In a world of values and views

Information and learning activities in a military setting

Karin Dessne
To all my cats of the past, the present and the future,
and to my husband
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The research in this thesis is based on the notion that there is no point in cutting an apple in two halves or breaking a plate in two pieces, and then attempting to put them together again. Instead, an effort to study a whole is made. Therefore, the evolving nature of relationships and learning within them is explored in order to understand how learning may be facilitated in organisations.

The research endeavours to synthesise interactive and interdependent aspects of informality and formality. These aspects are used to explain how the nature of relationships manifests itself in a setting and how it relates to learning. Moreover, preconditions that contribute to how the nature of relationships is formed and reformed are explored. Finally, an effort has been made to find and describe implications of intervening with relationships in a setting. Such intervention may be desirable or required to accommodate or increase learning and knowing in organisations.

The research, exploring complex situated phenomena, is conducted by taking a qualitative approach. A case study of the Swedish Armed Forces is carried out, including interviews, observations and documentation. This case study consists of two parts; the first involves a licentiate thesis and two papers, while the second part includes two additional papers. The research in the licentiate thesis, in the field of information technology, contains analyses of empirical data based on models emphasising either formality or informality whereas the ensuing four papers, positioned in library and information science, emphasise a synthesised view on these abstractions in order to fulfil the aim of this thesis. The field of knowledge management encompasses all these scientific works. Additional studies emphasising social interaction to construct information, learning and knowing in the field of knowledge management, as well as similarly focused studies in information behaviour, have served to reposition all of the conducted research.

Taken together, the findings depict a setting where informality is strong, even taking over a formally designed learning process. This informality is explained by how people interact to negotiate norms and values creating their attitudes of how work is expected to be accomplished. Social interaction thus creates informal aspects of relationships in the setting, for example conveyed through upholding a tradition of oral and local interaction where colleagues are highly valued as sources for needed information. The interaction results in a shared understanding of how to behave in relation to others. Moreover, the magnitude of informality in the setting may be explained in relation to the high degree of formality. Formal symbols, such as equipment and clothing taken together with military terminology, foster how people engage in relationships. Their engagement, including learning how to
become an able participant in the setting, simultaneously results in interacting informally when learning whom to trust and whom to avoid.

Furthermore, the findings show that understanding the nature of relationships is crucial for intervening with them. This is exemplified by the studied setting where implementation of a formally designed process for learning failed, possibly due to lack of consideration to a strong informal culture. Thus it is concluded that attempting to impose formality on informality may be futile. However, in other settings, imposing formality on relationships may also result in the destruction of previously existing vital interaction for learning and knowing. For example, if the implementation of the process in the studied setting had succeeded, it could to a considerable extent have inhibited learning, if informal work had been quenched, which, in turn, could have been detrimental if it were not replaced. As it turned out, although people seemed to struggle to access necessary information, interaction was viable, regardless of whether it existed before the designed process or emerged as a result of it.

The research in this thesis adds to previous research emphasising the need for understanding the dynamics between information, learning and knowing in order to facilitate these activities. Future research may therefore build on the provided empirical findings and conceptual analyses to continue this line of reasoning.
Abstract in Swedish


Det vetenskapliga arbetet i avhandlingen strävar efter att syntetisera interagerande och ömsesidigt beroende informella och formella aspekter. Dessa aspekter används för att förklara hur relationers natur kommer till uttryck i ett visst sammanhang såsom en arbetsplats och hur denna natur relaterar till lärande. Vidare utforskas vilka förutsättningar som kan bidra till hur relationers natur formas och omformas. Försök har även gjorts att hitta och beskriva de konsekvenser som kan uppstå till följd av att vidta åtgärder som berör relationer. Det kan vara önskvärt eller nödvändigt att ingripa i relationer för att göra plats för eller öka lärande och kunnande i en organisation.

En fallstudie av Försvarsmakten har gjorts för att utforska ovannämnda komplexa fenomen och i den har ingått kvalitativa metoder såsom intervjuer, observationer och granskning av dokument. Fallstudien består av två delar varav den första är en licentiatavhandling samt två artiklar och den andra är två ytterligare artiklar. Licentiatavhandlingen utfördes inom fältet informationsteknologi och omfattar en analys av empiriska data utifrån två modeller som betonade lärande och relationer i ett informellt respektive formellt perspektiv. I syfte att uppnå målet med nuvarande avhandling så betonas i artiklarna i stället ett syntetiserat synsätt på lärande och relationer där informella och formella aspekter ses som beroende av och interagerande med varandra. Fältet knowledge management omfattar hela det vetenskapliga arbetet, samt inkluderar studier som understryker vikten av social interaktion för att konstruera information, lärande och kunnande. Dessa liksom liknande studier inom information behaviour har bidragit till att ompositionera den utförda forskningen från ett forskningsfält till ett annat.

Sammantaget visar forskningsresultaten en organisation där informella aspekter är starka och de är till och med så starka att de tar över det arbete som en designad process har utvecklats för. Detta förklaras av medarbetares attityder till hur deras arbete förväntas utföras, vilket baseras på deras interaktion där de förhandlar normer och värderingar. Deras sociala interaktion skapar således relationer med informella aspekter, något som yttrar sig tex i att medarbetare upprätthåller en tradition av att interagera munligt och lokalt, liksom i att kollegor värderas högt som källor till information. Denna interaktion resulterar i att medarbetare har en
gemensam förståelse för hur de ska bete sig i relation till varandra. Dessutom kan vidden av informella aspekter i ett sammanhang förklaras av det finns omfattande formella aspekter. Formella symboler såsom utrustning och klädkod liksom militär terminologi fostrar människor till det sätt på vilket de engagerar sig i relationer. Deras engagemang resulterar samtidigt i att de interagerar informellt i samband med att de lär sig vem de ska lita på och vem ska undvika.

Vidare visar forskningsresultaten att det är viktigt att förstå relationers natur för att kunna ingripa i dem. Ett exempel på detta är att det i den studerade organisationen fanns en formellt designad process vars implementering misslyckades, förmodligen på grund av att ingen eller otillräcklig hänsyn visades till den rådande informella kulturen. Slutsatsen är att det formella i form av t ex design kan påtvingas det informella utan att lyckas. Däremot kan ett sådant intrång i andra sammanhang leda till att redan existerande interaktion som är oumbärlig för lärande och kunnande förstörs. Om t ex implementeringen av den ovannämnda designade processen hade lyckats skulle detta till stor del ha kunnat hindra lärande under förutsättning att det informella arbetet hade undertryckts. En sådan blockering hade varit förödande om det undertryckta arbetet inte ersattes. Det visade sig emellertid att medarbetarnas interaktion var bärkraftig trots att de verkade kämpa för att få tillgång till nödvändig information. Detta oavsett om denna interaktion existerade före eller om den uppstod som en följd av implementeringen av den designade processen.

Liksom tidigare forskning med liknande fokus betonas i denna avhandlings forskning och resonemang behovet av att förstå dynamiken mellan information, lärande och kunnande för att kunna möjliggöra dessa aktiviteter. Framtida forskning kan därför bygga på och fortsätta detta resonemang utifrån de erhållna resultaten, empirin och analyserna i denna avhandling.
Acknowledgements

Who we are and where we feel we belong depend on the paths we take. Some paths we plan to take while others we just find by chance. My journey, as regards this thesis, started in the information technology area and it continued in library and information science. However, this journey started long before that, in the area of my curiosity, but little did I know how it would emerge or where it would take me, or I take it. This is just as it should be, as it is my curiosity and interest in social interaction and social beings – may it be lions or people – that has led me forward.

I am very grateful to all who have made my work on this thesis possible and also enjoyable. My sincere and very appreciative thanks go to the people at the Land Warfare Centre, the studied setting. You and your generous attitude to me, and my persistent questions, always made me feel welcome. I have really enjoyed your company. I would especially like to thank Johnny Gullstrand and Andrea Manleitner and their colleagues, but also others who were part of the study, or just otherwise happily engaging in conversation with me.

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Once upon a time there was a lion cub named Key. It grew up with its siblings and they played together in the sun. It was also very fun to play with mother lion’s and father lion’s tails. Key saw their tails move from side to side. It was irresistible to paw at it and it was even more fun when the tail moved wider and faster for each pawing. Father lion looked sideways along his long nose and yawned. He tucked his tail away from Key and the play was over for this time. Key looked around to see if there was anything fun happening. The siblings were curled up with mother and father, contentedly falling asleep. Boring, I don’t want to sleep now, Key thought. So a little stroll around the corner seemed like a great idea.

Key walked for a while, seeing nothing special at all. Nothing moved on the dry soil beneath Key’s trotting paws. It seemed as if everyone was asleep. Suddenly there was something in front of Key’s nose. Something big. Looking up, Key saw a thing that seemed to tower into the sky. Key did not recognise the scent of it, it actually did not smell much at all. It looked the same all over the surface and Key examined it very thoroughly, trying to identify its scent and pawing at it. It smelled dry and the surface felt rough and hot. Key started to look for the end of it and followed the surface that went on and on. After a long while Key saw someone’s tracks. Key inhaled the scent from the tracks and it was fresh. It’s me!, Key thought. So what is this thing?

A really faint noise reached Key’s sensitive ears, a scratching noise right in front of Key’s nose. There Key saw a tiny tiny being trying to climb the thing. It looked at Key and hissed.

“What are you staring at? Don’t disturb me!”
“What, me?”, Key said, “what are you doing with this thing?”
“I am climbing it, can’t you see? It is not a thing, it is a mountain, don’t you know that, silly baby!”

“Of course I know,” Key said, “do you want to play with me?”
“I have no time for play!” the being huffed and puffed, “Go away!”

No fun at all, Key thought, and went to find something that was fun. There was a swooshing sound coming from a little winged being that sat in a crack of the thing, using its beak to what seemed like an attempt to break the thing’s surface. It stopped when it noticed that Key was looking at it.

“Who are you?” the winged one asked.
“Do you want to play with me?” Key said.
“I am busy, as you can see,” the winged one said, and started picking again.
“What are you doing with this mountain?” Key asked. The winged one looked amazed.
"It is not a mountain, it is a rock," the winged one said. "It is really important that you know these things."

"Are you sure you do not want to play with me?", Key said, and the winged one just nodded.

So Key, a bit sad, went and sat down in the shade under a tree. Then, Key realised that there was no family anywhere to be seen. So off Key went to find them! The scent was there to follow, and soon Key felt that they were near. The relief was great. Settling down in the midst of the siblings Key felt that everything was just the way it was supposed to be. Not really sleepy, Key’s thoughts drifted. The thing was a mystery to ponder over. This thing that was still the same thing although it was called different names. Why was that so? Why was that so important to know really?

"Mum?"

"Yes, dear?"

"I saw a thing today," Key said.

"A thing? You should not go away on your own like that, it is dangerous."

"It was big. A little being said it was a mountain. Another being said it was a rock. What was it, mum?"

"Hmm, what did it smell like?"

"Dry, but not dusty."

"What did it feel like?"

"Hard and uneven."

"How did it look?"

"Dark and it was really, really wide and tall."

"Could you sit on top of it?"

"Yes, but I don’t know how to climb it."

"It sounds to me like you encountered a cliff."

"Oh," Key said, and pondered some more while mother lion groomed Key’s ear.

"What is it for? Can you play with it?"

"You can sit on top of it to get a better view on things," mother said. Father lion gleamed at them.

"It’s my cliff," he said. "I sit on it every now and then."

"In my territory," mother lion said, just to remind him.

Key thought about the little being climbing and the winged one picking, and thought it was an odd thing to say, that it was his cliff. Anyway, that thing – whether it is a mountain, a rock or a cliff – was perhaps not for play. Or perhaps it actually was? Key drowsed off as a decision formed to explore this thing further, to see how it could be used for climbing, for trying to break its surface or for using as a lookout. For play, that is. That was a great plan. And then Key contentedly fell asleep, dreaming of the thing that was meant for play.

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The fable above is intended to show that a phenomenon may be viewed from various angles although the whole remains the same. It all depends on who you are, and the values you happen to encounter in your life, to identify with or not. Not only the participants in the studied setting, but also I, navigate in a world of values and views. In my case it is an academic world, and the change from the field of information technology to the field of library and information science has been a journey. In the end, due to this journey, the conducted research in the thesis is relevant to both fields, and hopefully the presented understanding of information and learning activities is broader and more rewarding than it would have been without this journey.
1 Introduction

This compilation thesis presents research on the dynamics of learning and information activities in organisations. Arguing that these activities are socially constructed, the research focuses on how social interaction relates to relationships and learning within them.

Situated in the field of knowledge management, the conducted research is based on a social constructivist view on learning that defines both learning and information as socially constructed. Talja, Tuominen and Savolainen (2005) describe social constructivism as focusing on social interaction that is influenced by and influences both the individual and the environment within which the individual acts. This focus on social interaction is especially influenced by Vygotsky’s understanding of learning (Talja et al., 2005). Vygotsky considered that individuals learn by using their cognitive abilities when interacting with the world, and that these abilities are developed in interaction with a social setting (Säljö, 2003; DeVries, 2000).

Viewing social interaction as a fundamental premise for learning provides a starting point for the research in the thesis. The specific focus on aspects of informality and formality stems from a critique of the traditional dichotomous approach where learning is studied as either informal or formal. The separation of learning into informal and formal has been debated for a long time without reaching any apparent consensus on a proper definition (Malcolm, Hodkinson and Colley, 2003; Marsick, 2009). Malcolm et al. (2003) propose a compound view by emphasising that aspects of informality and formality exist in all learning. Accordingly, although informality and formality are useful theoretical abstractions for exploring and defining particular aspects of learning, in reality they are not exclusive categories. The refusal to dichotomise informality and formality serves to emphasise their union rather than separation. The practical and theoretical advantage of this synthesising rather than dichotomising view will be explored and discussed in this thesis.

One obvious reason for this synthesis is that it is necessary to understand the interactive and synthesised nature of relationships and learning in order to be able to support them for the benefit of organisations. This is exemplified in the works by Brown and Duguid (1991), Wenger, McDermott and Snyder (2002) and McDermott and Archibald (2010) where the authors argue for the advantages of integrating informal learning with organisational goals, thus implying the need for synthesising aspects of informality and formality. Moreover, these researchers assert the value and magnitude of learning informally in relationships. Likewise, Ellinger (2005) claims that informal learning constitutes the majority of learning in the workplace.
However, she claims that “…little is known about how such learning is best supported, encouraged, and developed within organizational settings” (Ellinger, 2005, p. 389). Consequently, referring to the above reasoning, the research in this thesis is guided by the assumption that it is necessary to gain increased insight into the nature of relationships and its impact on learning. Such an insight may contribute to understanding how relationships and thus learning within them may be facilitated in order to create preconditions for beneficial outcomes of learning at workplaces.

The thesis is structured according to the two phases of the empirical study conducted as part of the dissertation project: the first part involves a licentiate thesis and two research papers, and the second part consists of two research papers that build on and further advance the findings of the first part. Empirical data were collected in both phases. The empirical foundation consists of a case study of the Swedish Armed Forces (SwAF) with a specific focus on the Land Warfare Centre (LWC). The case study focuses on learning from experiences in training and field action. The disciplinary context of the study is in the field of knowledge management, a domain that is part of library and information science (LIS), information technology (IT) and management studies.

Next, this chapter presents the aim and research questions followed by a discussion on the disciplinary premises of this thesis within the LIS field of knowledge management. Thus knowledge management is discussed in relation to information management and information behaviour, arguing some similarities and differences. This also serves to identify and present fundamental concepts for the thesis. Next, the chapter introduces a summary of the theoretical basis for the entire case study; that is, how social interaction relates to relationships and learning within them. This section thus includes a presentation of the concepts informality and formality, and the role of values and views for constructing relationships. In addition, the section contains an introduction to learning cultures in military settings. Finally, there is a section discussing the research process and methods. The chosen methods are described, including reflections on methodological choices made during the two-phase research process.

Following this chapter, part one of the case study is presented. This includes the scientific works presenting the empirical data collected in the first phase of the entire study. This part therefore contains a short background of the studied setting, the SwAF, and the two papers positioning the findings according to the research questions of this thesis. Part two of the case study then follows and consists of two papers. The first paper presents another set of empirical data collected that both confirm and are confirmed by previous findings. The second conceptual paper presents reflections based on the whole case study. These two parts are followed by a chapter with discussions and conclusions. This closing chapter combines the discussions and conclusions of the licentiate thesis and the individual papers in part one and two in order to provide a concluding synthesis of the whole study. The chapter ends with a discussion on questions for future research.
1.1 Aim and research questions

The foundation for this thesis is that information as well as learning is socially constructed through social interaction. Furthermore, as has been argued above, in order to facilitate learning there is a need to synthesise it. Facilitation, in the form of intervening with relationships and learning within them, is done with the aim of accomplishing a desired rather than an undesired change of preconditions that influence learning. Hence it is also important to identify implications of intervening. This thesis is based on an assumption that there are various ways of intervening with learning in organisations, and that the suitability of these ways depends on the nature of relationships. Thus, it is assumed that properly chosen and developed ways of facilitation are more likely to succeed than ad-hoc and preconceived ones.

