relevance and strengths of multiple transfer-affecting factors have been explored since the beginning of the last century. Although this field of research has developed substantially, we argue that over-emphasis on the barriers facing individual learners and on isolated factors influencing the process of transfer has led scholars to overlook the interplay between all parties involved in the transfer process. The interaction between the participants in continuing education (the learner, the teachers, and the learner's colleagues) is too often overlooked as an important source of learning and transfer. In this chapter, we discuss how these "interaction gaps" might be narrowed through an understanding of continuing education as collaborative practice. Drawing on Lave and Wenger's theory of learning as legitimate peripheral participation in communities of practice, we argue for the development of new collaborative approaches between participants within continuing education. Our point of departure is the case of a training program for managers in the Danish public sector. On the basis of a longitudinal survey study and field notes, we apply the core transfer dimensions of process, content, and time in our analysis of continuing education from a situated perspective. In doing so, we seek to re-think the concept of transfer of training as collaborative practice, offering a new perspective on how to conceptualize continuing education. This reconceptualization may foster innovative and more effective ways of developing learning trajectories for participants, thus closing the gap between continuing education and organizational learning and development.

Keywords Transfer of training · Collaborative practice · Continuing education · Participation · Public sector · Communities of practice

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Introduction

> *Learning cannot be designed... And yet there are few more urgent tasks than to design social infrastructures that foster learning.* Étienne Wenger (1998: 225)

It is well established that knowledge acquired by organizations from external sources such as universities or business schools does not always transfer unhindered from the classroom to the workplace (Holton III & Baldwin, 2003; Schneider et al., 2014; Sørensen et al., 2017). Newly acquired knowledge is often left in the classroom, thereby reducing its potential to promote organizational learning through training and education (Sørensen, 2017). Such challenges are well-documented and have been addressed in the transfer of training research literature (Ibid.). However, even though more than a century of development within this field has offered a better understanding of how to improve training outcomes, research, and practice, stakeholders still struggle to find common ground. While researchers produce recommendations for practice, practitioners and scholars tend to lack the time to immerse themselves thoroughly in academic research-based recommendations. This division has led many researchers to conclude that continuing education is ineffective, especially considering its cost (Kristensen & Skipper, 2009, 2010). We believe that an alternative approach is needed to align theory and practice and thus achieve the common goal of enhancing transfer of training. Over the last two decades, the classic field of transfer of training research has been criticized for its tendency to overemphasize the cognitive aspect of learning, focusing on isolated factors influencing transfer and thereby ignoring the social and collaborative aspects of the learning experience (Greeno, 1997; Säljö, 2003; Ludvigsen et al., 2010). Taking this critique into account, we argue that the notion of collaboration is central to effective learning processes; educators, learners, and organizations need new standards for collaboration to enhance transfer of training. Thus, this chapter aims to answer the following question:

> *How can educational institutions and organizations transcend the traditional approach to transfer of training by approaching the process of continuing education as collaborative practice?*

We begin the chapter with a short introduction to transfer of training research. We then present a case regarding leadership training within five Danish municipalities, showing how an educational institution collaborated with public organizations to produce a formal training program for public managers. Subsequently, we describe the design of our research project in the five municipalities and present its outcome. Finally, our analysis and discussion of the premises that might underpin these findings lead us to propose a new direction for continuing education.

Transfer of Training

For over a century, researchers have studied transfer of training as the relationship between learning in one setting and application of the learned content in another. Many recent studies have adopted Baldwin and Ford's definition of transfer of training (1988):

> Positive transfer of training is defined as the degree to which trainees effectively apply the knowledge, skills, and attitudes gained in a training context to the job. . . . Transfer of training, therefore, is more than a function of original learning in a training program. For transfer to have occurred, learned behavior must be generalized to the job context and maintained over a period of time on the job. (p. 63)

In their review, Baldwin and Ford (1988) name three factors that researchers have identified as important in enhancing transfer of training: trainee characteristics, training design, and work environment. Later research has confirmed the importance of these three factors and further developed our understanding of their impact.

Trainee Characteristics

Many researchers have pointed to the importance of individual factors for the transfer of training. General cognitive skills, such as working memory (Alloway & Alloway, 2010), Spearman's G (Clark & Vogel, 1985) and general intelligence (Colquitt et al., 2000; De Rijdt et al., 2013) correlate with learning and, to a lesser degree, with transfer. Stable personality traits such as locus of control and self-efficacy have also proven important for transfer (Saks, 1997; Vancouver & Kendall, 2006). Noe (1986) has argued that motivation to learn and motivation to transfer are equally important. The more motivated the learners, the more likely they are to learn something. Another important factor is job satisfaction (Egan et al., 2004; Wahlgren, 2009); the more satisfied individuals are with their jobs, the more motivated they are to transfer learning to improve their job performance.