Accordingly, the all-encompassing aim of the thesis is to explore the nature of relationships using aspects of informality and formality, and how the interactive dynamics between these aspects may be approached to facilitate learning in organisations. This aim guides the conducted research and is formulated in the following research questions:

1) How does the nature of relationships, expressed as aspects of informality and formality, manifest itself and relate to learning in an organisation?  
2) What are the preconditions that influence the nature of relationships in an organisation?  
3) What are the implications of intervening with the nature of relationships?

The questions are addressed within the field of knowledge management by conducting a case study of the SwAF, which specifically focuses on how the organisation learns from experiences in training and field action.

1.2 Information, learning and knowing in KM related to IM and IB

The research presented in this thesis is primarily situated in knowledge management (KM), an interdisciplinary and dynamic field connecting for example library and information science (LIS), management studies and information technology (IT). The theoretical framework for the research that started within the IT area was based on studies within the field of KM that focus on learning in organisations as informal or formal. As the learning in the studied setting proved to involve complex and interdependent aspects of informality and formality, the perspective taken for the continued research in the current thesis focuses on how information and learning are constructs of social interaction.

In the conducted research, the previous as well as the present perspective on learning connects IT and LIS through the study of information and learning activities in organisations. Therefore the theoretical basis – the dynamics of
informality and formality and Communities of Practice – remains the same. This basis is further developed in this thesis including the study of values and views in social interaction that are part of constructing relationships and learning within them (see 1.3). Maintaining and strengthening the focus on KM as the main field of research positions the current thesis in LIS even though it started within IT. This is accomplished by describing how KM connects to perspectives of and concepts in information management (IM) and information behaviour (IB). These connections are discussed in relation to two dominating research tracks in KM; the view that knowledge may be transferred in systems and the view that knowledge is shared in social interaction. This latter view of social interaction is thereafter discussed connecting the social track of KM to studies in IB. In addition, the intention of the above laid out discussion on KM is to define concepts that are fundamental to this thesis, such as information and knowledge or knowing.

1.2.1 KM relating to IM and IB

It is no easy task to define KM, which is evident by how McInerney and Koenig (2011) describe the numerous attempts that have been made. Thus, this field of large and diverse research lacks a definition (Widén-Wulff, Allen, Macevičiūtė, Moring, Papik and Wilson, 2005; McInerney and Koenig, 2011). In this thesis KM is understood as a field devoted to the study of how organisations may benefit from learning and knowing. In the field, this is primarily accomplished by focusing on knowledge as an asset to be transferred or shared. Transfer is accommodated by technology and sharing by people (Hislop, 2013). These two foci represent the two major tracks in KM, which are further described in the following subsections in order to argue the point of departure for the conducted research in the thesis.

Lambe (2011) argues that the economic potential together with the influence of consultants and technology contributed to the emergence of KM as an active field of research in the 1990s. However, Lambe (2011) contends that much of the contemporary KM literature fails to connect to the roots of KM, which may be found as early as in the 1940s. Prusak (2001) also acknowledges the economic incentives, and he asserts that KM is a response to actual needs: “…the fact is that knowledge management is not just a consultants’ invention but a practitioner-based, substantive response to real social and economic trends” (Prusak, 2001, p. 1002). Likewise, Spender (2008) states that the focus of research in KM is on realising the economic potential of knowledge. Thus, the desire to manage knowledge as an asset with economic potential may well have contributed to a dominating view on knowledge as an object to be transferred or shared.

The increasing possibilities to easily transfer information using everyday technology may have contributed to such an objectified view on knowledge. Gherardi (2006), for example, suggests that emphasis on techniques and technologies formed a new alliance between KM and information technology that monopolised the term KM. This emphasis, according to Gherardi (2006), relates to the notion that knowledge is to be placed in information systems for others to possess. Consequently, according to Gherardi (2009), the desire to manage
knowledge made what she calls the expression ‘knowledge management’ gain in popularity to the detriment of the previous expression ‘organisational learning’. By addressing KM and organisational learning as expressions, Gherardi (2009) implies that these are merely labels for various kinds of inspiration to studies that are devoted to facilitating learning and knowing in organisations. Furthermore, she refers to a debate in the 1990s that centred on whether organisational learning could be managed as any other organisational process. She also states that the debate focused on discussing which expression – organisational learning or knowledge management – that ought to be used. Furthermore, according to (Gherardi, 2009), the discovery of knowledge as a resource to be used and managed was debated, indicating a possessive view on knowledge that proved difficult to apply for analysing learning and knowing. Such a view on knowledge has been criticised for its simplicity (Gherardi, 2006). Gherardi (2006) argues that learning and knowing are socially situated activities, and she also implies that research needs to focus on practices in organisations regardless of expressions used. In line with this reasoning, and with the theoretical approach taken to address the research questions, KM and organisational learning are in this thesis considered synonymous labels of the same social phenomena related to learning and knowing in organisations.

A similar debate has taken place regarding KM and IM. As stated above, a fundamental concept in KM is knowledge to be transferred in information systems. However, in IM, the entity transferred is information. This transfer view on knowledge thus makes KM resemble information management (IM). Claiming that knowledge in KM equals information in IM, Wilson (2002) even argues that KM is IM. However, he also suggests that KM could refer to the “management of work practices”, recognising the role of people in KM. Wilson’s (2002) argumentation is based on the premise that knowledge refers to what people know in their minds and is therefore impossible to manage. Hence his argumentation is part of a debate, in which, for example according to Sarrafzadeh, Martin and Hazeri (2006), it is asserted that KM is a name invented for what LIS research has already been doing for a long time.

Furthermore, according to Wilson (1988) and Macevičiūtė and Wilson (2002), IM is concerned with the economic value of information in organisations, and leans on information technology for dissemination. This economic concern and dissemination form correspond to the purpose in KM of harvesting knowledge as an asset by using information technology in the form of knowledge management systems (KMS). However, according to Sarrafzadeh et al. (2006) there are features that distinguish KM from IM. The authors argue that KM is supposed to focus on people rather than objects; that is, the intention is to manage tacit knowledge, to involve learning, and to emphasise the creation and sharing of knowledge. However, these statements claiming to differentiate KM from IM depend on how knowledge is defined, especially in relation to information.

As indicated above, there is an ambiguity regarding the definitions of information and knowledge. The need for clear definitions is argued by Wilson (2002) and reinforced by Schlögl (2005) who also asserts the need for definitions that clearly distinguish knowledge from information. Arguing this point, Schlögl
(2005) states that “the high claims of knowledge management can only be realised, if at all, after a long learning process”. Hence he implies that learning is the basis for creating knowledge within the minds of people in an organisation, and thus he distinguishes knowledge from information. Nevertheless, Widén-Wulff et al. (2005) propose that in order to develop the IM field, aspects in KM that emphasise people and processes can be incorporated. This would further strengthen the connecting similarities between KM and IM.

Regardless of definitions, the view on how to transfer knowledge as an entity in KM compares to how information is managed in IM. However, according to Wilson (2002), knowledge rather represents a person who knows. Similarly, Choo (2006) considers knowledge to include “collective action and reflection” (p. 1). He furthermore argues that knowledge, or knowing, is a result of interacting with information. Thus he connects the study of information behaviour (IB) – how people need, seek and use information – with KM research focusing on how to gain knowledge. The study of information behaviour dates back to 1948 (Choo, 2006; Wilson, 1999). Depending on orientation, the field may be labelled ‘information behaviour’, ‘information practice’ or ‘information need, seeking and use’. In this thesis, information behaviour is used as an umbrella term embracing these and similar research orientations within LIS. Rather than addressing differences on a labelling level, the goal is to emphasise research with a common denominator; that is, the role of social interaction.

In his book discussing information behaviour in the knowing organisation, Choo (2006) argues that information is the basis that enables learning and knowing in organisations. He suggests that people learn to know while making sense of information in order to act, for example by making a decision. He argues that in needing, seeking and using information people develop their knowing in organisations, and he refers to this knowing as tacit and explicit knowledge.

This dichotomy of knowledge into tacit and explicit, often based on the study by Nonaka and Takeuchi (1995), has had considerable impact on how knowledge is viewed in KM. Thus, using it to understand knowledge, Choo (2006) connects IB to KM. Moreover, it seems as if Choo’s (2006) approach to how information behaviour results in knowledge strongly resembles the objectified view on knowledge in KM where knowledge is treated as an entity that can be transferred or shared. However, Choo (2006) regards information, rather than knowledge, as the entity. Therefore, if the entity really is not knowledge but information, as Wilson (2002) argues, IB in organisational settings and KM are in fact largely studying the same thing; that is, how people individually or collaboratively engage with information. Nevertheless, studies in KM that focus on transferring knowledge or sharing knowledge claim to capture or share, respectively, knowledge and not information. Still, both major tracks in KM relate to studies in information behaviour provided that knowledge equals information.

Accordingly, a specific term in IB, information sharing, relates directly to knowledge sharing in KM. Although relatively little explored, research on this concept increased at the same time as KM gained in popularity (Wilson, 2010). Moreover, Wilson (2010) argues that the similar usage of the terms knowledge
sharing and information sharing makes them synonymous; that is, they both relate to information rather than knowledge. Also Pilerot (2011) claims that some researchers use these terms interchangeably. Both terms are used by Widén-Wulff (2007) in her study of social processes in information-sharing practices. She differentiates between them by stating that information-sharing practices provide knowledge sharing, implying that people share what they know through these practices. Furthermore, information sharing is a term used in research studying collaborative information behaviour, an orientation of IB that is increasingly studied. Talja and Hansen (2006) describe collaborative information behaviour as involving two or more actors who communicate to “identify information for accomplishing a task or solving a problem” (p. 114), and they furthermore assert that information sharing may be casual as well as designed. Thus, information – in contrast to knowledge – is shared. Hence, in KM, the track of sharing so-called knowledge in collaborative activities compares to information sharing in IB.

The collaborative activities studied in KM and IB share concerns regarding interlaced and elusive concepts such as context and culture. For example, Talja and Hansen (2006) and Meyer (2009) emphasise the importance of understanding information behaviour as embedded in a context. In addition, Meyer (2009) studies how power connected to norms and values influences a context. Similarly, Chatman (1999) analyses information behaviour based on norms and attitudes that form a culture. Choo, Bergeron, Detlor and Heaton (2008) likewise discuss socially shared patterns of behaviours, norms and values that define how people in organisations apply and work with information. Also Choo (2013) and Widén-Wulff and Ginman (2004) argue that values and norms shape information behaviour in organisations. Widén-Wulff and Ginman (2004) explore how networks, norms, trust and mutual understanding impact and explain collaborative information behaviour in organisations. However, Case (2012) declares that context or situation is only vaguely defined when studying information behaviour. Similarly, Burnett, Jaeger and Thompson (2008) assert that social aspects have not been sufficiently acknowledged or examined when studying how people access information. They argue that access to information is influenced by the manner in which people value it and make it available, and this is built on social norms and expectations in relation to each other.

In KM, culture is an influential factor (Heisig, 2009; Baskerville and Duliprovici, 2006) that influences peoples’ motivation to participate in activities such as sharing (King, 2007). Hence culture can explain why people consider certain patterns of behaviour appropriate, and moreover it relates to issues of group identity, personality, trust and social relationships (Hislop, 2013). Cabrera and Cabrera (2005) discuss how people base their beliefs of perceived appropriate behaviour on social norms, and how these beliefs motivate them to share what they know. Culture is thus found in contextual social elements conveyed, for example in Communities of Practice (CoPs), which is a concept presented by Lave and Wenger (1991), Wenger (1998b) and Brown and Duguid (1991) for understanding how people interact to share what they know. This concept is interdisciplinary, connecting studies of collaborative information behaviour and practices. For
example, Widén-Wulff and Ginman (2004) argue that Communities of Practice (CoPs) represent a suitable context for studying social identity, social interaction and information sharing. Furthermore, according to Cox (2012), using CoPs is a familiar approach in information practices, an IB orientation. Thus, contextual/cultural elements are important for exploring, understanding and situating interaction with information, and, accordingly, studying such interaction connects IB and KM.

The above discussion addresses some possible conceptual definitions and some boundaries between KM, IM and IB as parts of LIS, though unlikely all of them. Nevertheless, the preceding argumentation of how KM links to IM and IB serves as a starting point for clarifying the concepts of information and knowledge in KM research. Thus, in the following subsections the use of knowledge and information in KM is discussed. This discussion continues to focus on the two major tracks of KM; that is, the transfer and sharing of knowledge. Moreover, it connects to the above reasoning on knowledge and information as well as the social aspects of information behavior and interaction.

1.2.2 Transfer and sharing

In KM there are, as previously briefly touched upon, two major tracks that aim to strengthen and increase knowledge-building in organisations. The first one is to systematically transfer knowledge between individuals to acquire knowledge, and the second is to participate in social interaction to share knowledge. This is illustrated by how knowledge management has been mainly focused on either codification or collegial networks. Codification focuses on storing and exchanging objects such as documents, whereas interaction focuses on knowledge networks (e.g. Hansen, Nohria and Tierney, 1999; Verburg and Andriessen, 2011).

In order to further explain the basic foundation for this thesis, it is necessary to discuss the concepts of knowledge, learning and information in relation to the tracks of transferring and sharing. Such a discussion serves to explain the choice of social interaction as the point of departure for the research undertaken in this thesis.

1.2.2.1 Knowledge/knowing and information in relation to learning

In this thesis, the intention is not to extensively and epistemologically discuss the concepts of knowledge or knowing. Such a discussion is more suitable in research oriented towards philosophy of science. However, a background is necessary in order to lay the foundation for why a term focusing on activity is more appropriate to use when exploring learning in organisations. The following discussion is therefore intended for arguing this standpoint.

In KM, there are basic concepts that are often used for managing knowledge, and they are described for example by Heisig (2009) in his review comparing 160 KM frameworks. He identifies five core activities in KM: sharing, creating, using, storing and identifying knowledge. He also identifies a sixth relevant activity, acquiring knowledge, although it is not considered equally significant. Moreover, according to this review, a central knowledge dichotomy of tacit and explicit
dominates KM research, and this explains why the core activities treat knowledge as an object to be transferred or shared. This dichotomy is described by Nonaka and Takeuchi (1995), and they propose the SECI model for understanding how knowledge may be socialised, externalised, combined and internalised. Through these processes tacit knowledge may be transformed into explicit, although tacit knowledge is difficult to capture (Nonaka and Takeuchi, 1995). This notion of tacit knowledge is based on the works of Polanyi in the 1950-60s. However, Spender (2008) argues that Nonaka and Takeuchi (1995) seem to have made an incorrect interpretation of Polanyi, as tacit knowledge cannot be explicitly expressed. Accordingly, even though the intention of Nonaka and Takeuchi (1995) is not to separate the knower from what is known, it seems as if their terminology of explicit and tacit still contributes to such a separation. Moreover, they argue that tacit knowledge can be turned into explicit knowledge through the act of separating it from the knower. However, if the SECI model instead were based on information rather than knowledge as the entity to be processed, this model could be used to understand ways of interpreting information to create knowing. Distinguishing information from what is known would thus contribute to understanding how knowing is created rather than transferred.

This seeming separation of the knower from the known that is proposed to occur in Nonaka and Takeuchi’s (1995) approach has been contested. For example, Wilson (2002), Schlögl (2005) and McDermott (1999) imply that such a separation is impossible. Furthermore, McDermott (1999) declares that “[k]nowing is a human act” (McDermott, 1999, p. 105) and that knowledge therefore always involves a person who knows. Alavi and Leidner (2001) similarly reason that knowing is an activity that is difficult to define, but it could be viewed as a state of mind. Likewise, Buckland (1991) declares that knowing something is a state of being informed. Moreover, the grammatical form of the word knowing implies activity (Orlikowski, 2002), which also contributes to a pronounced distinction between information and what is known. An activity, in turn, entails that there is a subject who acts, and thus an activity or a state of mind in this sense cannot exist without the knower. However, Buckland (1991) asserts that knowledge may be used as a concept to represent what is known. Still, once a label such as knowledge is attached to a phenomenon, it starts to taint it with its own semantic meaning – and the original constructed value is lost. What is known in activity is then transformed into a static entity. The label knowing therefore serves to maintain the clear distinction between activity and entity. In accordance with the claims of the above researchers that knowing is to be preferred over knowledge, it is argued in this thesis that knowing is a more appropriate term to use in order to separate the activity of knowing from the entity of information. Separating the knower from the known has had some consequences. The outcome of separation, the explicit knowledge, has turned into something that is approached as an entity. This entity that exists outside of the knower is information rather than explicit knowledge, and it may be both interpreted and interacted with. Consequently, people use information in order to learn and know. Thus knowing is defined as an ongoing activity formed and re-
formed in interaction with information, and this information is interpreted, constructed and exchanged in a social context.

It has been argued above that it is appropriate to emphasise activity rather than entity, and that there is a need to distinguish the activity of knowing from the entity called information. This need for clarification between concepts is asserted by many, for example by Cornelius (2002) who contends that it is necessary to theorise the term information in information science. This argument is reinforced by Case (2012) who states that there is no agreed definition of information despite many efforts by researchers. Hence, in order to distinguish information from other related concepts in this thesis, information is considered anything that may nurture learning in an organisation. Such an understanding of the term does not render information into something that is too general to be usable, a risk claimed by Hjørland (2007). Rather, it is similar to the one used by Case (2012) who argues that instead of attempting to find and use one universal definition of information it may be more rewarding to consider it a primitive term so basic that it does not need to be fully explained. He considers information to be “any difference you perceive, in your environment or within yourself”, which means “any aspect that you notice in the pattern of reality” (p. 4, italics in original). Consequently, in this thesis, information is an over-arching term that includes anything that may nurture learning and knowing; that is, information is more or less consciously interpreted, constructed and exchanged in relationships. This understanding of information clarifies its nurturing role in relation to learning and knowing, and this is further described in the following subsections. It also leans on Hjørland’s (2007) view on information as something situational and subjective. Hjørland (2007) considers such a view necessary in order to base LIS research on an appropriate theoretical foundation.

Thus, knowing is an activity connected to learning, and learning in turn is an activity of interpreting information. Hence, distinguishing knowing from information may assist in understanding how learning in an organisation may be facilitated. The potential lies in focusing on the conveying of information as an entity and/or on facilitating activities of interaction where information is constructed, interpreted and exchanged. This distinction provides a focus and an intention in the study of learning in organisations. In addition, this focus may draw attention to the fact that learning is accomplished through interpreting and constructing information, and not only through exchanging information. For example, instead of finding out how information ought to be mediated it may be necessary to consider what it is that motivates people to engage with information instead of dismissing it.

1.2.2.2 Fuzzy sharing due to fuzzy terminology

Above, it was argued that choosing the term knowing serves to distinguish this phenomenon from information. It has also been argued in the first part of this section that the use of the term knowledge in both of the major tracks in KM really equals the use of information. Thus, although sharing in activities is emphasised, it still seems as if these activities are viewed mainly as human information systems to
be used for transfer. This is exemplified for example by Blankenship and Ruona (2009), who argue that sharing is fundamental in KM and that it is therefore necessary to understand and facilitate such sharing in social processes. They also discuss sharing in relation to the term tacit knowledge, which implies that it is information that is shared or transferred. Such a prevailing use of the term, developed by Nonaka and Takeuchi (1995), may therefore be a reason for the confusion of what is shared in activities. Their terms, explicit and tacit knowledge, were previously discussed to separate the knower from the known, resulting in a fuzziness rather than a distinction between knowledge and information. For example, arguing the increasing focus in KM on activity rather than entity, Beesley and Cooper (2008) use tacit knowledge to describe the result of activity within and among individuals. Koloskov (2010) similarly argues that both the transfer and the practice perspective are important for managing explicit as well as tacit forms of knowledge. Gherardi (2009) asserts that much effort has been expended making tacit knowledge explicit, where instead it is crucial to understand that this kind of knowledge is embedded in work practices. Furthermore, notwithstanding their discussion on how to facilitate and encourage such practices of sharing – clearly focusing on social interaction in practices – Cabrera and Cabrera (2005) still refer to sharing as transfer. Accordingly, the social approach in KM that focuses on sharing has largely aimed at capturing tacit knowledge, still as a construct that is possible to explicitly express.

Thus, the term tacit knowledge causes fuzziness and confusion. It is not clear whether social interaction is perceived and used as human information systems for transferring through sharing, or as relationships where information, learning and knowing are constructed. This is exemplified for example by the extensively used concept of Communities of Practice (CoPs), elaborated by Lave and Wenger (1991), Wenger (1998b) and Brown and Duguid (1991). The concept of CoPs has been used instrumentally in KM research to help organisations profit from knowledge perceived as tacit knowledge shared in social interaction. This prevailing use of CoPs may thus be traced to how Nonaka and Takeuchi (1995), rather than Polanyi, addressed tacit knowledge. Hence, due to this focus on transfer of tacit knowledge rather than on constructing knowing, it seems as if KM research in general has somewhat overlooked the question of how and why people participate in interaction in order to interpret, construct and exchange information.

However, there is research in KM that represents a practice-based perspective, thereby focusing on knowing as an activity. This focus emphasises that an individual is part of a social collective context where knowing is an activity of learning, and it is accomplished through interpreting, constructing and exchanging information in interaction. Orlikowski (2002) argues that knowing emerges in such a social setting through ongoing and situated actions of people carrying out their everyday work. This emergent nature was also crucial for the original idea of CoPs when first presented by Lave and Wenger (1991). This emphasis on ongoing and emergent activity would correctly distinguish the foci of the two major tracks in KM. They would then reflect two metaphors for learning – acquisition and participating – discussed by Sfard (1998). She asserts that the first metaphor
concerns how people learn by acquiring knowledge as an end result, which can be possessed and shared. In contrast, the second metaphor relates to how people participate in interaction, where knowledge is an aspect of ongoing activity. Learning in organisations can thus been seen as both a planned and carefully calculated process, and as a complex, dynamic and social process that is difficult to calculate (Rasmussen and Nielsen, 2011). The complex social process is described for example by Kolb (1984) and Matthew and Sternberg (2009), who describe how people create and develop their knowing based on experiences made.

To conclude, in recognising the role of social interaction for learning and knowing in organisations, practice-based studies emphasising ongoing activity are considered appropriate to further develop the argument for the research approach in this thesis.

1.2.2.3 Interacting socially to construct information, learning and knowing

In the previous sections, it was concluded that knowing is an activity facilitated by learning through the interpretation, construction and exchange of information in social interaction. This view is exemplified in the approach of CoPs, a social learning theory, where the focus is on people collaborating and participating in interaction to carry out work (Lave and Wenger, 1991; Wenger, 1998a; Brown and Duguid, 1991). The concept of CoPs is discussed in this section in order to further argue that learning relates to information and knowing.

The concept of CoPs has played a part in the introduction and enhancement of practice-based research in LIS, when broadening the field to place a more pronounced emphasis on social contexts. Research in IB is traditionally focused on the individual’s cognitive processes (McKenzie, 2003; Hyldegård, 2006). Nevertheless, as far back as 1933 Ranganathan proposed contextual factors in the form of time and space (Satija and Singh, 2013), also reflected in other models for information behaviour described by (Wilson, 1999). Still, an increasing amount of research has acknowledged the importance of context in collaborative work (Reddy, Jansen and Spence, 2010; Talja, 2002; Sonnenwald and Pierce, 2000; Wildemuth and Case, 2010). This increase is expressed in practice-based studies exploring information practices. Savolainen (2007) describes that the studies of information practices emphasise context as an inherent part of information-related activities. He, among others, traces the roots of information practices to the works of Giddens, Suchman, Lave, Wenger, and Brown and Duguid, who all studied everyday activities in social and situated contexts, for example in the form of CoPs. The concept of CoPs is one of the most well-known practice approaches in this research (Cox, 2012).

Focusing on practices, Savolainen (2007) argues that there is a need for a deeper analysis of the concepts of information behaviour and information practice, and discussing information practice as an alternative concept to information behaviour reflects this need. According to him, the concepts should not be considered self-evident. It has been generally assumed that everybody knows what is meant by these concepts, and this is a reason for why addressing the meaning of
them has been regarded as pointless (Savolainen, 2007). This assumption has implications for the elusive concept of information, which has previously been discussed in this thesis for example in relation to the perspectives of Case (2012) and Cornelius (2002). These two researchers argue that information science is certainly in need of a clarified use of the information concept.

Nevertheless, the discussion on replacing information behaviour with information practice highlights an increased focus on social interaction. Indeed, Cox (2012) similarly argues for calling the field “the study of information in social practices”. Highlighting social interaction, Talja (2002) seems to be one of the first in LIS studies to state that:

…social aspects of information seeking cannot be captured in a framework that views individuals as functioning independently but adhering to social and cultural norms. Scholars’ social networks not only affect their choices of information seeking strategies; rather, these networks are often the place where information is sought, interpreted, used, and created. (Talja, 2002, p. 9-10)

This statement shows how Talja (2002) relates to the situated learning theories of Lave and Wenger (1991) when she argues that it is not enough to merely take social and cultural elements in the form of influential factors, as for example represented in models of information behaviour described by Wilson (1999), into account. Nevertheless, there is research in IB that does not separate information behaviour from its context of norms and values. For example, Sonnenwald (1999) explores the concept of information horizons, where she emphasises the importance of social networks for access to information. Social networks are likewise emphasised by Sonnenwald and Pierce (2000) in their study of the US army command and control at battalion level. They argue that dense social networks construct the collaborative nature of information. Similarly, Hyldegård (2006) explores collaborative processes using Kuhlthau’s (1991, 1993) Information Search Process model that was originally developed for studying processes of the individual and not the group. In addition, Solomon (2002) argues that it is important to recognise information as something that is constructed by people when they interact with other people, technology and social structures. Likewise, Chatman (1999) explores how people integrated in a social world create meaning in their interaction with each other when they exchange information and use technology. These are some examples of research within LIS that focus on the collaborative construction of information, learning and knowing that, in turn, is based on the interaction of participants in a practice.

Talja and Hansen (2006) propose a social practice approach in studies of collaborative information behaviour, which for example may be built on the concept of CoPs. They argue that information sharing is deeply embedded in work and other kinds of social practices. Furthermore, Talja and Hansen (2006) assert that although the number of studies that focus on the collaborative nature of information behaviour is increasing, their main focus continues to be on social relationships. This is exemplified by Veinot (2009) who studies how relationships provide information to those interacting in them. Veinot (2009) argues that although relationships are considered important for how information is gained, little attention
has been given to exactly how this happens. She exemplifies how, by asserting that people expose themselves to information in everyday activities and that they investigate things together. Hertzum (2008) similarly argues that collaborative information behaviour is realised when creating a common ground; that is, a shared understanding constructed by maintaining information sharing in a setting. Nevertheless, Karunakaran, Reddy and Spence (2013) contend that there is little consensus on what collaborative information sharing activities are. Still, it seems as if studies of these activities closely relate to the activities of CoPs, which provides an argument for and explains the approach of Talja and Hansen (2006).

1.2.3 Intersecting studies in KM and IB emphasising social interaction

To conclude, both KM and IB have advanced from their earlier heavy focus on studying individual interaction attributing information skills and behaviour to cognitive processes. Social and contextual aspects are increasingly considered inherent parts of activities in studied settings. Research has turned to social and cultural/contextual elements not merely influencing but rather constituting the core of information activities where people construct what they know from information shared and used. These fields, or perhaps labels, are strongly connected and overlap when studying the way people interact with and construct information in an organisation. Both fields lack clarity regarding the definitions of their core concepts. In KM, the word knowledge is used to describe the intent to facilitate knowledge work in organisations in order to develop and enhance performance. However, the knowledge work as such is focused on knowledge as an entity which constitutes both the means and the ends. Nonetheless, in this thesis it is argued that the means instead are information for achieving the goal of knowing. In IB, the terms behaviour or practice are used to study interaction with information, and the outcome of this interaction may be useful to organisations. Nonetheless, the intention may or may not be to explicitly study how this interaction results in knowing, and the use of the term information is often unclear. As described above, a considerable and increasing number of studies in both IB and KM focus on and explain how people act with information in social contexts. Thus, on certain issues, research in KM and IB seems to study the same phenomena in similar ways; that is, the dynamics between information, learning and knowing.

In accordance with the discussion presented so far, the point of departure for this thesis is that people are social beings who interpret and create information in order to learn and know within a context. Hence, the thesis could be said to be situated in the intersection of KM and IB where studies focus on people and their behaviour when interacting with information. It could also be said, as argued above, that KM and IB are two labels studying partly the same phenomenon. Thus, although KM and IB may have different origins, they share some similar perspectives and developments, for example in the form of studying participation in practice at work places. In this thesis, the use of CoPs in practice research is therefore considered a mutual point of departure for understanding and analysing
learning as a social phenomenon. However, compared to information practice the concept of CoPs focuses more on learning and identity-development (Cox, 2012).

To conclude, in this section it has been claimed that knowing is a more appropriate term to use than knowledge. The term knowing emphasises and clarifies that what is known ought to be regarded as an activity rather than an entity. Likewise, learning is an activity that occurs while interpreting information that may emerge in social interaction. Thus information nurtures learning that in turn facilitates knowing. However, the idea is not to regard these terms as a sequence where knowing is a result, but rather as mutually dependent interactive and iterative activities. For example, information may be open to revised interpretation when experiences made are added to it.

Based on the previous discussion on concepts, the studies presented in this thesis share common concerns as described in the following key phrase:

- Knowing is an activity that builds on
- learning, which is an activity that builds on social interaction where
- information is interpreted, constructed and exchanged.

The intersection of KM and IB is relevant not only to the positioning of this thesis, but also to future cross-fertilisation of these fields.

1.3 Social interaction, relationships and learning

In the previous section of this chapter, the concepts of knowing and information were discussed in relation to learning. This section continues to explore learning to briefly explain the basis for the analyses in the four papers and the licentiate thesis. The basis was created from the assumption stated at the beginning of this thesis; that learning is socially constructed through social interaction embedded in an organisational setting. This assumption guided the research from the beginning, but it was further established during the research process as a result of supportive findings and conceptual analyses.

Previously, it has been declared that the concept of CoPs is used to understand and analyse learning as a social phenomenon. In CoPs, the social interaction is studied by emphasising the social collective, and thus recognising the social identity of the individual as well as the collective. Based on this view on learning, cognitive processes are important as well, albeit not in isolation as mere answers to stimuli but rather as interactive constructs. Accordingly, the self, including cognitive abilities, is socially constructed (for a profound analysis of how the self is socially constructed see e.g. Gergen, 2011). Consequently, people are considered social beings who interact and learn in a setting to develop and re-develop their and others’ identities as persons-in-the-world (Lave and Wenger, 1991). Thus, people interact in various local settings where their learning and knowing is embedded (Gherardi, Nicolini and Odella, 1998; Brown and Duguid, 1991; Lave and Wenger, 1991; Wenger, 1998a; Lloyd and Somerville, 2006). Such interaction results in people forming relationships, and these relationships may be described by the form of interaction. This is done for example by Diefenbach and
Sillince (2011) who argue that organisations may be understood as informal or formal social hierarchies based on constructed relationships of roles such as managers and employees. Moreover, they argue that little is known about how these hierarchies relate to and interact with each other. In organisations, the nature of relationships is thus determined by the way people interact both informally and formally. In turn, this interaction involves values and norms, which are continuously negotiated. This negotiation is conducted more or less consciously, including various means of communication such as oral, textual and embodied.

Drawing on the concept of CoPs – where informal aspects of emerging identity and practice occurs in an organisational setting that represents formality – serves to connect aspects of informality with formality. The basis for the conducted research is further presented in the following subsections, and the first to be presented are the dynamics of informality and formality that convey the nature of relationships. Next, the origins and development of CoPs are described followed by a discussion on how participants’ values and views relate to relationships. This is then followed by a portrayal of how participants construct relationships and learning within them, and finally, learning in military settings is depicted.

1.3.1 The dynamics of informality and formality

Relationships in organisations are commonly referred to as organisational structures, and consequently, structures express relationships based on interaction. Intended and designed structures are often called formal (e.g. Burns and Stalker, 1961; Conway, 2001; Meyer and Rowan, 1977; Wang and Ahmed, 2002), whereas unintended and emerging structures are called informal (Wang and Ahmed, 2002; Brown and Duguid, 1991; Conway, 2001). These structures may supply maps of decision-makers, department structures, routines and rules, work tasks and work processes and communication channels.

However, designed relationships cannot be designed in such detail that no aspects of informality will emerge, and according to Orr (2006) strictly following designed formality could even result in a break-down of work. Emergent relationships, in turn, connect to formality by emerging within the framework of, or due to, designed relationships. An example of the latter is described by Diefenbach and Sillince (2011), who explain how informal relationships emerge from knowing how to ignore or bend bureaucratic rules. In this thesis, the term relationship is used to focus on ongoing human activity in interaction, whereas using the word structure rather assumes a finished construct.

This dichotomy of informal and formal relationships is a conventional approach to studying relationships in organisations. Similarly, learning is also dichotomised into informal and formal. This conventional approach, combined with the fact that a majority of what is known occurs in informal relationships (Nirmala and Vemuri, 2009), has implications for the study of relationships in this thesis. Instead of separating relationships into informal and formal, relationships and learning within them are understood to reflect intertwined and interdependent aspects of informality and formality in social interaction. How learning connects to
interaction is further exemplified by the following quotation: “Most learning takes place as a social act that involves relationships between people and involves the talk that occurs between them” (Boud, Rooney and Solomon, 2009, p. 323). In addition, this way of understanding the intertwined nature of relationships is similar to the approach taken by Malcolm et al. (2003) who argue that all learning involves aspects of informality and formality, although the balance may vary depending on for example how and where it happens.