Training Design

Seidle et al. (2016) have found that a combination of coaching, classroom instruction, feedback, and experiential training has a significant impact on subsequent performance. In addition, learning goals should be explicitly communicated (Burke & Hutchins, 2007), and, as long as it does not induce cognitive overload, over-learning is recommended to enhance transfer (De Rijdt et al., 2013). Another effective teaching technique is behavioral modeling, through which learners are encouraged to simulate the specified practical situations in which the learned content will be applied (Salas et al., 2012). Finally, error-based examples and reflections on

the consequences of such errors are also found to enhance transfer of training (Joung et al., 2006).

Work Environment

Several studies have shown that a major barrier to transfer of training is the subsequent inability of students to apply what they have learned in new contexts (Brinkerhoff & Montesino, 1995). Another major barrier to transfer is large "work humps" and time constraints (Clarke, 2002). Furthermore, numerous studies have found a clear link between managerial support and transfer (Saks & Belcourt, 2006; Smith-Jentsch et al., 1996). These findings suggest that organizations must plan ahead to ensure that they are ready to facilitate the assimilation of new knowledge and skills in their daily practice. Rouiller and Goldstein (1993) have identified eight parameters of such a 'positive organizational transfer climate': goal cues, social cues, task cues, self-control cues, positive feedback, negative feedback, punishment, and no feedback. Elaborating on Rouiller and Goldstein's insights, Holton III et al. (2000) developed the Learning Transfer System Inventory, a comprehensive list of organizational factors that can enhance or hinder transfer. In addition to the organizational factors comprising Rouiller and Goldstein's model, this inventory includes individual factors that affect the transfer process, including motivation to transfer, transfer effort, performance expectations, resistance, openness to change, self-efficacy, and learner readiness.

The review above indicates that the successful transfer of training depends on several factors. However, research and practice are still struggling to find common ground, with attempts to enhance transfer based solely on Baldwin and Ford's (1988) three factors (Baldwin et al., 2017; Ford et al., 2018). We find much transfer research problematic in its tendency to examine each factor as an independent variable. We argue that transfer of training is not so much a question of single variables; it depends crucially on collaboration among all parties involved in the learning process. We develop this argument throughout the rest of this chapter, beginning with the case of a formal training program in the Danish public sector. This program started as a classic buyer-supplier approach but transformed midway into a collaborative learning experiment.

Leadership Training in Five Danish Municipalities

Five municipalities located in the southern part of Denmark (Middelfart, Fredericia, Vejle, Kolding, and Billund) joined forces in 2009 with the goal of ensuring that all their frontline managers (school principals, managers of daycare centers, elderly care homes, disability services, park and road maintenance services, etc.) were qualified for the complex task of leading a public institution. To achieve this goal, they asked a

university college to run a Diploma of Leadership program for all managers in the municipalities. The municipalities and the university college established a steering committee that would meet twice a year to exchange information about the courses.

In its first round (2010-2014), the program adopted a very traditional approach to continuing education. The municipalities bought a fixed training program and enrolled their managers. The municipalities did not spend time defining learning goals for the program or the participants and showed only minor interest in the teaching principles applied in the program. The main goal was simply to ensure that all managers received a formal education. This approach changed when the steering committee prepared the second round of the training program (2014-2018).

On the basis of feedback from the managers participating in the first round, the steering committee concluded that the first round of the program had not enabled the participants to change their managerial practice to the extent that they had expected. Things had to change. The steering committee decided upon numerous changes to the educational setup. The teaching methodologies were changed to a mix of traditional classroom lectures, supervision, and individual and group-based reflections. Furthermore, the principles of action learning (Revans, 2011) began to assume an important role in the program. This constituted a fundamental change of approach to training and development. The municipalities and the university college now saw the training of the managers as a process in which everybody (teachers, managers, administrators, and employers) had an important part to play, not just as buyers and sellers of a training program but as equal and active partners in the learning process. This new approach required new roles for all parties. Each organization within the municipalities had to facilitate knowledge implementation and knowledge distribution in the workplace before, during, and after the managers' participation in the program. The managers were no longer merely attending a course; they were part of an active process of organizational learning. Instead of 'merely' being expert purveyors of a certain curriculum, the educational institution and the teachers became facilitators of organizational learning in the specific context of the five municipalities. The steering committee also redefined its purpose. During the first round of the diploma program, the primary objective of the committee had been to act as a forum for the exchange of practical information. From the onset of the second round, however, the committee became part of the entire learning environment. The practical details no longer played an important role in the discussions; they were outsourced to teachers and the institutions and left for them to solve. Instead, dialogues unfolded around such questions as "How do organizations learn?", "What does good leadership look like?", and "Can you actually learn leadership in class?"