Interaction and learning are ongoing dynamic and evolving activities that imply that the nature of relationships is continuously formed and re-formed. Hence relationships, in turn, impact on interaction and learning at the same time as interaction and learning provide the ongoing formation of relationships. Consequently, one of the main interests of this thesis is to explore preconditions that influence the nature of relationships and learning within them. Thus, the concept of CoPs, as well as other approaches that explore embedded learning where aspects of informality and formality merge, is used to focus on emerging identity and practice in an organisational setting.

1.3.2 CoPs: a practice approach to relationships and learning

Previously in this chapter, the fuzziness of sharing in social interaction activities was discussed; that is, whether people are human information systems for sharing the entity knowledge, or whether people share and interact with information in order to learn and know (see 1.2.2.2). Thus, in the first scenario, knowing is once again approached as an entity to be transferred in interaction rather than as an ongoing emergent activity – the second scenario – where knowing is situated in interaction. The study undertaken in this thesis is based on the latter understanding of social interaction. However, not only CoPs may be understood this way, but all relationships characterised by informality. Such an understanding refers to how the concept of CoPs was originally introduced; that is, as part of an overall reaction to a former strong cognitive focus on learning where knowing was separated from the person. Implications of this separation have also been addressed earlier in this chapter, where notions of knowledge/knowing and information were discussed. In their seminal work on CoPs, Lave and Wenger (1991) explain how people are part of a social world, and how they engage to form a practice that is something more than just a group, team or network. Such a practice is explained by Lave and Wenger (1991) to emerge as a result of people interacting. Moreover, people choose how much to participate in this interaction (Wenger, 1998b). However, people may also not know that they are members of a practice (Roberts, 2006). This emergent and delicate nature of participation makes CoPs difficult to identify, and consequently there is little agreement on how to define CoPs (Hara and Schwen, 2006) notwithstanding the efforts of Lave and Wenger (1991), Wenger (1998b) and Brown and Duguid (1991).

Although difficult to define, CoPs have generally been considered positive for learning and knowing in organisations, but they may be negative as well, for example by being introvert and resistant to new ideas (Hislop, 2013). The positive
Influence is exemplified by Lesser and Storck (2001) who argue that CoPs contribute to behavioural change that is beneficial for organisational performance. Likewise, Brown and Duguid (1991) reason that CoPs are positive for innovative and adaptive work as they closely follow actual practice. They also argue that CoPs contribute to cross-fertilisation in an organisation when they span over conventional boundaries. Accordingly, Brown and Duguid (1991) emphasise that informal learning is beneficial to organisations. However, they do not suggest that CoPs should be managed but rather acknowledged and cautiously supported. Their idea seems to be to promote learning as a social phenomenon rather than a cognitive and individual one, due to shortcomings of the latter approach to support development and innovation.

From the beginning CoPs were thus defined as emerging phenomena that tend to escape formal description and control (Wenger, 1998b). Since then it has been claimed that CoPs may be designed and managed (e.g. Lesser and Storck, 2001; Wenger et al., 2002; Dubé, Bourhis and Jacob, 2005; Scarso and Bolisani, 2008; Wenger, White and Smith, 2009; McDermott and Archibald, 2010; Iaquinto, Isbon and Faggian, 2011; Borzillo, Schmitt and Antino, 2012). Research claiming that it is possible to design CoPs is inclined to attempt such design by focusing on membership, tools for interaction and leaders. Such design transforms the concept that was originally intended to convey social learning into an instrument. This use strays far away from the original intent and construct, according to Lave (2008) and Duguid (2008).

In the following subsections, it is discussed how people as part of a context, for example a CoP, interact to construct relationships and learning within them.

1.3.3 Values and views in social interaction

In the following, interaction in relationships is briefly described to illustrate its complexity. Interaction forming and re-forming relationships is for example based on expectations of how to behave, which is determined by assumptions originating in the culture and subcultures of an organisation (Schein, 2003). Such assumptions may involve perceived ideas of who people are and how and why they act. People find and send information not only consciously and orally but also through how they act and dress (Jones, 2007). How people perceive others and themselves thus depends on complex and interwoven facets. Furthermore, how people interact depends on prior experiences of settings. People bring their pasts with them including experiences from previously known norms and settings, and in a new context these may potentially cause conflicts, which then need to be negotiated although they may never be resolved (Handley, Sturdy, Fincham and Clark, 2006). Accordingly, by participating in interaction relationships and culture are formed and re-formed, and this is characterised by the absence or presence of various values and norms depicting for example power, status and trust. Among other things, the way people listen or are listened to and how they react, is influenced by power (Galinsky, Rus and Lammers, 2011). Similarly, trust depends on the status an individual has (e.g. Lount and Pettit, 2012).
According to Billett (2001) people feel a need to find meaning in their workplace activities from a basis of negotiated norms and values. This negotiation means that people interpret signals and cues in the form of for example gestures, ways of talking and acting, which are forms that Johnsson and Boud (2010) suggest inform people on how to behave in interaction. Moreover, such negotiation of meaning is central for constructing identities in relationships (Wenger, 1998b). Wenger (1998b) describes how learning is connected to identity by emphasising how people become their identities as part of or in contrast to a practice, and this connection depends on how they view themselves and each other in relation to this practice. Moreover, he reasons that the intensity and substantiality of engagement determines whether people are core or peripheral members of a practice, or whether they seem to decline membership.

As described above, norms and values contribute to the perception of expected behaviour in social interaction. However, attitudes and perceptions of how to behave may not concur with actual behaviour. Argyris (1991; 2002) argues that there is a discrepancy between the espoused theory and the theory-in-use. People may be consistently inconsistent by holding beliefs that are contrary to what could be expected from what they know as facts and norms. Thus people may be more or less aware of their own and others’ perceptions, although they may still share them. Nevertheless, sharing a collective awareness facilitates a collective understanding of people’s roles related to a setting. Chatman (1999) describes the consequences of this collective awareness:

collective awareness about who is important and who is not; which ideas are relevant and which are trivial; whom to trust and whom to avoid. In its truest form, a small world is a community of like-minded individuals who share co-ownership of social reality (Chatman, 1999, p. 213)

The small world of like-minded individuals explored by Chatman (1999) is thus built from attitudes, and engagement based on attitudes. Furthermore, this attitude and engagement is described as influencing how information is accessed, rejected or created. The motivation to engage may be found in appreciation of work tasks and of colleagues, explained by the way norms dictate for example perceived expected, trusted and valued behaviour. Widén-Wulff (2007) describes such expected behaviour based on norms in her study of claims handlers who participate in a setting characterised by stability and routine work. She explores how the participants’ attitudes in this setting influence their sharing of information. The claims handlers state that they hold their colleagues in high esteem and that they have a strong common understanding of group identity shaped by their norms and values. For example, they assert that they are loyal to duties and respectful of superiors. In contrast, in their setting, biotechnology experts do not build their practice on collegial cohesiveness, but rather on the participants’ trust in each other’s expertise (Widén-Wulff, 2007).

Small worlds, such as the above exemplified workplaces, compare to how participants in CoPs interact and relate to each other in accordance with their values and views. Also participants in a CoP interact in similar ways using personal networks of trusted and valued colleagues. While participants in a CoP create these
connections, a shared repertoire is constructed and a joint enterprise is pursued (Wenger, 1998b). This shared repertoire includes norms and values, for example in the meaning of words and symbols. This exemplifies how informal relationships, such as the ones in small worlds and CoPs, contribute to situations and contexts through an ongoing negotiation of values and views. Such situations and contexts are likewise of interest in information horizons, a concept explored by Sonnenwald (1999) with a focus on participants and their worlds. An information horizon may consist of access to and participation in informal relationships (Sonnenwald, 1999). An information horizon is thus the space for interaction, and this space includes a choice of resources to be used, such as social networks, colleagues, experts and documents. This opportunity to choose from resources to use or interact with is the basis for interaction in models for informal learning (Lucas and Moreira, 2009). Indeed, the apparent freedom to choose whom and what to interact with seems to apply similarly to CoPs and small worlds as well as to information horizons. However, the power or the opportunity to freely negotiate values and norms may not always be that strong. This depends, for example, on how open a setting is to change and ideas, or on social pressure to behave as expected.

1.3.4 Constructing relationships and learning within them

The way participants interact socially has been described above by presenting how values and norms are negotiated. An illustrative example of how people create or sustain relationships as well as learning is seen in the following quotation:

> We sometimes saw people wandering around just to see what was going on, apparently with no other motive. Gus called this doing a “walkabout”. In fact, useful information seemed to be obtainable passively, just by coming into close proximity to others. Conversations could be overheard and people seen working together at PCs or on design models or showing each other documents. (Bellotti and Bly, 1996, p. 213)

The interactions in the above quotation illustrate how informality – the way people walkabout to physically connect – and formality – the physical work setting, and possibly work tasks – are merged. The formal layout of workspaces integrates with their informal use, at the same time as their informal use is not entirely informal, as people come together to work on formally designed tasks. However, the tasks, in turn, may be addressed in informal ways rather than by sticking to formally designed routines and procedures, or alternatively; the informal “routines” may be interlaced with the formal.

The quotation also illustrates how relationships and learning integrate passive and active forms of interaction; that is, passively hanging around, and actively working together. This social reality may furthermore depict a mutual worldview that constructs a small world in a setting the way Chatman (1999) argues. She suggests that people interact to understand their social roles according to mutually shared norms and values. This interpretation of a situation depends on social norms being coloured by underlying subtleties of power that may twist their way of understanding (Marsick and Watkins, 2001). In addition, the interpretation influenced by norms and values determines which information is accepted and which is rejected (Meyer, 2009). According to Widén-Wulff, Ek, Ginman, Pertillä,
Such interpretative evaluation is determined by people's beliefs of what is relevant and meaningful in their setting. These beliefs, in turn, are influenced by how people identify themselves in relation to their group (Widon-Wulff et al., 2008; Widén-Wulff, 2007). Hanging about and wandering around are thus ways to negotiate and accomplish interpretation, understanding and awareness of a setting and a situation. Such a pattern of individual, intragroup and intergroup awareness contributes to a shared understanding of work (Sonnenwald and Pierce, 2000). However, Gherardi (2000) reasons that people may learn from experiences in everyday situations regardless of how aware they are of this learning. This may imply that a shared understanding does not presume awareness.

Nevertheless, people develop their understanding as they learn the ways of a situated setting to become able participants in it, regardless of their level of awareness. Therefore, wandering around is part of becoming able through interacting in available spaces of the setting. An able member is good at reading the local context and acting in appreciated and valued ways within that context (Contu and Wilmott, 2003). Such local ability or knowing evolves in embedded interaction and it may be non-verbal or intuitive (Yanow, 2004). An oral culture depends on collective memory to negotiate and uphold a shared understanding, and an ability to browse the setting is linked to permission to access information, which is determined by ascribed social position (Meyer, 2009). Intuition, in turn, implies that ability is based on prior learning. This is described, for example, by Marsick (2009) who argues that people bring beliefs, values, histories and prior socialisation into their learning. Learning is thus a process where people integrate previous experiences with new experiences to possibly form identities (Campbell, Verenikina and Herrington, 2009).

The influence of wandering around to become an able participant in the setting implies that in negotiating and replacing old values with new ones, people change their dispositions in order to develop an identity. The usefulness of understanding learning through how people become part of the workplace is argued for example by Hodkinson, Biesta and James (2008). They propose that there are opportunities to learn in any situation, and that these opportunities depend on the characteristics of individuals. Lloyd and Somerville (2006) similarly discuss how people become part of work practices. They suggest that in order to become a participant in a practice, for example the way of becoming a fire-fighter, people need access to social and embodied information that is mediated in interaction. Furthermore, Wenger (1998b) relates learning to collective construction of identity. He argues that identities are constructed in iterative and interactive negotiation of values, and this negotiation results for example in appreciation of certain qualities and competences. Identities are thus developed and re-developed in socially embedded interaction. Hence, the perceived self is a result of defining oneself in relation to others in the group and reflects how the individual estimates and relates to the social status of the group (Tyler and Blader, 2001). Furthermore, Tyler and Blader (2001) argue that the higher the social status of a group, the more likely it is that people are willing to identify with it. Accordingly, they assert that this social identity in turn influences attitudes and values towards the group, such as perceived
status. This shows how social identity both shapes and is shaped by perceived social reality. It is not only a matter of defining one’s own self, but also of others recognising this self (Brown and Duguid, 2001; Brown and Duguid, 2000).

Finally, the above example of wandering around illustrates how the physical spaces of a setting matter for constructing relationships and learning. Such spaces may for example influence which colleagues in an information horizon to approach for information. It could moreover relate to the spaces discussed by Solomon, Boud and Rooney (2006). They argue that spaces represent locations where relationships are negotiated by people who are being not entirely either social or vocational, but something in-between. Spaces then provide context for relationships and learning, and according to Ellinger (2005) informal learning is influenced both positively and negatively by such contextual factors. She considers that learning-committed people constitute a positive factor whereas barriers such as invisible walls and the layout of workspaces may impact negatively.

1.3.5 Studying learning in military settings

Although the nature of relationships is relevant to all learning and thus to many kinds of organisations, the implications of the studied military setting in this thesis may reflect patterns or issues specifically attributed to a military culture. Therefore the aim of this subsection is to exemplify prior research describing the nature of relationships in military settings.

A common way to explore relationships and culture in military settings, according to King (2006), is to primarily concentrate on informal personal and intimate social interactions between participants considered to produce social cohesion and comradeship. He concludes that such research has considerably focused on male bonding to explain informal relationships. In his study of the British Army, King (2006) argues that the formation of dense relationships in a military context may rather be the outcome of formal than informal rituals. Furthermore, he describes how these formal rituals are realised in the intense training that participants undergo. This training is focused on exercising collective drills to imprint behaviour for field action. King (2006) also explains that these drills for example entail training a specified set of actions in answer to a short command. These short commands provide military units with a clear and concise communication for executing commands, and this is considered necessary for successfully facing pressure in a battle situation and following rules of engagement. In addition, a crucial goal for the communication drills in training, according to King (2006), is not only to establish clarity, but also to construct individual understanding of collective goals.

Soldiers are thus drilled into a collective behaviour resulting in a shared understanding of expected conduct. Such a shared understanding is fundamental to collaborative work and collective information behaviour (Sonnenwald, 2006). To emphasise this fundamental shared understanding, Sonnenwald (2006) provides illustrative examples in her study of command and control in the US military. She describes situations where participants believe they share an understanding, but it is
revealed that this is not the case. One such misunderstanding exemplified by Sonnenwald (2006) originated in the colour of the push pins on maps used to illustrate the locations of friend or foe. She furthermore proposes that many misunderstandings seem to emerge from everyday use of language and symbols in everyday work practices. Therefore, she argues, it is necessary to continuously negotiate a common ground in order to keep it common. She continues to describe this common ground as being expressed for example in how participants speak, dress and engage in organisational roles. Sonnenwald (2006) concludes that participants need to make sense of this common ground in similar ways in order to make it real and shared.

The necessity of a shared understanding contributes to how participants develop identities. King (2006) argues that, in training, participants learn to relate to each other’s roles, including physical relationships to other units. He concludes that extensive training is a way to shape individuals into a collective, and the status credited to another participant depends on how successful and competent that participant is in participating in the collective. Being successful means that the participant learns and knows expected behaviour in the formal activities. This status is then, according to King (2006), important for informal relationships to emerge. This description by King (2006) thus depicts how informal relationships emerge within and even due to performance within formal relationships.

Training is similarly addressed to be of crucial importance for learning and informal relationships in a study of the Australian army by O’Toole and Talbot (2011). O’Toole and Talbot (2011) argue that formal training fosters soldiers into a culture of bonding with each other, and they furthermore assert that training is a setting where networking is encouraged. Thus, O’Toole and Talbot (2011) describe formal relationships as closely connected to informal, and they therefore acknowledge that aspects of informality and formality overlap and interact. In their studied setting, informal relationships are needed to cover for deficiencies that are found in the formal. This need is illustrated by how participants in the study perceive that the formal dissemination of information suffers from time-lag, leading to information not being up-to-date or of good quality. Therefore, participants turn to their personal relationships, their social networks, to overcome such issues and gain the information necessary for carrying out their work. Furthermore, O’Toole and Talbot (2011) describe that, according to participants, information from informal sources is needed to complement the basic conduct provided by formal training. It was also ascertained in this study that participants preferred to access information using personal contacts over other methods. This was attributed to the fact that participants considered it more efficient and faster to access information this way, and also that it was necessary to fill in gaps perceived to exist in the information gained through formal channels. This informal way of acting also seems to occur in the British Army according to Catignani (2014). He contends that participants often rely on informal relationships to compensate for the shortcomings of formal relationships to disseminate information. Moreover, the participants in Catignani’s (2013) study perceived that using informal routes may be the only way to gain required information. In such situations, information was considered not to
reach those in need of it, implying that formal channels of dissemination failed. Such lack of or failing access to information may be a consequence of the sheer complexity of a military organisation, which is proposed by Swindler, Militello and Lyons (2007). This assumption is based on their study of two logistics units in a military domain where participants faced similar information challenges attributed to lacking overview of complex procedures.