Methods

One of the authors of this chapter was employed at the university college mentioned above, and in 2014 he started a Ph.D. project examining the effects of the training

program. The Ph.D. project explored how the revised training program affected the public managers' leadership behavior as defined by Yukl's taxonomy, which divides leadership behavior into task-oriented, change-oriented, and relations-oriented behavior (Yukl, 2012, 2013). The Ph.D. student attended all meetings in the steering committee. Furthermore, as part of the faculty he had access to firsthand experience of the changed curriculum. Throughout the project, he documented the process through autoethnographic note-taking, capturing important events and conversations. Furthermore, he carried out a longitudinal survey study involving the 128 public managers who participated in the second round of the training program, as well as their subordinates, superiors, and peers (N = 1679).

All four groups of respondents received the same questionnaire once a year throughout the project period. The questionnaire was designed to assess how each manager was developing in terms of Yukl's taxonomy of leadership behavior (task, change, and relations orientation; Yukl, 2012, 2013). It addressed issues such as the extent to which the manager was defining professional standards, discussing quality in the organization's tasks, delegating responsibility, encouraging and supporting staff, and solving relational problems in the workplace (for a complete list of all 42 items in the electronic questionnaire, see Sørensen (2018)). The respondents were grouped in a way that made it possible to study how each manager was developing over time, as assessed by themselves and by subordinates, superiors, and peer managers. Diagrams showing the mean score per year and regression analysis documented the effect of the training program on the managers' three-dimensional leadership behavior over the three-year Ph.D. period (Sørensen, 2018).

Results

The results of the survey study showed that the revised training program had a positive effect on the development of task-oriented, relations-oriented, and change-related leadership behavior (Yukl, 2012, 2013). Measured on a five-point Likert scale, the mean scores on the three dimensions of leadership behavior had improved by the end of the training program. Thus, the training program seems to have positively affected leadership behavior, as assessed not only by the managers themselves but also by the managers' peers, subordinates, and superiors. Furthermore, the second round of the course was evaluated much more positively than the first round by the attendees and teachers. The conclusion of the Ph.D. project was that the diploma program had been a success in promoting transfer of training and thus organizational change (Sørensen, 2018).

The long-term collaboration between the authors of this chapter derives from a shared interest in transfer research within continuing education. We were excited by the positive results documented by the Ph.D. project and began to wonder about the cause of these results. Were the changes to the curriculum in themselves enough to prompt these effects? Through discussions and analysis of the quantitative data and the Ph.D. fellow's autoethnographic field notes, we came to the conclusion that the

most important factor was not the change in teaching methods or curriculum but rather the collaborative relationship that had emerged during the process between the educational institution and the five municipalities. The new form of collaboration had apparently created a higher degree of engagement and ownership among all involved parties, which was reflected in the evaluation sheets and in the dialogues between the Ph.D. student and the participants. Before we present our analysis describing this emerging relationship, we will briefly outline the theoretical position supporting our understanding of education as collaborative practice.

Continuing Education as Collaborative Practice

Since the beginning of the last century, the Western educational system has prioritized theoretical academic knowledge over more practical action-oriented skills and has emphasized the individual student as the focal point of learning (Tuomi-Gröhn & Engeström, 2003). The same is true within formal continuing education, where educational institutions, by and large, have adopted the practices of the primary education system (Eraut, 2008). Furthermore, the stakeholders involved in continuing education often function as autonomous entities that operate according to different sets of logic (Tynjälä, 2008). In the workplace, the key imperatives are the services provided and the goods produced. For training institutions, the focus is on learning and the development of knowledge and skills, typically with little regard for the degree of compatibility between the content of the subject taught and existing practices in the workplace (Røvik, 2011). As a result of this discrepancy, continuing education has typically been based on a traditional understanding of learning and transfer of training as described by Baldwin and Ford (1988).

Over the last three decades, however, new perspectives on learning have gradually emerged. In 1991, Jean Lave and Étienne Wenger proposed an alternative analytical approach, emphasizing the contextual and social qualities of learning. In their critically acclaimed work, they argued that learning must be understood as an integrated part of practice, and they advocated a shift in the analytical focus of learning research from the individual as the focal point of all learning processes to learning as a process of participation in communities of practice. They also suggested that the concept of cognitive processes be replaced by the more encompassing view of social practice. As community members participate in the activities of the community, they become increasingly adept and experienced, moving toward a more complete mode of participation. Thus, for Lave and Wenger, learning is a social, situated activity that cannot be separated from the context in which it unfolds.