An important issue when accessing information in relationships is trust. Informal relationships seem to be based on people knowing and trusting each other including competencies, strengths and weaknesses (O’Toole and Talbot, 2011). Thus O’Toole and Talbot (2011) describe that a person is inclined to contact others if she or he trusts that they supply accurate and valuable information. Furthermore, a person will reconsider whom to contact next time if expectations are not met and inaccurate information was provided instead. Being unable to trust information due to its source – in this case a person – may have serious consequences, as described by Sonnenwald (2006). She exemplifies this by describing a participant who refuses to obey an order from a superior as a consequence of the fact that this superior had provided false information in an earlier phase.

Another issue in a military setting is the problem that information and learning tends to stay local. For example, although learning through building social relationships is at times efficient in the settings studied by O’Toole and Talbot (2011), they argue that this weakness is eminent. This means that, if the corresponding learning is not realised using formal channels, participants cannot access information that may be vital for them to know. Therefore, O’Toole and Talbot (2011) contend that formal relationships need to provide updated and dynamic information and, simultaneously, that informal relationships between units/divisions need to be supported. This reasoning is reinforced by Swindler et al. (2007) as well as by Catignani (2014). In their study, Swindler et al. (2007) state that participants in one role are expected to pass on information to other participants, without knowing the roles of those receiving the information. In other words, they do not know the whole picture of the complex information process that they are part of. Therefore, Swindler et al. (2007) argue, participants need to develop their own understanding of the setting through interacting informally. However, according to Catignani (2014), interaction in informal relationships tends to focus on short-term ad-hoc problem-solving. This implies that understanding a setting through interacting in it may be limited to a local perspective focusing on everyday work.

Moreover, Catignani (2014) asserts that there is a risk of information in informal relationships being lost when participants move within or out from the setting or the organisation. Thus he argues that it is crucial for learning in the organisation that this kind of learning is institutionalised in order to, for example, not repeat mistakes; that is, experiences made need to be implemented in routines, doctrine, formal training and education. According to him, the British Army has failed to accomplish such institutionalisation, although it has been attempted. One reason for this failure, found in his study, is that it is difficult to develop and update training and doctrine in accordance with the continuous changes and challenges
arising and faced in operations. However, he also found that a major reason, according to participants’ testimonies, for their not having access to necessary information was that it was actually not accessible, which was attributed to it being over-classified. Such circumstances may also result in that these participants turned to their social networks to find needed information.

To summarise, training and not only combat is significant for military domains. These often long periods of interacting socially in a setting of formal procedures nurture informal relationships. This kind of in-depth training may be found in a military organisation to a higher degree than in other organisations. Thus the nature of relationships consisting of aspects of informality and formality may be more pronounced or dynamically interlaced compared to many other organisations. In addition, a military context may be more complex, considering its many diverse tasks and that it involves ever-changing challenges in field action. However, there are organisations of similar character, for example in health care and law enforcement. Nevertheless, in light of the above emphasised opportunity of workspaces for constructing relationships, a military domain ought to emerge as an illustrative example of their nature.

1.4 Research process and methods

A case study has been conducted resulting in a licentiate thesis and four papers. This study consists of two parts. The licentiate thesis and two papers contribute to the first part and two additional papers to the second. All papers advance findings in the licentiate thesis as well as present findings of later research. This section first describes the research process followed by a presentation of the methods used. In order to reflect on reasons influencing my research as well as choice of methods, I end the section with contemplating values and norms in research.

1.4.1 Research process

The research in this thesis is positioned in library and information science (LIS). However, the research process started within the information technology (IT) area. The process is therefore characterised by reframing the research through a change of perspective. Thus, additional literature was used to identify studies within KM that focus on social interaction and that are relevant to the research aim and questions of this thesis. Furthermore, these studies were linked to similarly focused studies in information behaviour, for example through the interdisciplinary concept of CoPs. Consequently, additional theoretical and empirical LIS research was used to further enrich and consolidate the point of departure as well as the analyses.

The first part of data collection took place between November 2009 and November 2011 (the main data-collection took place in 2009 and 2010, with additional data being collected to follow up development). The purpose of gathering the data was to explore and understand learning issues in the studied setting. The collected data consisted of:
- approximately 2400 pages of written documents, for example protocols regarding the Lessons Learned process (LL process), directives and reports,
- 20 observations of seminars associated with home-coming forces from field action in Afghanistan, training sessions and meetings related to the LL process, and
- interviews with 14 individuals.

The second part of data collection, in the same organisation, took place in May-June 2013 and consisted of six interviews. The intention was to follow up previous findings and gain insight into how participants’ views possibly influence learning in the studied setting. Table 1 depicts the data collection periods.

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<tr>
<th>Case Study</th>
<th>Interviews</th>
<th>Observations</th>
<th>Documents</th>
<th>Analysis</th>
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<td>- March 2010 – November 2010 (14 participants, each interview: 1-2 hours)</td>
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<td></td>
<td>- May 2013 – June 2013 (6 participants, each interview: 1-1.5 hours)</td>
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<td>- November 2009 – December 2010 (16 observations: 3 experience seminars, 4 training sessions, 9 LL meetings)</td>
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<td>- 4 March 2011 – November 2011 (4 observations: 4 LL meetings)</td>
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<td>- November 2009 – December 2010 (Main part)</td>
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<td>- January 2011 – November 2011 (To keep up-to-date)</td>
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<td>- Using KM, CSCW/CSCL, CoPs from the perspective of IT, finalising in LIC presented in February 2012</td>
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<td>- Using KM, CoPs, IB from the perspective of LIS, finalising in four papers during 2013-14 and this thesis in 2014</td>
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Table 1 Schedule for thesis work

In the beginning of the research process, theory connected to the field of IT was explored in order to set the stage for understanding learning as a phenomenon as well as in the studied setting. These theory studies consisted of research in KM, CoPs and computer supported collaborative work (CSCW) and learning (CSCL). In the licentiate thesis, frameworks for analysing the collected data were constructed based on this theory, taking the perspective of informality and formality respectively. These perspectives, informality and formality, were then developed in the current thesis to explore the dynamics of interaction, learning and relationships – a step taken to favour a cohesive perspective over a dichotomous thinking regarding learning. Thus additional theory and empirical findings in LIS were used to enhance the analysis of previous findings as well as to analyse the findings of newly collected empirical data. This additional KM literature encompassed studies exploring social interaction; that is, CoPs as well as studies in IB also emphasising
how people collaboratively interact with information embedded in a setting. Thus, changing fields required the research process as a whole to be highly dynamic and cross-disciplinary.

The scientific works of this thesis are listed below. The first is the licentiate thesis and the other four are papers. The first three papers are single-authored and the last is co-authored where I am first author. As first author I designed and conducted the study, analysed and drew conclusions and finally wrote the paper with input from the second author.

Part I

Licentiate thesis: Supporting Knowledge Management with Information Technology: The Significance of Formal and Informal Structures. (The licentiate thesis was conducted within the field of information technology. The current thesis builds on its content)

Paper 1: Learning in an organisation: exploring the nature of relationships. (The paper presents a constructed enhanced model first developed in the licentiate thesis. This paper thus addresses the second research question of the current thesis)

Paper 2: Formality and informality: learning in relationships in an organisation. (The paper presents the empirical data of part I, addressing the first research question of the current thesis)

Part II

Paper 3: Learning in relationships in an organisation: participants’ views. (The paper presents the empirical data of part II, thus addressing the first and second research questions of the current thesis)

Paper 4: Imitating CoPs: imposing formality on informality. (The paper presents conceptual ideas, addressing the third research question of the current thesis)

1.4.2 A qualitative approach

Qualitative research is rooted in the interpretative tradition and focuses on describing, explaining and understanding phenomena within a context, whereas quantitative research is rooted in the materialist and positivist tradition of understanding and describing phenomena by measuring them (Draper, 2004). In LIS research, qualitative methods are used frequently (Liebscher, 1998), which can also be seen in the discussion by Wildemuth (2009) on methods used in LIS research. Conducting a case study is one such qualitative method. A case study enables illustrative depth and detail when examining and explaining a phenomenon (Marshall and Rossman, 1999; Yin, 1994). However, Yin (1994) argues that case
studies have a character of their own, which does not necessarily need to be attributed to a qualitative approach. Still, he describes that case studies are suitable choices for research that aims to explore a phenomenon that is embedded in a setting. A case study may also be used to provide a framework for discussion (Wildemuth, 2009), which is suitable for understanding and presenting a phenomenon. The strength and purpose of case studies is their deep particularity rather than generalisation (Wildemuth, 2009).

From the very beginning of the research process it became clear that there were learning problems in the studied setting. Thus I considered it important to first gain an understanding of the situation in order to identify the problems. The aim and research questions of this thesis were therefore formulated to explore a complex embedded phenomenon. Accordingly, they were not formulated to aid measuring but understanding. Understanding a setting in its natural habitat is, as explained previously, commonly undertaken by using qualitative methods, as described for example by Draper (2004). Based on the preceding reasoning, a qualitative approach was chosen, and this choice guided as well as was guided by the formulation of the aim and research questions, as it should according to Poggenpoel, Myburgh and van der Linde (2001). Hence, a case study of the Swedish Armed Forces (SwAF) was conducted.

Case studies may be designed using many different data sources, and observations, interviews and documentation are three mentioned by Yin (1994). These three are common in qualitative research (Marshall and Rossman, 1999; Cresswell, 1994; Baxter and Babbie, 2004), and they are used in this thesis to collect empirical data. I chose three methods in order to be able to strengthen the analyses by triangulation, which is a strategy used to check data for consistency (Patton, 1999). Although Patton (1999) acknowledges that it is common to triangulate data using both quantitative and qualitative methods, he asserts that triangulation is likewise beneficial and relevant when using only qualitative methods. The term triangulation originates from the use of three known points to locate an unknown point for example in navigation and military practices (Berg, 2009).

The case study focuses on learning from experiences in training and field action, and the starting point was therefore the formally designed Lessons Learned process (LL process). This process was developed by the SwAF to accommodate such learning. The studied setting is a military organisation that may be assumed to have a strong hierarchical structure leaving little room for informality. This could imply that learning is easily designed within these frames of hierarchical relationships. Such an assumption makes it especially interesting to explore whether it is true, and if not, what are the implications. Furthermore, these implications could be compared specifically to other military settings.

1.4.2.1 Interviewing participants

There are three sorts of interviews; the structured, the semi-structured, and the unstructured (e.g. Wildemuth, 2009; Qu and Dumay, 2011; Sommer and Sommer, 1997). In the beginning, the interviews of the first part of the case study were
unstructured so as to not bear prejudices as to what kind of patterns of learning that could emerge. As I gained further insight into the setting, the interviews progressed into semi-structured, where specific topics were reckoned to be of interest (see paper 2 for details). The interviews in the second part of the case study were semi-structured from start to focus on the questions designed for them (see paper 3 for details).

During the first part of data collection, interviews with participants were considered to provide up-to-date information to be compared to information gained through collected documents. The people interviewed were all connected to the LL process. The idea was to interview people from various departmental instances involved in training and field action, and I therefore chose to include persons from the Headquarters, units responsible for training and the Land Warfare Centre (LWC). This strategy was based on the fact that participants in various parts of the organisation ought to represent possibly different perspectives. Nevertheless, conducting qualitative in-depth interviews limits the number of interviewed participants. This could result in perspectives or issues not being completely covered. However, I noted that for each interview fewer and fewer new issues directly related to the LL process emerged. Nevertheless, to confirm that a sufficient number of interviews had been conducted, and to interview participants from various parts of the organisation, I kept to my interview plan. This point in data collection, a state called saturation, is reached when additional data repeats and confirms previous data (Denzin and Lincoln, 1994). Thus, the number of interviews was sufficient as regards the questions asked.

During my early acquaintance with the setting, I soon realised that the LL process seemed to be a somewhat delicate subject in the organisation, and this led me to choose to take notes rather than tape-record the interviews. This choice was reinforced by the fact that there was a risk of tape-recording classified information. Several interviewees confirmed that this choice was appropriate when asked about it after the interview had been completed. They asserted that they would not have been so open if the interviews had been recorded. Once the notes had been transferred into digital format, they were given to the interviewees to provide them with an opportunity to revise the content. As it turned out, this opportunity to revise was mainly used by the interviewees to alter occasional emotional wordings that they seemed to regret, and to rewrite minor factual issues that were lacking in clarity. Therefore, these revisions did not significantly alter the character or content of the data used in the analysis. Still, choosing note-taking over tape-recording is not as precise, and therefore the used quotations are not exact, even if they do capture key wordings and expressions. Moreover, although content is properly translated from Swedish, this fact contributes to the quotations not being exact.

It was important to me to start with establishing trust in the interview situation. Therefore I tried to show my sincere and straight-forward interest in what they had to say. The aim was to gain as much information as possible in order to understand the setting and obtain answers to the research questions. The strategy used to achieve this aim was to listen actively rather than question, even if questions determined the topics the interviewee was going to talk about. Getting people to talk
is about listening to them and making them feel listened to (Townsend, 1993). It is
advisable to have the ambition of listening 80-90% of the interview time (Roulston,
deMarrais and Lewis, 2003). My listening strategy was therefore based on literature
describing how to be a skilled listener as well as on instinct. This skill of listening
together with the skill of applying and reflecting on own non-verbal behaviour,
questioning and reflecting, is of utmost importance when conducting interviews
(Gillham, 2000). Furthermore, talking too much as an interviewer may result in the
interview being excessively directed and in putting words in the interviewee’s
mouth (Gillham, 2000). However, the signals a researcher sends and receives can
obviously not be thoroughly controlled. Nevertheless, I tried to be aware of and
make use of facial expression, eye contact, gestures, intonation in voice and physical
appearance in a manner that generates trust and allows access to information.
Moreover, to establish trust, I informed the interviewed participants that their
identities would be protected in the undertaken research. This ethical consideration,
together with giving them the opportunity to revise the notes, was therefore intended
to make the participants feel comfortable with the interview situation. Taken
together, these considerations may have contributed to an open atmosphere during
the interviews, although all interviewees seemed quite comfortable and straight-
forward from the very beginning.

The interviews in the first part of the case study were conducted with
participants who had been introduced to me during my observations, whereas the
interviews in the second part included participants who were more familiar with me
and my research. This may have influenced participants interviewed in the second
part to feel more comfortable with me and with being interviewed. Therefore, they
may possibly have provided information that otherwise would not have been
exchanged.

1.4.2.2 Observing interaction

Observations are used to discover complex interactions, to grasp events and
behaviours and then record them by taking field notes (Marshall and Rossman,
1999). I chose to observe gatherings based on whether they related to learning from
experiences in training and field action. Thus, I observed meetings of assembled
home-coming forces from international field work – called experience seminars,
meetings related to the LL process (LL meetings) and finally training sessions.
Seminars and training involved a great number of people whereas the LL meetings
were considerably smaller.

The qualitative method of observing, such as direct and various kinds of
participative observations used for example in LIS studies (Wildemuth, 2009, pp.
189-210), is similar to interviews involving issues related to interaction between an
observer and the observed. Hence I also applied the strategy that guided my conduct
in interviews when I carried out observations, for example how to actively listen
while observing interaction and activities. Moreover, I attempted to observe as non-
intrusively or passively as possible by not interfering with what was happening,
especially when observing the smaller LL meetings. For example, sitting or standing
off to the side from others was an attempt to be as indiscernible as possible. I was always introduced to others by a participant of the organisation. Nevertheless, people who were observed for example during training sessions could not choose not to be observed. Therefore, it is important to protect the integrity of individuals, which I have done. Analyses contain data in a form that cannot be traced to any individual that has not been specifically asked for consent. However, as regards the influence of my presence, I occasionally asked questions to confirm and understand what was happening, and this made my role more active. These questions were mostly asked during breaks. I also took any chance of interacting in spontaneous conversations during breaks in order to probe for more insight and information. This probing is part of making observations (Berg, 2009). However, such probing as well as the mere presence of an external part ought to influence the ongoing activities, although likely not the shape but their conduct. People observed are more or less sensitive to being observed, and therefore adjust their behaviour accordingly. Although I was presented in the beginning of LL meetings and people were accustomed to my attendance, they might still have felt uncomfortable. However, these meetings openly contained critique on many matters, indicating that there were no such problems of unease. In case people were not sure that I was allowed to hear certain matters being discussed, they were assured by one of their colleagues that I had such clearance.

The seminars for home-coming forces, amounting to a whole lecture hall full of people, were too large to be influenced by my presence. On these occasions I did no probing during the actual seminars. Probing was only conducted in the in-between spaces such as lunch and breaks, and then to people who were introduced to me or to whom I presented myself. This probing was only made to understand in more detail issues discussed in the seminar, and was not in itself used for analysis.