Lave and Wenger view learning as the process of moving from legitimate peripheral participation to full participation. This involves adaptive progression toward mastery of all practices in the community. However, the terms "peripherality" and "full participation" cannot be viewed solely as figurative descriptions of learning as a linear movement from the periphery to the center of a

community. Actually, as Lave and Wenger noted, "central participation" may very well not exist. Rather, positions are negotiable and constantly interchanging. People move between different modes of participation within the community of practice. Understanding learning as legitimate peripheral participation entails a decentered learning perspective; mastery resides not only in the master but also in the entire community and learning stems from continuous interaction and participation. Every member of a community of practice is simultaneously a contributor and a learner.

Finally, it is important to note that learning through legitimate peripheral participation is a transformation not only of practical and cognitive abilities but also of the identity of the learner (1991). When we learn, we change our ways of engaging with the world — our ways of relating and our modes of participation. In this respect, learning provides us with opportunities for repositioning, revaluating, and reconfiguring our conception of ourselves. As Lave and Wenger stated, "Identity, knowing and social membership entail one another" (Ibid., 1991: 53).

Continuing Education as a Community of Practice

Several scholars have described the educational system as a community of practice (Hord, 2004; Lea et al., 2005; Hodgkinson-Williams et al., 2008) with students as legitimate peripheral participants striving to achieve full participatory membership by learning academic codes and skills. However, if the community of practice is seen as an entity consisting of school *and* workplace, the parties involved must negotiate the various practices in different parts of the community to achieve full participation. Thus, if organizations and educational institutions are to form a learning community, a mutual understanding between both parties is necessary. This also means that one single group alone (e.g. teachers) cannot represent full membership of the community. Full membership and the duties that follow from representing the central practices of the community can thus be viewed as a shared responsibility and commitment across boundaries within the community. It is important to keep in mind that most communities of practice comprise multiple communities that overlap and interact with each other; participants move between different sections of the community and adopt different roles while following their personal trajectories of participation (Nielsen, 2008). However, movement between multiple learning arenas within the community can be challenging for learners, as the cultural codes and practical demands in the different contexts are not always compatible. In the early days of organizational transfer research, researchers primarily understood these differences as obstacles that trainers and learners had to overcome if learning was to transcend the boundaries between school and work and travel unhindered from one context to another (Säljö, 2003). However, other researchers have since suggested that boundaries should be seen not as learning barriers but as areas of unlimited learning potential (Akkerman & Bakker, 2011; Konkola et al., 2007; Wenger, 1998). Boundaries can be understood as sociocultural differences that lead to discontinuity in action or interaction (Bakker & Akkerman, 2019). Such

discontinuities can substantially contribute to learning because new understandings and practices may emerge at these intersections. Boundaries can thus form the basis of invaluable learning opportunities through the mutual interchange of perspectives. Learning communities should therefore embrace the differences in perspective and practice that their members bring with them through their personal participatory trajectories.

Transfer as Collaborative Practice

In the following section, we expand upon our case to illustrate how it can be understood from a situated learning perspective. As we aim to propose a new understanding of transfer of training, we take our point of departure in Baldwin and Ford's classic definition (presented at the beginning of this chapter), which states that transfer of training is more than just the process of learning. Learned material must find its way into another context in order to be relevant beyond the classroom. Furthermore, the acquired content must be accessible over time and be part of the way in which an individual routinely tries to solve work problems.

Even though our perspective on transfer of training is quite different from Baldwin and Ford's, we find their definition useful in our attempt to rethink this field of research. Three dimensions of transfer of training can be derived from their definition (Laursen & Stegeager, 2017):

- *A content dimension* consisting of the material to be learned.
- *A process dimension* comprising the movement of ideas, skills, and objects between the learning context (classroom) and the application context (the workplace).
- *A temporal dimension*, referring to the difference in time between the learning and the application of the learned content.

The following analysis is based on these three dimensions, which we deploy as a framework to understand our case within a situated perspective.

The Content Dimension

As mentioned above, the approach to training changed significantly between the first and second rounds of the diploma program. In the first round, the university college instructors were seen as experts disseminating their knowledge and expertise to the managers participating in the course. Although both teachers and managers were familiar with this way of "doing continuing education," frustration emerged as the managers experienced problems in trying to apply the content of the course to their daily managerial practice. While preparing to launch the second round of the training program, the steering committee discussed this frustration during one of its first

meetings. The HR managers from the municipalities presented their visions of future management in the municipalities as well as the topics they believed could lead them from vision to reality, while instructors presented several of the theories on organizational change and leadership that inspired them most. On the basis of this exchange, the committee and representatives from the group of managers and teachers discussed how learning activities could be organized to comply with the vision of the municipality and the formal Danish requirements that regulate courses such as the Diploma of Leadership. One aspect that was discussed by the steering committee was the importance of the grey literature, i.e. the importance given to consultancy reports and "how-to-manage" handbooks in organizational practice. In contrast, teachers are obliged to refer to research-based literature. Through a discussion on the relative advantages of the types of literature suitable for formal education, mutual agreement was reached on which topics to teach and which type of literature would form the basis for the teaching and learning activities.