Training sessions were observed to gain insight into activity and interaction. I was always accompanied by a guide who introduced me to people. The main part of these observations consisted of conversing with the guide while overviewing the activities of soldiers engaged in them. Training and exercises are continuously reviewed by evaluation personnel and people playing the roles of civilians are often part of these scenarios as well. Therefore these soldiers were accustomed to having people studying their activities, suggesting that they took no significant notice of me. Still, the main purpose for observing these exercises was to observe activity and interaction, not participants. Thus notes taken were in accordance with that purpose, and individual participants were not exposed. Notes were likewise taken also when observing experience seminars and LL meetings so as to capture issues relevant to the research questions.

1.4.2.3 Searching for documents

A review of documents is a way to explore the values and beliefs of participants in a setting, and to gain an understanding of the setting and the group being studied (Marshall and Rossman, 1999). Therefore, data related to the LL process were collected. The intention was to trace the LL process to its roots in order to clarify the
current situation of learning from experiences. These documents were in the form of
protocols, reports and directives related to the LL process. The time period covered
by the documents ranged from the 1990s to 2011.

The documents were retrieved from the SwAF intranet and this required
using a computer within the SwAF as well as a personnel login. I was therefore
granted access to a computer and such a login by authorised employees. I
considered the information on this intranet weakly structured and therefore not
easily accessible, and this weak structure hampered any systematic searches for
information. People searching for information in this system need to know exactly
what they are looking for (for example by using a known report number), and where
to look for it. As a consequence, I used a brute-force strategy to search for
documents. Keywords used were: LL process, experience work, experience process,
training and evaluation. In addition to this search, I was given other documents
specifically related to the LL process by personnel who were involved in the
process. This way, I was given access to for example protocols from LL meetings.

Reviewing this massive amount of material provided an insight in the LL
process and other related work. However, some classified information in specific
systems was not accessible to me. Thus, although the contents of information I
could access seemed to repeat itself, there could be classified information that would
have been relevant to the study. Nevertheless, the findings of this thesis show that
not even personnel involved in the LL process had access to much of this classified
information due to restricted system access.

1.4.2.4 Overview of the conducted research

As the research process progressed, a first insight of a failing and vague LL process
was gained. The empirical data were then searched further for themes that could
explain this failure and vagueness. Simultaneously, I searched for other issues that
could help me understand the nature of work related to learning from experiences.
In order to validate my understanding and analysis to this point, a first draft of the
case study was provided to a key person in the LWC for feedback. The draft was
thus confirmed as correctly describing the current status of the situation. In addition,
collected reports confirmed the learning situation as it had been outlined so far.
Confirming this draft also served to check whether I unintentionally and
unknowingly had included any particular classified information, or whether it,
together with other pieces of information, allowed a classified total picture to
emerge.

The thick description and analyses of the first part of empirical data were
presented in the licentiate thesis as well as partially in paper 2. In the licentiate
thesis, the data were analysed by constructing frameworks based on KM, CoPs and
CSCW/CSCL and CoPs respectively. The frameworks focused on aspects of either
formality or informality. Both frameworks included literature on the concept of
CoPs, but as this concept is specifically oriented towards understanding informal
relationships, additional literature was used to build the second framework. These
perspectives’ foci were later merged in order to explore the nature of relationships in
this thesis. Accordingly, one of the frameworks in the licentiate thesis was further adapted and presented in paper 1 (see paper 1 for details).

The adapted framework in paper 1 was then used in paper 3 to analyse how participants’ views of how and where to learn in a setting influence their interaction, which, in turn, shape relationships and learning. The study presented in paper 3 was therefore conducted in order to further explore the nature of relationships in the studied setting. This paper was accompanied by ideas specifically within CoPs and information behaviour (IB) literature.

The synthesising of informality and formality to establish the nature of relationships is elaborated in paper 2. In this paper, literature on KM and CoPs was revisited and expanded to explore aspects of informality and formality in learning from experiences in the studied setting. The data were analysed in paper 2 by focusing on the collective rather than on the individual, and on learning as a result of social interaction. This approach was based on the distinctive concepts of knowing, learning and information described earlier in this thesis.

From the empirical data collected and the theories studied, implications of supporting the nature of relationships emerged. This emergence gave cause to the writing of paper 4 to discuss these implications. The analysis included a review of core issues attributed to the concept of CoPs (see paper 4 for details).

### 1.4.3 Making choices

The choice of any kind of research approach is a matter of subjectivity (Berg, 2009). Subjective beliefs thus influence research. In addition, choices made depend on which tradition is being followed, on the researcher and on demands placed on the researcher. These demands and expectations are formed by traditions although they may also be locally influenced, for example by partners in a research project. Moreover, demands may be inherent in the research tradition that determines what kind of research is considered relevant and prestigious, or what kinds of methods are considered appropriate. This is illustrated by the debate concerned with the comparison of quantitative and qualitative methods for the purpose of claiming superiority. However, Poggenpoel et al. (2001) argue that this debate ought to come to an agreement that the research problem and not any preference of methodology should guide the conducted research.

Accordingly, how researchers conduct research depends for example on views, values and norms reflecting the past and present focus on nature or social settings (Nola and Sankey, 2007). Debating nature/nurture is significantly attributed to the book *Sociobiology: the new synthesis*, published in 1975 by Edward Wilson. In this thesis, such a dichotomy is contested, and I propose that nature and nurture ought to be synthesised to avoid a pointless dichotomy. The pointlessness of such a dichotomy is for example argued by Tuana (1983) who reasons that this dichotomy instead should be replaced by a view of the relationship between genetics and environment as dynamic, constantly changing, iterative and interactive. A refusal to understand also other phenomena by dichotomising them thus makes me approach dichotomised concepts such as informal and formal learning by synthesising them. I
therefore use informality and formality as theoretical abstractions to explore the nature of relationships. Accordingly, I consider informality and formality to be dynamically interdependent and interactive aspects that together shape the nature of relationships. Similarly, I consider nature and nurture likewise dynamically interlaced; that is, they develop together. Thus the nature of relationships in this thesis depicts patterns of social interaction, which is formed and re-formed through iterative activity where the synthesis is continuously transformed and evolving. Consequently, the word “nature” in the nature of relationships is not to be confused with the nature in the nature/nurture debate.

In accordance with the above reasoning, current and past beliefs expressed in research traditions influence the choices that are made when conducting research regarding problem, research questions, methods, theories and limitations. The pattern of past and present beliefs is part of the way people shape and reshape paths that pass as flickers or become dominating paradigms. Ideas that contradict paradigms may be easily quenched, perhaps emerging later when the time is right and a paradigm is about to change. What is easily believed to be true in one particular time may be questioned later. Thus, beliefs and truths are merely constructions reflecting conventions and reactions to conventions. In studies concerned with learning, such a reaction is seen in the changed focus from the individual to the collective described earlier in this chapter (see 1.2). My thesis is part of this development that emphasises the social and the collective. Nevertheless, the tradition I follow is also in itself learning, negotiating contemporary beliefs for understanding possible interpretations of the world. This thesis is thus positioned in a research tradition influenced by its previous and current values. My aim, however, is to be as pragmatic as possible in order to conduct research that is valuable to both the studied phenomena and to the followed tradition. Also, I hope to contribute to an increased cross-fertilisation of fields.
2 Case study Part I

This first part of the case study of the Swedish Armed Forces (SwAF), with a specific focus on the LWC, involves a licentiate thesis and two papers. The licentiate thesis provides a thick description of the studied setting and the first-round analyses. It provides the background for the re-oriented further explorations in this thesis that are presented in papers one and two. The first paper focuses on the nature of relationships in organisations, and a model is presented for understanding preconditions that influence relationships. The second paper presents the results that focus on learning in the SwAF and on how this learning is accomplished in relationships.

Next follows a brief summary of the licentiate thesis to provide a background of the SwAF, and to outline key components. Thereafter, brief summaries are provided ahead of each full paper. The purpose for these summaries is to introduce each paper and not to fully reflect its content.

2.1 Supporting Knowledge Management with Information Technology: the Significance of Formal and Informal Structures¹

The purpose of this summary of the licentiate thesis is to shortly present the Lessons Learned process (LL process), a designed process implemented in the SwAF for learning from experiences in training and field action. To explore learning in the setting, the research in the licentiate thesis focused on studying this process. The model for the LL process is described in the following section, and the next subsequent section presents a narrative on key components to highlight three main composing parts of the licentiate thesis. They are: a framework focusing on formal learning, a framework focusing on informal learning and implications for facilitating learning in the organisation. (For a thorough description of background, frameworks and implications, plus additional theoretical reasoning, results and research contributions, see the licentiate thesis.)

2.1.1 Learning from experiences in the SwAF: the LL process

Since the 1990s, work in the SwAF related to learning from experiences has been expected to be conducted in line with a framework that is based on a report from 1998 by Lindgren, Almén and Rindstål. The model for this work – called Lessons Learned (LL) process or experience work – depicts how experiences in training and field action ought to be collected, analysed, evaluated, implemented and followed up to be stored in a memory. In short, oral, written and image-based information is to be transferred in these parts of the model to disseminate lessons that can be learned from experiences, as well as to revise and update for example training.

This LL model was in use when the research data were collected. However, it was obvious that it was not successfully or even satisfactorily implemented. Attempts had been made, though only the Naval Warfare Centre (NWC) was successful in using the process described by the LL model. In the 2000s it was still obvious that little had happened since the 1990s. For example, this is evident in documentation that declares that learning from experiences should be part of the daily work routine. The licentiate thesis describes how the army’s LL process, still in use during the period of data collection, is primarily based on people filling in experience reports, which are then collected and analysed but not used or followed up. These reports, in a format used by the whole organisation, thus constitute the experiences to be transferred in the LL process.

One reason for the failure of the LL process, according to in-house documentation, is confusion as well as vague terminology and vagueness about who does what. This is demonstrated in the following quotation:

Regarding responsibility for the LL process it is unclear on the verge of anarchy in the HQ [the Headquarters] as well as in the SwAF in general (Försvarsmakten, 2006, Lessons Learned processen i Armén (No. MSS 09100:20453), pp. 2-3; original in Swedish)

There have been numerous efforts to gain clarity, and this is discernible in the next quotation from the same source:

There are enough investigations at the SwAF about how the LL process should be structured; what is lacking is a unanimous decision about implementation, an assignment with resources and division of responsibility in the Order and directives, and a finalized assignment about acquiring a technical support system. (p. 2; original in Swedish)

In the beginning of empirical data collection at the SwAF, as well as at the end of 2013, the LL process was and continued to be vague. According to the participants, hierarchical ambiguity due to responsibility issues between the leaders of the

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different units, such as the Land Component Command (LCC) in charge of the LWC, has contributed to this situation.

In the licentiate thesis, it is also described how in December 2010, renewed efforts were made to hold meetings between the LWC departments, where ideas for the content of future work and the preconditions for working with experiences were discussed. This recovery, as described, may primarily be dedicated to the efforts of engaged learning-committed participants in the LWC and to a change of leadership in the LWC. However, it remained a relatively disregarded process.

2.1.2 Key components
A framework for understanding learning in the SwAF was developed in the licentiate thesis based on reviewing literature related to KM, CoPs and CSCW/CSCL. The framework was mainly based on KM literature involving traditional concepts such as the creation, sharing, storing and application of knowledge in an environment influenced by culture, leadership, motivation, technology and structure. Based on this literature, a model – the wheel of learning and knowing – was constructed to represent a perspective that focuses on how to formally accomplish learning. This general model was then further developed into a specific model used to describe the LL process of the SwAF. This specific model included elements of training and field action as well as experiences and changes. Using this model to analyse the LL process in the SwAF enabled the description of how the LL process had been attempted specifically at the LWC, with formal routines centred on so-called experience reports.

Next, focusing on how to informally accomplish learning, a second framework was constructed based on a further review of the concept of CoPs. Based on this review, a model named the Precondition Profile Model was developed to understand preconditions that enable or inhibit an informal network such as a CoP. It was found that learning in the SwAF was to a considerable extent accomplished informally by consulting personal networks to attain required information.

Following the analyses, implications for designing IT were discussed. This discussion drew on the conclusion that it is necessary to design support for both informal and formal work. The role of IT was concluded to be two-fold: to nurture learning and knowing by providing sources for interpretation, and to encourage interpretation and interaction by facilitating collaboration. The sources for interpretation were considered systems developed for storing and disseminating information, while encouraging interpretation instead could be realised by creating systems that enable communication and collaboration. Furthermore, it was concluded that the SwAF lacked an organisation-wide system that aided a shared institutional memory. Thus, although it was established that enabling interaction was the most important key to further facilitating learning in the SwAF, it was also suggested that an organisation-wide system ought to be a basic requirement. Moreover, it was concluded that a considerable amount of information in the SwAF is being classified unnecessarily, which could inhibit learning due to limited access.
In the licentiate thesis, the need for communication and collaboration support systems was based on the fact that SwAF are characterised by substantial social, local and dispersed interaction. However, as far as learning from experiences was concerned, the interaction was found to exist informally alongside the LL process, not within it. Therefore, the conclusion was drawn that it is of fundamental importance to encourage participation in organisation-wide learning rather than local and oral. When designing IT for the SwAF it was therefore suggested that emphasis must lie on participation considering for example the fact that it is crucial to improve the status of the LL process and work related to it. It was also emphasised that it is vital to approach oral and local communication in a way that does not risk losing this crucial source of learning.

2.2 Learning in an organisation: exploring the nature of relationships

2.2.1 Summary
This paper addresses the research question asking which preconditions influence the nature of relationships in an organisation. A model – the Precondition Profile Model – is presented, illustrating preconditions for the emergence, growth and existence of informal relationships. The model was first developed in the licentiate thesis, and is further enhanced in this paper by including all relationships, thereby also recognising aspects of formality. The five preconditions of the model are:

1) Attitude – how open interaction is to new influences and to sharing within a setting and outwards.
2) Status – how legitimised interaction is and by whom.
3) Participants – how likely interacting participants are characterised, viewed in terms like personal traits, activity and engagement.
4) Authority – how power and trust influence interaction.
5) Resources – how availability and characteristics of resources influence interaction.

In this paper it is concluded that these preconditions interact and depend on each other, and that they together form a profile of an organisation showing characteristics that influence and are part of the nature of relationships. Moreover, the model portrays that participants may attribute values to various elements of relationships, for example authority. How participants value such elements also reveals their attitudes to information.

2.2.2 The full paper
Learning in an Organisation
Exploring the Nature of Relationships

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Keywords: Informal Learning, Formal Learning, Relationships, Organisational Learning.

Abstract: Learning transpires in the relationships that shape an organisation, and the nature of them influences the characteristics of this learning. To realise learning objectives it is necessary to know how features that influence relationships may be provided and manipulated. The aim of this paper is to present a model of preconditions that contributes to the nature of relationships in an organisation. The focus is to explore preconditions contributing to the informal aspect of relationships. Another aim is to show that these preconditions also influence the formal aspect of relationships. The contribution is a model for studying some crucial preconditions related to learning in an organisation.

1 INTRODUCTION

This paper proposes a model for exploring the nature of relationships in an organisation. This nature of relationships is reflected in the way people interact and participate. The model concentrates on preconditions for the emergence, growth and existence of informal relationships. This model, named the Precondition Profile Model, may also assist an organisation to understand how to create or alter features shaping the preconditions. Organisations always provide – intentionally or unintentionally – such preconditions. This fact impacts on learning that is accomplished through participating in social interaction. Based on this impact claim, an organisation aiming to facilitate beneficial learning needs to be aware of the nature of relationships in order to know how it may respond to various influences provided.

Formality and informality are two concepts often used to explore relationships as well as learning in an organisation. Relationships may be expressed as structures or networks. A common division is to refer to them as formal and informal structures. The relationships formally created are designed by the management of the organisation in order to carry out work (e.g. Burns and Stalker, 1961, Conway, 2001, Meyer and Rowan, 1977, Wang and Ahmed, 2002). The relationships informally created emerge between people co-participating in the workplace (Wang and Ahmed, 2002, Brown and Duguid, 1991, Conway, 2001). In reality, relationships often relate to and depend on each other. The informal relationships emerge within formally designed relationships, and the designed relationships cannot be designed in such detail to prohibit any kind of informal emerging characteristics. It is therefore more useful to address the idea of formal and informal as aspects of formality and informality in relationships. Still, they may be viewed as mainly formal or informal.

An organisation is often seen as a social construct where people are bound together by various relationships (e.g. Diefenbach and Sillince, 2011, Ran and Golden, 2011). This means that the nature of relationships encompasses informality through emerging relationships as well as it encompasses formality through designed relationships. As aspects of formality and informality in relationships interact with each other, the preconditions claimed to be vital for informal relationships are also important to formal relationships.

Traditionally, much research has – similar to formal and informal structures – studied learning in isolation as either formal or informal. Formal learning refers to designed learning such as for example education in schools (Marsick and Watkins, 2001). Informal learning refers to the learning carried out in social relationships (e.g. Wenger, 1998, Eraut, 2004). Nevertheless, no agreed upon
definitions of formal and informal learning are provided in literature (Malcolm et al., 2003).

Rasmussen and Nielsen (2011) emphasise that the approaches on learning as formal or informal are not mutually exclusive but should be combined. Thus they claim that the approach to learning should focus on the integrated, and not on the isolated. Rasmussen and Nielsen further argue that the point is to achieve innovative performance in a dynamic environment, and for this purpose, both formal and informal learning need to be supported. If they are both supported, the organisation can benefit from them rather than suffer from a potential tension between them (Conway, 2001). Malcolm et al. (2003) argue that formal and informal learning should not be viewed as separate forms at all, but rather that all learning involves attributes of formality and informality. This means that in designing successful support, it is crucial to consider characteristics of formality as well as informality. Designing only for formality may disrupt the informality (Brown and Duguid, 1998) that requires a different kind of approach (Gutwin et al., 2008).

Svensson et al. (2004) also emphasise the need to integrate formal and informal learning in order to support learning in an organisation. Billett (2001) argues that it is important to provide inviting opportunities for engaged participation in order to facilitate learning, and that it is vital to know the prerequisites for participation in an organisation. The intention with the model presented in this paper is to explore preconditions contributing to such learning.

To construct the model, focus was placed on actual social interaction rather than on artificial design of interaction, emphasising the informal, but acknowledging the formal. Wenger, 1998, and Lave and Wenger, 1991, see learning as inherently social and propose Communities of Practice (CoP) as an approach to view learning in organisations. The concept of CoP is based on participants creating informal relationships where they engage in social interaction to achieve joint goals that sometimes are aligned to organisational goals. Reviewing this concept was therefore deemed as a suitable starting point for creating a model that focuses on relationships as fundamental for learning.

The review focused on core ideas of CoPs, and on ideas presented in a literature review on CoPs by Murillo (2010). Articles were collected in order to establish the basic ideas of CoP and main criticisms. During analysis, main ideas from the review were formed into key phrases. These keys were then analysed by searching for and finding keywords to form patterns influencing on the emergence, growth and existence of informal relationships. These patterns were then formulated into main preconditions influencing these relationships. These preconditions were then used to create the Precondition Profile model.

The paper continues with a section describing the main preconditions concluded to be valuable for the suggested model, ending with an illustration of the model and its constituent parts. Then follow some concluding remarks.

2 CONSTRUCTING THE MODEL

In the following, the preconditions contributing to the construction of the Precondition Profile Model are described as conclusions drawn from the review. This description ends with presenting the model including an illustration.

2.1 Participants

A core element of CoP as a social learning theory is identity. As a person learns s/he (re)forms her/his own identity (Campbell et al., 2009). Campbell et al. (2009) suggest that an identity is never entirely reformed, but that it is formed as overlapping and composite experiences are made. Experiences are made through learning and vice versa and thus learning is closely connected to how people define themselves based on perceived behaviour. Behaviour is based on assumptions on what is considered to be the appropriate way to behave (Schein, 2003).

Wenger (1998) argues that learning changes who people are and this means that there is a link between learning and identity. For example, strong or weak participants influence the learning in the practice they belong to through their identities. They may be strong due to the value that other participants give them. This value forms their identity and the perceived identity in the practice. Their interaction then impacts differently on learning depending on strength/weakness. Other characteristics of participants’ identities also influence how the relationships emerge and continue, for example traits such as being open or resistant to various kinds of influences in the form of for example attempts from participants or leadership to change routines, information flows or collaboration patterns. The identity in the practice is influenced by how participants form their identities as “being” a specific competence of work, but it is also based on
personal characteristics. Lave and Wenger (1991) view identities as “long-term, living relations between persons and their place and participation in communities of practice” (p. 53).

The conclusion is that the traits of participants play a major role in how interactions in relationships are carried out; that is, the nature of relationships. Participants may be territorial, bureaucratic, pragmatic, attentive, negligent, secretive, open-minded etc. Pragmatic behaviour could result in for example informal decision-making whereas bureaucratic behaviour could result in directives regulating every detail. Further, strong participants may foster or hamper for example the degree of liveliness and openness in relationships depending on personal traits.

2.2 Authority, Status and Attitude

The concept of CoP has been criticised because it may defer from considering issues of conflict and power (Murillo, 2010). These issues could gain from more attention, although Wenger (1998) discusses marginalisation, positioning and initiatives arising from personal agendas. A CoP can on the one hand be creative, open and dedicated to cooperation, and on the other a CoP can be conservative, introvert and a venue for all kinds of positioning, abuse of power and marginalisation (Wenger et al., 2002). Wielding power by taking or withholding action influences relationships by for example causing conflict or consensus. Conflict could be a sign of strong engagement whereas consensus could be a sign of passivity or conforming to power. “Disagreement, challenges, and competition can all be forms of participation. As a form of participation, rebellion often reveals a greater commitment than does passive conformity” (Wenger, 1998, p. 77). Conflict may also be the result of unresolved issues, and consensus the result of hard work.

Within a community status and power may be linked to competence, but the farther away a community is from the centre of the organisational power, the lesser the legitimacy acknowledged to the community and its members (Yanow, 2004). Thus power and status may be high within a CoP although the CoP does not have legitimacy with leadership. Yanow (2004) discusses marginalisation of an entire CoP. Wenger (1998) however, addresses marginalisation of members within a CoP that occurs when contributions of members are ignored – which may result in a feeling of non-belonging, and when certain experience is not considered competence (Wenger, 1998). The joint engagement in relationships of a setting reflects the status of how legitimised its work is. For example, engagement may be devoted to open and elaborate activities if work is highly esteemed and delivering results is required.

There are many ways power may be wielded and expressed. Tasks may for example be delegated without being accompanied by empowerment to conduct them. An example given by Yanow (2004) shows how an organisation, despite having decided that design should be developed from local needs, continued to design without consulting the locally competent employees. Yanow further describes that employees were annoyed when leadership called upon external consultants rather than calling upon the competence of the employees. Another way to wield power is to discourage communication. Woerkum (2002) suggests that communication may be discouraged by making it difficult to interact by for example letting experts draft and present while referring heavily on official documents, and by letting the experts present in a vocabulary unfamiliar and odd to the audience.

The above examples illustrate how power may be exercised for different purposes. Power is likely to influence relationships and thus learning. People may form attitudes resisting change perceived as forced upon them. Loyalty may be strengthened locally in a practice as the participants close ranks toward exterior pressure. An excessive use of power may also be a sign of lacking trust between leadership and employees. Lacking trust may result in information staying local as it may be perceived as risky to share it. A perceived need to secure confidentiality may lead to self-censorship, which in turn may be resolved by people by sending e-mails to specific individuals, making phone calls and linking to personal homepages (Ardichvili et al., 2003). This kind of interaction to avoid control may contribute to informality in relationships.

Much attention, feedback and support from the leadership could be signs of what kind of status a setting and its relationships hold. The engagement and activity of senior managers is a crucial asset to a CoP, and managers assuming the roles as champions are needed (Wenger et al., 2002). Settings may however be highly valued by leadership but not by employees, and vice versa. Feedback and support build on trust in relationships between colleagues and between employees and leadership, and so do confidence and commitment (Eraut, 2004). Without feedback people do not know and are left to speculate (Cramton, 2001).
Usually, management is about emphasising motivation, productivity and rewards, while focus alternatively could be on supporting learning by allocating and organising work, and creating a culture promoting informal learning (Eraut, 2004). How leadership acts, or is perceived as to act, is thus essential for how informality in relationships is employed, and whether informality is aligned to organisational goals.

The conclusion is that status and authority influence relationships. For example, participants may have strong informal as well as formal positions in relationships. Through this power they may keep interaction in relationships within a local setting hidden or open to the rest of the organisation. All participants hold attitudes as responses to exercised power, status and trust. These attitudes influence relationships as well. A high degree of seclusion could relate to low status of the work being done in the specific setting as there may seem to be no reason to be open about something that there is little interest in. Conflict or cooperation between individuals may colour relationships and possibly the organisation.

2.3 Resources

It is in the informal networks and not through policy texts, that new ideas will be approved or disapproved (Woerkum, 2002). However, it may be problematic for ideas to emerge as people face problems in learning from each other, for example by not being able to access information due to lack of resources for sharing this information. Tools as well as a shared repertoire may be lacking. According to Wenger et al. (2002) there are some possibly helpful tools for members of a CoP, such as an online space for conversation and discussions, a repository to store documents, a search engine and a directory with information on members. Digital habitats are enabled by technology providing a place for interacting (Wenger et al., 2009) and these tools are some examples of such technology.

However, although resources to interact are available, they may be little used which may weaken participation and stifle relationships. According to Ardiehvilii et al. (2003), people may fear losing in trustworthiness and respect if contributing something that is not entirely correct or adequate. They argue further that people may fear being critiqued or ridiculed, and that there is also an uncertainty regarding expectations and appropriateness of contributions. One possible obstacle is that people may not know how to express and describe what they know in a form suitable for storage in a database (Verburg and Andriessen, 2011). Eraut (2004) reasons that an individual, who perceives that s/he know things that no longer are perceived as valid, may feel a loss of control over the own participation in a practice. That individual turns into a novice again at the same time as s/he is not considered by others to be a novice.

Issues of power, status and trust may also be seen as resources for relationships in the way they influence participants. Leaders that participate in informal relationships may be seen as a resource that influences positively or negatively. The informal role of a manager has considerable impact on learning at work and is expressed as the personality, interpersonal skills and learning orientation of the manager (Eraut, 2004). Another crucial resource is time allotted, which could be expressed in terms of personnel allocated. If time is scarce, a participant in one setting may prioritise other matters in line with what the organisation appreciates. Conversely, a participant may continue to act in relationships within a setting of own prioritisations despite what the organisation favours.

The conclusion is that resources influence how relationships are shaped and carried out. A setting may be enabled, and thus its relationships, by resources. It could also be disabled by inappropriate or insufficient resources.

2.4 The Precondition Profile Model

The core issues presented in the previous section resulted in the model depicted in Figure 1, the Precondition Profile Model. The model shows some main preconditions for informal relationships to emerge, grow and exist through interaction. The issues are represented in five preconditions:

1) Attitude – how open interaction is to new influences and to sharing within a setting and outwards.
2) Status – how legitimised interaction is and by whom.
3) Participants – how likely interacting participants are characterised viewed in terms like personal traits, activity and engagement.
4) Authority – how power and trust influence interaction.
5) Resources – how availability and characteristics of resources influence interaction.
Together, the preconditions in Figure 1 form a “precondition profile” that supplies an organisation with a profile depicting predominantly informality aspects in the nature of relationships. The five parts representing the preconditions in the model influence each other and therefore they need to be considered together. Then, when implications for learning in the current nature of relationships have been analysed, it may be possible to manipulate variables of the preconditions.

The preconditions of the model have been applied when studying learning in the Swedish Armed Forces (SwAF) (Dessne, 2013). Each precondition proved useful for understanding the nature of relationships in the SwAF. As each precondition may consist of various factors it was possible to see how a factor for example enabled or disabled learning in the studied setting.

3 CONCLUDING REMARKS

The Precondition Profile Model focuses on the aspect of informality in the nature of relationships. As informal relationships emerge within designed relationships, the formality aspect is applicable as well. Human relationships always contain aspects of informality, more or less obvious. Focusing on informality but acknowledging formality contributes to an approach of combination rather than separation, as suggested by Rasmussen and Nielsen (2011), Svensson et al. (2004) and Malcolm et al. (2003). Compared to for example CoPs the Precondition Profile Model also offers a way to approach all informal relationships in an organisation, not just in the form of CoPs.

The Precondition Profile Model may be used as a framework to understand preconditions for the nature of relationships in a defined setting. A setting may be defined by for example work tasks or organisational objectives. The preconditions should preferably be explored together as they influence each other making features valid through various perspectives.

Learning is, as stated in the beginning of this paper, a consequence of social interaction and interpretation and thus the nature of relationships impacts on learning. Therefore it is necessary to be aware of and understand this nature in order to be able to manipulate it for learning purposes. To facilitate preconditions could involve matters of design, thereby interfering with formality on informality. To impose formality on informality has been claimed in research as recommendable (e.g. McDermott and Archibald, 2010, Lesser and Storck, 2001, Wenger et al., 2002). Ardichvili et al. (2003) suggest however that supporting and enriching participation in practice and hence facilitating learning is what matters, rather than attempting to direct. Whatever measures are taken, they are likely to change the preconditions both in intended and unintended ways. Interfering with one precondition may impede on another in an unpredicted way. It may therefore be advisable to be careful and moderate when manipulating the preconditions.

To facilitate learning is to provide preconditions that enable participants to learn by being nourished with information gained from each other. Providing preconditions for a suitable and healthy nature of relationships is a way to nourish and encourage learning. Such a suitable and healthy nature ought to provide desired information accessed by participating in relationships. The constructed model may be a point of departure for this facilitation of learning, both for organisations and for continued research. The model depicts how participants, authority, attitudes, status, and resources are connected through for example the way participants form attitudes toward sharing information. They engage in relationships influenced by themselves and issues of status, authority and resources. Their relationships emerge informally, influenced by for example a leadership that exercises power in both formal and informal ways. The availability, characteristics and use of resources influence and contribute to informal as well as formal interaction. The need for an integrated approach to learning in an organisation is based on this kind of intertwined
features and connections. The Precondition Profile Model aims to contribute to such an approach.

REFERENCES


2.3 Formality and informality: learning in relationships in an organisation

2.3.1 Summary
This paper refers to the research question that aims to explore the nature of relationships in relation to learning. Empirical data regarding learning from experiences in training and field action are analysed. The analysis is accomplished through exploring the synthesised aspects of informality and formality. Compared to the licentiate thesis, this exploration is thus based on further developed perspectives on learning and knowing in order to emphasise that these aspects shape the nature of relationships.

The analysis of the empirical data portrays an organisation where efforts have been made since the mid-90s to establish a formal process for learning from experiences, the so-called LL process. According to the participants interviewed in the study, there is no systematic way of ensuring that experiences contribute to the advancement of regulating documents and education/training. This is consistent with the fact that the LL process is perceived to be inadequate and unsupported by leadership, especially by the Headquarters. Consequently, there is little engagement in the attempted LL process. Nevertheless, a considerable amount of learning from experience-work is conducted although mainly in informal ways. The analysis therefore shows that relationships in the studied case are characterised by and contribute to 1) local and oral learning, 2) confusion in the formal design of concepts and processes and 3) issues of power, status and trust.

2.3.2 The full paper
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Formality and Informality: Learning in Relationships in an Organisation

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ABSTRACT

An organisation and its work are formed by social structures in the form of relationships. The aim of this paper is to explore the nature of relationships and its impact on learning with a qualitative approach. A case study focusing on the Land Warfare Centre (LWC) of the Swedish Armed Forces (SwAF) was conducted. The main target of the study was learning from experiences in training and field action. The analysis shows that relationships are characterised by and contributing to 1) local and oral learning, 2) confusion in the formal design of concepts and processes and 3) issues of power, status and trust. The results of this research support and clarify the viewpoint that the nature of relationships – with various degrees of formality/informality – impacts on learning in an organisation. The relationships are formed and re-formed by their preconditions and may be altered through conscious and unconscious changes of the preconditions.

Keywords: Formal, Formality, Informal, Informality, Knowing, Knowledge, Learning, Lessons Learned, Relationships, Structures

INTRODUCTION

This paper aims to explore the nature of relationships and its impact on learning in an organisation. A case study has been conducted of the Swedish Armed Forces (SwAF) with particular focus on the Land Warfare Centre (LWC).

In general, relationships may be influenced, manipulated and left alone through for example negotiation of meaning as suggested by Wenger (1998). The way people behave is based on expectations of how to behave, which depends on assumptions based on the culture and sub-cultures in an organisation (Schein, 2003). These assumptions are examples of meanings that could be negotiated. Issues of power, status and trust also characterise relationships. Power influences for example the way people listen or are listened to, and the way they react (Galinsky, Rus, & Lammers, 2011). Trust depends on the status an individual possesses within an organisation, and status influences how relationships are formed and carried out (e.g. Lount & Pettit, 2012).

Depending on what kind of learning is emphasised – systematic and designed, or unsystematic, emerging and social – the way to accomplish learning and knowing is approached differently. Organisational learning has both been seen as a planned and carefully
calculated process, and as a complex, dynamic and social process hard to calculate (Rasmussen & Nielsen, 2011). It is claimed that a majority of what is known by individuals is exchanged in informal structures in relationships and interactions rather than in formal structures and processes (Nirmala & Vemuri, 2009). The intended and designed structures are often called formal structures (e.g. Burns & Stalker, 1961; Conway, 2001; Meyer & Rowan, 1977; Wang & Ahmed, 2002), whereas the unintended and emerging structures are called informal structures (Brown & Duguid, 1991; Conway, 2001; Wang & Ahmed, 2002). These structures dictate “how-to-do-what-together-with-whom”, for example represented in maps of decision-makers, department structures, routines and rules, work tasks and work processes, and communication channels.