One outcome of these discussions was a decision that the content of the course should not be entirely determined in advance. Experiences from the first round and the discussions leading up to the second round had led the steering committee to realize that relevant knowledge (content) must be negotiated and renegotiated amongst the involved parties. A procedure was introduced in which, at the beginning and end of each course, the teachers and participating managers would be asked to discuss what kind of literature should supplement the official curriculum. At first, this procedure was perceived by both parties as an unnecessary distraction: "Why not just let the teachers decide and get on with the learning?" However, both went on to realize that these discussions were eminently fruitful, as they turned the participants' attention away from traditional focus points, such as classes, papers, and exams, and instead directed it to a discussion about what learning content would be helpful. This led to even broader discussions and other questions, such as "What is actually the purpose of the course and the entire program?" As one manager mentioned at the end of a class discussion of the curriculum:

> This discussion has been great! At first, I was impatient, thinking, "Can't we get on with the important stuff?" But now I begin to think that these conversations actually are the "important stuff," as they help me realize what it is that I actually need to learn. Not just what you guys [the teachers] *want* me to learn but what I *need* to learn to become a better leader. (Field notes)

Through these content discussions, the students (managers) and teachers were united in the common goal of creating a curriculum that was meaningful for all participants. As a result, the curriculum changed drastically over the years. An interesting example of how these content discussions helped managers and teachers to exploit the boundaries between school and work for learning arose when two managers asked if the curriculum could include some of the official texts on organization and management produced by the municipalities (e.g. strategy papers, official management guidelines, etc.) so that the class could analyze them from an academic standpoint. This became a huge success and was adopted by many other courses.

The decision to involve all parties in deciding on the course content helped to contextualize it. Suddenly content decisions were based not (solely) on the demands in the Bologna Treaty, on national standards, and on the study program, but also on what seemed meaningful to *these* specific teachers and students (managers) in the given situation. In this respect, the content evolved through practice.

The Process Dimension

The discussions about content initiated by the steering committee and further elaborated in the classroom had another important effect; they led to dialogues about the relationship between theoretical and practical knowledge in the program. Evaluations from the first round indicated that the managers had experienced problems in trying to apply the theoretical content presented during the course to their own managerial practice. As one manager wrote, "The divide between what we learn in class and the chores I face in my daily life seems insurmountable" (written evaluation sheet).

Having discussed the problems related to the gap between theoretical knowledge and practical skills, the steering committee decided that the course should be based on more action-oriented pedagogical principles, thus prioritizing the "doing" side of academic learning. After further discussions with the faculty, a plan was designed in which action learning became an integral part of the pedagogical design. In practice, individual participating managers were to define their own development goals in relation to their academic interests and their current work-related challenges. Furthermore, the managers were asked to inform their employees about their learning goals and if possible, involve them in their efforts to achieve these goals. As a result, the entire organization became involved in the diploma program. One manager subsequently described the positive effects to the Ph.D. fellow:

> I went home and created a project with my management team. And I have to say that I am impressed with how much trust they showed me. I more or less opened the door and said, "Now we're doing this," and they totally bought the idea. And then all of a sudden I witnessed a process that ran a bit by itself because they suddenly began to contribute. My middle managers contributed with data and helped analyze them. Our problem statement was, "How to become an effective high-performing team." They all worked seriously, and a lot of results unfolded, and we actually ended up becoming a high-performing team in the process. (Field notes)

In other words, the manager involved the entire group of middle managers in her development project, and suddenly the group became part of the diploma course. The content of the course was interwoven with the practices of the management group. However, it is important to note that the main focus of the group was not the diploma course, or even learning; they were concerned with developing the central practice of the community. As Lave and Wenger point out (1991), learning originates in practice and cannot be separated from practice.

The teachers and the other course participants played an equally important role in the action learning process. Learning groups of four to six managers and two teachers were formed, and they met once between each seminar to discuss the progress of each participant. One teacher took on the role of facilitator and the other participated as a normal member of the group, albeit with a specific perspective. Furthermore, each student was appointed a supervisor, who not only supervised the academic requirements of the course but could also be invited by the student/manager to participate in workplace interventions. The teacher was not "just" a supervisor but also a fellow practitioner.

Lave and Wenger (ibid.) assert that a situated and decentered perspective on learning implies that mastery resides not (solely) in the master or teacher, but also in the community, and that learning stems from interaction and participation. Thus, all participants in the community (e.g. fellow students, teachers, school secretaries, superiors, peers, and employees) were seen as important in the creation of learning opportunities. The teachers from the university college did not occupy a privileged position; instead, they were invited into the learning group under the same conditions as everybody else. The teachers found themselves in new positions in which the authority they typically commanded in the classroom needed to be renegotiated. New forms of collaboration and participation had to be invented.

Our analysis indicates that the course process should not be understood as a linear progression from delivery to application. Rather, practice unfolds simultaneously in multiple communities, with community members moving from one community to another. In this respect, the course can be perceived as a circular process without a clear beginning or end. We further elaborate on this principle of circularity in the final section of our analysis.

The Temporal Dimension

A diploma program is a long-term process, and most of the managers attended courses over a two-year period – some even longer. This format implies that activities are interconnected. Courses were protracted, with managers typically attending a course one day a week for several months. Thus, a manager might be engaged in daily practice one day, in the classroom analyzing her work through the lenses of academic theory the next day, only to be back in her managerial practice the following day, but now with a new perspective gained through the latest classroom activities. This interconnectedness created an ongoing flux that made it impossible to separate the learning in the course from what the manager learned when not attending the course. As such, the learning became a circular process, as one of the teachers tried to describe during a steering committee meeting:

> I believe what we do here can best be described as learning about leadership by developing leadership suitable for learning about leadership, and being sure to learn about leadership while simultaneously taking part in leadership, which is necessary in order to develop the kind of leadership that enables you to learn about leadership! (Field notes)

This circular flux of interconnectedness most likely contributed to the fact that even though the managers evaluated the course very positively, most found it quite difficult to describe what they had actually learned. One manager tried to express it in the following way:

> When I look back upon what I have learned and how I perform as a leader today, I must admit that the diploma program has had positive implications for all aspects of my daily working life. It is in play when I sit and negotiate with suppliers or talk economics with the accounting department. It is part of my entire leadership approach. It is embedded in my ambition of helping people reach their full potential, being curious about what people think, and to be able to cope with the complexity of organizational life without drowning. It may sound like too much, but it has become an integral part of me. That's why I would say that I carry the training with me all the time. (Written evaluation sheet).

The perspective of time changes when continuing education is perceived as collaborative practice. In a traditional educational set-up, there are clear-cut start and end dates (Gosling & Mintzberg, 2006). However, when practice is the driving pedagogical principle, such a linear perspective must be abandoned. Learning does not begin or end according to dates set by an official study calendar. The participating managers were all involved in multiple projects when the diploma program began. Some of these projects continued during and after the program. Thus, the practices that the managers engaged in during the course depended on the practices that preceded the course, and likewise, the outcome of the course depended on the practices that succeeded the course. In this respect, learning cannot be separated from practice and practice cannot be separated from the practitioner.

Discussion and Concluding Remarks

In this chapter, we have presented a case describing how professional educators and organization members created a productive learning environment by embracing a strong collaborative commitment and a learning-through-participation mindset. As the underlying Ph.D. project indicated, this approach seems to promote transfer of training between 'school' and work. To some extent, this was accomplished by focusing on the joint task for all involved parties in the learning community and thus dissolving the boundaries between 'school' and work (Martin-Kniep, 2008). Even though our position can be seen as a critique of the transfer of training paradigm, we acknowledge the importance of individual, classroom, and organizational factors for learning. However, we believe that continuing education can become more effective in promoting learning if we shift our focus from individual factors affecting learning to a collaborative approach with an emphasis on joint practice. In this approach, the central purpose of communities of practice is not to transfer knowledge and skills from more knowledgeable to less knowledgeable members, but rather to ensure that, through continuous interaction, the community, fulfills its mission – to develop lasting learning trajectories for the participants.

This shift in perception raises some interesting questions: What are we producing? Who is part of the community? What are the roles of the teachers and students in such a community of practice? There are no universal answers to these questions, but we believe that all learning communities should discuss them. In the specific case discussed in this chapter, we saw how teachers and students shed their traditional roles and obligations to engage with each other in the learning process. In the process, the focus shifted from a pre-set curriculum to the creation of new collaborative practices evolving around what the students needed to learn to become more adept managers. This kind of meta-learning proved to be an eye-opening experience for many participants because it extended beyond themselves to embrace entire communities within schools and workplaces. Of course, teaching will continue to be an important activity in the educational system and teachers will still play an important role as pedagogical experts. However, this chapter is intended as an invitation to investigate the potential that can be released by letting go of the traditional position of the educational expert and instead embracing joint ventures in collaborative learning in classrooms and organizations. It is our hope that this chapter can inspire educational institutions and workplaces to explore new ways of collaborating and thereby create new learning experiences — not just for the participants but also for the organizations in which they work.

References

Akkerman, S. F., & Bakker, A. (2011). Boundary crossing and boundary objects. *Review of Educational Research, 81*(2), 132–169.

Alloway, T. P., & Alloway, R. G. (2010). Investigating the predictive roles of working memory and IQ in academic attainment. *Journal of Experimental Child Psychology, 106*, 20–29.

Bakker, A., & Akkerman, S. (2019). The learning potential of boundary crossing in the vocational curriculum. In D. Guile & L. Unwin (Eds.), (pp. 349–372). Wiley.

Baldwin, T. T., & Ford, J. K. (1988). Transfer of training: A review and directions for future research. *Personnel Psychology, 41*, 63–105.

Baldwin, T. T., Kevin Ford, J., & Blume, B. D. (2017). The state of transfer of training research: Moving toward more consumer-centric inquiry. *Human Resource Development Quarterly, 28*(1), 17–28.

Brinkerhoff, R. O., & Montesino, M. U. (1995). Partnerships for training transfer: Lessons from a corporate study. *Human Resource Development Quarterly, 6*(3), 263–274.

Burke, L. A., & Hutchins, H. M. (2007). Training transfer: An integrative literature review. *Human Resource Development Review, 6*, 263–296.

Clarke, N. (2002). Job/work environment factors influencing training transfer within a human service agency: Some indicative support for Baldwin and Ford's transfer climate construct. *International Journal of Training and Development, 6*(3), 146–162.

Clark, R. E., & Vogel, A. (1985). Transfer of training principles for instructional design. *Educational Communication and Technology, 33*(2), 113–123.

Colquitt, J. A., LePine, J. A., & Noe, R. A. (2000). Toward an integrative theory of training motivation: A meta-analytic path analysis of 20 years of research. *Journal of Applied Psychology, 85*(5), 678–707.

De Rijdt, C., Stes, A., Van Der Vleuten, C., & Dochy, F. (2013). Influencing variables and moderators of transfer of learning to the workplace within the area of staff development in higher education: Research review. *Educational Research Review, 8*, 48–74.

Egan, T. M., Yang, B., & Bartlett, K. R. (2004). The effects of organizational learning culture and job satisfaction on motivation to transfer learning and turnover intention. *Human Resource Development Quarterly, 15*, 279–301.

Eraut, M. (2008). Using research into how professionals learn at work for enhancing placement learning. In *WACE/ACEN Asia Pacific conference e-proceedings* (pp. 148–154). Australia.

Ford, J. K., Baldwin, T. T., & Prasad, J. (2018). Transfer of training: The known and the unknown. *Annual review of organizational psychology and organizational behavior, 5*, 201–225.

Gosling, J., & Mintzberg, H. (2006). Management education as if both matter. *Management Learning, 37*(4), 419–428.

Greeno, J. G. (1997). On claims that answer the wrong questions. *Educational Researcher, 26*(1), 5–17.

Hodgkinson-Williams, C., Slay, H., & Siebörger, I. (2008). Developing communities of practice within and outside higher education institutions. *British Journal of Educational Technology, 39* (3), 433–442.

Holton, E. F., III, Bates, R. A., & Ruona, W. E. A. (2000). Development of a generalized learning transfer system inventory. *Human Resource Development Quarterly, 11*, 333–360.

Holton, E. F., III, & Baldwin, T. T. (2003). *Improving learning transfer in organizations*. Wiley.

Hord, S. M. (Ed.). (2004). *Learning together, leading together: Changing schools through professional learning communities*. Teachers College Press.

Joung, W., Hesketh, B., & Neal, A. (2006). Using "war stories" to train for adaptive performance: Is it better to learn from error or success? *Applied Psychology: An International Review, 55*(2), 282–302.

Konkola, R., Tuomi-Grohn, T., Lambert, P., & Ludvigsen, S. (2007). Promoting learning and transfer between school and workplace. *Journal of Education and Work, 20*, 211–228.

Kristensen, N., & Skipper, L. (2009). *Effektanalyser af voksenefteruddannelse – Analyse af individeffekter samt cost-benefit-analyse*. AKF, Anvendt Kommunal Forskning.

Kristensen, N., & Skipper, L. (2010). *Effektanalyser af voksenefteruddannelse – Analyse af private virksomheders brug af offentlig medfinansieret voksenefteruddannelse og effekterne på virksomhedernes udvikling*. AKF, Anvendt Kommunal Forskning.

Laursen, E., & Stegeager, N. (2017). Transfer i videreuddannelse. In E. Laursen & N. Stegeager (Eds.), *God videreuddannelse – med transfer, balance og praksisnært projektarbejde* (pp. 19–34). Samfundslitteratur.

Lave, J., & Wenger, E. (1991). *Situated learning: Legitimate peripheral participation. Learning in doing*. Cambridge University Press.

Lea, M., Barton, D., & Tusting, K. (2005). Communities of practice in higher education. In D. Barton & K. Tusting (Eds.), *Beyond communities of practice: Language power and social context* (pp. 180–197). Cambridge University Press.

Ludvigsen, S. R., Lund, A., Rasmussen, I., & Säljö, R. (Eds.). (2010). *Learning across sites: New tools, infrastructures and practices*. Routledge.

Martin-Kniep, G. O. (2008). *Communities that learn, lead, and last: Building and sustaining educational expertise*. Wiley.

Nielsen, K. (2008). Learning, trajectories of participation and social practice. *Critical Social Studies, 10*(2), 22–36.

Noe, R. A. (1986). Trainees' attributes and attitudes: Neglected influences on training effectiveness. *Academy of Management Review, 11*(4), 736–749.

Revans, R. W. (2011). *ABC of action learning*. Gower Publishing, Ltd.

Rouiller, J. Z., & Goldstein, I. L. (1993). The relationship between organizational transfer climate and positive transfer of training. *Human Resource Development Quarterly, 4*, 377–390.

Røvik, K. A. (2011). From fashion to virus: An alternative theory of organizations' handling of management ideas. *Organization Studies, 32*(5), 631–653.

Saks, A. M. (1997). Transfer of training and self-efficacy: What is the dilemma? *Applied Psychology, 46*, 365–370.

Saks, A. M., & Belcourt, M. (2006). An investigation of training activities and transfer of training in organizations. *Human Resource Management, 45*(4), 629–648.

Salas, E., Tannenbaum, S. I., Kraiger, K., & Smith-Jentsch, K. A. (2012). The science of training and development in organizations: What matters in practice. *Psychological Science in the Public Interest, 13*, 74–101.

Säljö, R. (2003). Epilogue: From transfer to boundary-crossing. In T. Tuomi-Grohn & Y. Engeström (Eds.), *Between school and work: New perspectives on transfer and boundary crossing* (pp. 311–321). Pergamon.

Schneider, K., Pältz, M., & Stauche, H. (2014). *Transfer of learning in organizations*. Springer.

Seidle, B., Fernandez, S., & Perry, J. L. (2016). Do leadership training and development make a difference in the public sector? A panel study. *Public Administration Review, 76*(4), 603–613.

Smith-Jentsch, K. A., Jentsch, F. G., Payne, S. C., & Salas, E. (1996). Can pretraining experiences explain individual differences in learning? *Journal of Applied Psychology, 81*(1), 110–116.

Sørensen, P. (2018). *Developing leadership behaviour: The impact of leadership education*. Aalborg Universitetsforlag. PhD Series, Faculty of Social Sciences, Aalborg University.

Sørensen, P. (2017). What research on learning transfer can teach about improving the impact of leadership-development initiatives. *Consulting Psychology Journal: Practice and Research, 69*(1), 47.

Sørensen, P., Stegeager, N., & Bates, R. (2017). Applying a Danish version of the learning transfer system inventory and testing it for different types of education. *International Journal of Training and Development, 21*(3), 177–194.

Tynjälä, P. (2008). Perspectives into learning at the workplace. *Educational Research Review, 3*(2), 130–154.

Tuomi-Gröhn, T., & Engeström, Y. (2003). Conceptualizing transfer: From standard notions to developmental perspectives. In T. Tuomi-Gröhn & Y. Engeström (Eds.), *Between school and work: New perspectives on transfer and boundary-crossing* (pp. 19–38). Pergamon Press.

Vancouver, J. B., & Kendall, L. N. (2006). When self-efficacy negatively relates to motivation and performance in a learning context. *Journal of Applied Psychology, 91*(5), 1146–1153.

Wahlgren, B. (2009). *Transfer mellem uddannelse og arbejde*. Nationalt Center for Kompetenceudvikling (NCK), Institut for Uddannelse og Pædagogik (DPU), Aarhus Universitet, Denmark.

Wenger, E. (1998). *Communities of practice: Learning, meaning, and identity*. Cambridge University Press.

Yukl, G. (2012). Effective leadership behavior: What we know and what questions need more attention. *The Academy of Management Perspectives, 26*(4), 66–85.

Yukl, G. (2013). *Leadership in organizations* (8th ed.). Pearson Education Limited.