Both formal and informal structures express relationships regardless of characterisation. Relationships are structures based on interaction. People organise themselves to pursue a set of goals and thereby an organisation is constructed binding people together through this pursuit and these goals. The resulting organisational structures thus consist of social relationships, of which some are intentionally designed whereas others emerge unintentionally. Learning in an organisation occurs through the learning in relationships by individual participants who are bound to each other through these relationships. In this paper, formality and informality are used as aspects for describing the nature of relationships. Preconditions shape this nature and they may be influenced and manipulated by for example the leadership of an organisation, but also by employees. This paper will provide a description of such preconditions.

The starting point for the research presented in this paper is described next by shortly exploring perspectives on learning and knowing. Then follows a presentation of the qualitative methods used and a presentation of the case. In the subsequent section the main findings are presented and the paper concludes with a discussion on main findings and their consequences.

**POINT OF DEPARTURE**

The point of departure for the study presented in this paper is:

- Knowing is a consequence of learning;
- Learning is a consequence of social interaction and interpretation;
- Information has potential to nourish learning.

In short, learning results in knowing by interpreting information and by participating in social interaction. The point of departure stating that learning is a consequence of social interaction and interpretation connects two perspectives on learning; that is, the cognitive and the social.

A clear distinction between the concepts of knowing, learning and information assists an organisation in recognising how to for example primarily facilitate interaction or primarily facilitate the presence of information. Learning is generally supposed to result in a phenomenon called knowledge. For example, Kolb (1984) and Matthew and Sternberg (2009) describe how knowledge is created and developed through a learning process based on experience. Defining what is known as knowing rather than knowledge offers a clearer distinction from information. Knowing implies an activity similar to learning, whereas information is the object to be interpreted for learning and knowing to occur. Information is anything that can be interpreted. Knowing is a grammatical form that makes the process view on the concept more pertinent. Using the word knowing also focuses on understanding learning and knowing as social processes to be supported, rather than on an objectified substance called knowledge to be disseminated.

For the purpose of explaining the point of departure for this paper, perspectives on knowing and learning will be shortly described based on some relevant literature as a brief non-exhaustive view (thorough reviews of organi-
sational learning may be found in e.g. Curado, 2006 as well as Wang and Ahmed, 2003).

**Perspectives on Learning**

Learning and knowing are processes nourished by what is perceived by bodily senses from physical settings in the world. Sometimes the signals to the senses are more frequent and more demanding, giving little time for reflection at the particular moment although reflection may occur later. Awareness of and attention paid to what is experienced is more or less conscious. Meaning is created by practising ideas and experiences, and by reflecting on these ideas and experiences (Kolb, 1984).

Focusing on how the mind is active in learning involves studying cognitive skills and taking a cognitive perspective on learning. Cognitive studies traditionally explain how people process information and focus is on how knowledge is individually constructed (Säljö, 2003). Cognition represents all concerns that make a person capable of knowing (Beesley & Cooper, 2008). Cognitive skills are the prerequisites for interpreting the world in order to make sense of it, to learn and to achieve a state of knowing. Focusing on how people are socially oriented beings puts greater emphasis on social patterns than on cognitive skills, taking a social perspective on learning. Already in the beginning of the 20th century, Lev Vygotsky emphasised how people learn socially by interacting with others (Säljö, 2003). According to Säljö (2003), Vygotsky also highlighted that learning may be very local and situated in specific social settings. This view differs extensively from many other views on learning, like the widely known learning theory by Jean Piaget that emphasises cognitive aspects of an individual when learning through the processes of assimilation and accommodation to social factors (e.g. Piaget, 1971; for an extensive discussion on similarities and dissimilarities between Vygotsky and Piaget see DeVries, 2000). Nevertheless, an important aspect in both perspectives is the element of identity. People may identify themselves in relation to how they perceive themselves, as well as in relation to how they or others view their participation in social interaction. Identity involves for example attitudes, personal characteristics and linguistic expressions that influence social interaction.

The point of departure in this paper is neither of these perspectives in isolation but rather the unity of them. From the moment we are born we are shaped by surrounding influences at the same time as we start shaping these influences by our own actions, regardless of the degree of intention behind them. Our social patterns consist of relationships between us and between us and objects that we decide – due to culture and time – to be rather meaningless or to be valued symbols. Knowing things is then a consequence of learning through interpreting information gained in participation in relationships with other people and with objects. This is supported by how Lave and Wenger view learning in practice as a social phenomenon (Lave & Wenger, 1991; Wenger, 1998).

**Perspectives on Knowing**

The study presented in this paper is thus based on the view that knowing is a more practical and suitable concept than that of knowledge. Knowing implies an on-going activity rather than a finished product. The importance of naming the concept for the scope of this paper is to establish that knowing – as well as learning – is an activity. A consequence of viewing knowing as an activity is that it is impossible to transfer or teach knowledge as such – what is transferred or taught is information. Knowing is a consequence of a learning process that is accomplished by an individual who interprets information and participates in social interaction.

To use knowing rather than knowledge is thus a matter of choosing a suitable concept for the present study rather than to participate in the since long lively debate on the concept of knowledge. Still, a brief background positions the choice of concept. Knowledge has been and is perceived as something that is possible to have (e.g. Pritchard, 2010) as some kind of objectified phenomenon. This view may be seen in for example Knowledge Management
(KM), a field which is part of research both in Information Technology (IT) and in Library and Information Science (LIS). According to Lambe (2011), KM was coined by consultants, technologists and conference organisers and situated in management literature. This origin explains a possessive view on knowledge as something to be managed and controlled. This means that knowledge is considered as an end result of the processes where an individual learns something. The activity of knowing is then changed into some sort of tangible or intangible substance called knowledge. Then, after this transformation and labelling, the activity-oriented origin of the word knowledge is often overlooked when trying to explain what knowledge is. Knowledge is treated as an existing object to be explained rather than as a phenomenological construct.

Two terms that are frequently used when describing knowledge are found in the division of knowledge into tangible and intangible, articulated as explicit and tacit knowledge by Nonaka and Takeuchi (1995). They argue that explicit knowledge is possible to objectify and transfer from one instance to another, whereas tacit knowledge is intangible and hard or impossible to capture, objectify, codify and transfer. The tacit knowledge is kept within people in mental processes whereas explicit knowledge may be formulated as some kind of object to be transferred between people. However, knowing is not about sharing an object in the form of knowledge through processes such as socialisation, externalisation, combination and internalisation as claimed by Nonaka and Takeuchi (1995); it is about learning in interactions through information where:

 [...] a knowledge-transmitting type of learning process leads to a knowledge-simulating type of behaviour; where the learners are trying to figure out the right answers, whereas a knowledge-creating learning type of learning process leads to knowledge-stimulating type of behaviour; where the learners are trying to figure out the right questions (Naeve, Yli-Luoma, Kravcik, & Lytras, 2008, p. 6).

In KM there are alternative views on knowledge; as an object to be stored and manipulated, a process of applying expertise, a state of knowing and understanding, a capability to influence action and a condition of access to information (Alavi & Leidner, 2001). The alternative where knowledge is considered a state of mind is similar to the perspective taken in this paper. Alavi and Leidner (2001) state that when KM proceeds from knowledge as a state of mind, focus is on enhancing learning and understanding through the provision of information. This relates to the definition in this paper of information as nourishment for learning. Moreover, the state of mind is expressed as “knowing and understanding”, which may be compared to defining knowledge as knowing. Buckland (1991) declares that the state of knowing something is a state of being informed. He reasons that there is a difference in what an individual actually knows and the representation of that knowing. In addition, he claims that knowledge may be used as a concept for representing what is known. However, as it is hard to keep distinctions as previously argued – once a label is attached it starts to colour the concept with its own meaning and the original value is lost – the label knowing serves to keep the distinction clear.

Knowing is thus an ongoing activity that assumes learning. This activity is nourished by interpreting information and participating in social interaction. The nourishing activities are accomplished through the relationships in an organisation. Therefore, the nature of these relationships impacts on learning. This nature, in turn, is created based on the preconditions in the organisational setting. The nature of relationships – and its impact on learning – may be influenced by providing and manipulating preconditions.

**METHOD**

A qualitative case study of the LWC/SwAF was conducted for a contextual rich understanding
of learning in an organisation. This approach was considered appropriate as case studies may be used to explore complex social contextual phenomena (Yin, 1994). The study used triangulation of a large amount of documentation, observations and in-depth interviews in order to achieve a rich case description as part of a qualitative analysis. It may be assumed that a military organisation governed by strict directives and hierarchies represents an environment where overall strong formality governs over informality. This assumption makes the selected case interesting to study with respect to these latter concepts. The focus of the case study was to explore learning from experiences in training and field action. As feedback is vital for learning (Eraut, 2004) it is especially engaging to investigate a process that specifically aims to learn from the feedback of experiences. This process relates to a formal process designed by the organisation. In the studied setting, this formal process is named the Lessons Learned process (LL process, sometimes also called the experience process or the experience work). The LL process is based on an idea of collecting, storing and disseminating experiences in the form of experience reports.

Observations of selected exercises, seminars of home-coming international forces and meetings were made from November 2009 to November 2011. Three seminars held to collect experiences from international mission forces returning from Afghanistan were attended, along with four exercises and thirteen meetings related to the LL process. The selection was based on available opportunities to attend these activities during the period of collecting data. Efforts were made to carry out as non-participatory observations as possible, where participation of the researcher is limited to allow studying activities and events in a natural context. Breaks were used for conversation to obtain further insights. Hence participation in the context of the observed event – although not in the event itself – was limited but existing. The intention of these observations was to gain insight in and understand the studied setting through the actual work being done as well as observing attitudes and behaviour. After attending a couple of seminars and exercises, the conclusion was that not much further insight was gained through these observations in contrast to the meetings related to the LL process. Activities relevant for the study seemed to repeat themselves when observing the seminars and exercises. The LL meetings however provided continuous valuable insight in the studied setting.

Documents in the organisation related to learning from experiences were collected from November 2009 to November 2011 and analysed to see what had been accomplished or not, what was being done at present and whether there were successes, challenges or problems. The time period of collected documents ranges from the introduction of the LL process in the SwAF in the 1990s to November 2011. These documents were retrieved from the SwAF intranet and had to be accessed from computers within the SwAF. For the purpose of collecting a manageable amount of documentation, searches focused on keywords such as the process of Lessons Learned (LL process), experience work, training and evaluation. One third of this surveyed documentation was printed for easy daily access, amounting to about 1200 pages. Additional documents were supplied by personnel involved in the LL process, amounting to another 1200 pages. The documents encompassed final reports, meeting protocols, reports on the progress, directives and printed e-mail correspondence. A review of documents is a way of looking into the values and beliefs of participants in a setting, and gaining an understanding of the setting and the group studied (Marshall & Rossman, 1999). The goal was to use the documents to explore the LL process. Quotations in this paper from documents and participants have been translated from Swedish.

As the study of the case proceeded through observations and collection of documents, people connected to the LL process were identified. Some were approached as people to interview or to just casually talk to. This approach made it possible not having to rely only on suggestions from people already in-
involved. The aim was to cover as many roles as possible, from generals to active trainers, and the 14 individuals chosen constituted such a variety. These individuals were interviewed during March 2010 – June 2010, and September 2010 – November 2010. The time varied between half an hour and two hours, where the majority lasted one and a half hour. In the beginning – to be open to all kinds of expressions regarding learning – the interviews were of the unstructured kind. In the iterative process of data analysis and data collection, these interviews developed into a more structured form. To protect the interviewees, their identities are kept confidential and they are referred to in the form of aliases named after stars. When data is regarded as particularly delicate with respect to a continued work situation, their identities have been further concealed by using the name Andersson and a number.

In order to establish trust and openness in the interview situation, these were not recorded. Interviews are characterised by interaction between researcher and interviewee and it is vital to establish a comfortable situation to ease conversation (Berg, 2009; Marshall & Rossman, 1999). Several interviewees confirmed that they would not have been so open if they had been recorded. To verify the content the interviewees were supplied with the notes taken from the interviews and given a chance to revise them. The guiding questions were formed to gain insight in the role of the interviewee in the organisation, in how the interviewee perceived that learning from experiences was attended generally in the organisation as well as specifically in his/her own setting and in how the interviewee valued and worked with learning from experiences.

The richness in the content received by the above methods includes numerous variables making comparison hard to accomplish, and quantification of the results is not the desired outcome. However, the empirical data from three different methods of collecting provide a way of reinforcing the results through triangulation. Triangulation is achieved by using different methods to check the consistency of the findings (Patton, 1999). It is a term originally used in for example navigation and military practices using three known points to locate an unknown point (Berg, 2009). The data from all three sources were analysed by focusing on the collective rather than on the individual, and on learning as a result of social interaction. This approach was based on the distinctive concepts of knowing, learning and information as described earlier in this paper. Aspects of formality and informality in learning from experiences in the studied setting were analysed. The empirical data could be thematised and analysed by three themes which were: local and oral learning, confusion in the formal design of concepts and processes, and issues of power, status and trust. These themes were also used to present the result. The themes were intended to find out how and why learning from experiences in training and field action did or did not work as well as the intention and need for this process to work.

**MAIN FINDINGS**

The main findings portray a setting of strong loyalties, engagement in providing the best training possible, perceived vagueness in structures, rigid rules, questioned leadership, informal decisions and low status for much of the work with learning from experiences. The nature of relationships is thus characterised by these features, and what is learned and not learned depends on this nature. Learning in the SwAF could be illustrated by one participant’s statement: “The SwAF does good things, but it is not certain that it chooses to do the right good things” (Spica). This conclusive statement is scrutinised closer in the main findings in the following.

The SwAF has made efforts to establish an LL process since the mid-90s but so far with seemingly little success. For example, a report in 2006 described that it was a task to recommend how to establish an LL process in the army (Försvarsmakten, 2006) and in 2010 it was stated in another report that systematic work with learning from experiences ought to be integrated in all operations (Försvarsmakten,
These are only two of many reports during the years that emphasise the need for structure for joint learning from experiences. Reasons that are referred to regarding failures to learn from experiences in the collected document data include reallocation of personnel, confidentiality, reluctance to admit mistakes, unclear division of responsibility, long time span between collection and feedback, perceived low benefit of reporting to Lessons Learned, lack of resources and absence of coordination between the training and procurement process on the one hand and the mission process on the other (Löfstedt & Rode, 2007).

The nature of relationships in the studied case is depicted next by presenting relationships that are characterised by and contribute to:

- Local and oral learning;
- Confusion in the formal design of concepts and processes; and
- Issues of power, status and trust.

**Local and Oral Learning**

According to the participants there is no systematic way of making certain that experiences contribute to regulating documents and education/training. Rather, experiences are learned from through participating in for example missions; in other words, a local change on individual and group level takes place in units that are reallocated in mission areas. The much appreciated experience seminars are held after each mission, but only those present will learn from them. Trainers wish to include experiences from missions in training but this is hard to accomplish as information is gained mostly by local and oral learning. This situation is exemplified by this statement of one participant:

*The present situation is that concrete information about what is going on in Afghanistan is scarce which creates opportunities for rumours. Someone might receive an e-mail from someone who was there. Every individual soldier needs to know what is going on – not all of them down there have the information they need. (Andersson1)*

Another participant declares that it is most important to learn from mistakes, but also from what worked well (Formalheur). This is hard to accomplish when there is little available information on mistakes, which is illustrated by a comment from one of the participants that a valuable source for information to trainers is the text-television available to anyone in Sweden, as it supplies updated information on the mission area.

During training and interaction, knowing is formed and reformed. Experiences are shared by collaborating, constructing and/or participating in training/exercises. Local documentation during training is created for example through recordings by the mobile combat training centre, saved on DVDs and made available to the units partaking in the training/exercises (observation 2010-04-14). Many of the participants have stated that the employees in the SwAF are practically oriented; that is, they prefer to act rather than to produce documentation. According to the participants, sources in writing are hard to find, out-dated, or absent. Trainers make efforts to supply adequate and up-to-date training by involving instructors that recently were in a mission. They also try to include their own experiences, if time allows. Informally, exchanges of experiences transpire within local groups, such as a mission force, and within the mission force’s military units. Relationships are built on what is needed for solving issues in a practical manner.

The fact that the SwAF lacks an overall shared system for managing experiences contributes to the local and oral tradition. There is a system for local administration of experience reports within the frames of the formal LL process. In order to make experience reports available, they are stored on the intranet. No database exists for managing all the various reports emerging in the empirical findings, for
example deviation reports, experience reports, weekly reports, inspections, final reports and evaluations after exercise. These reports are administered within separate processes. This situation fragments learning from experiences into seemingly different categories.

In order to find documents it is necessary to already know where to look for them, whom to ask and what a potential report number is. Moreover, information is often unavailable to trainers due to classification. These constraints contribute to information staying local and unavailable to many to learn from. A flexible, searchable system is desired by some of the participants for easy access to information on situations, stories, summaries of events – what was done, how it was done, what happened etc. including images and explanations. Some of the participants do however not want another system imposed on them as yet another work task. One participant argues that although a shared and staffed institutional memory is missing, it is more important that individuals inform the units actively and firmly implant a message; a database risks becoming unmanageable (Formalheur). Another participant states that a database with searchable content is good to have, but it is not a solution to disseminate what is known (participant in observation 2010-09-27). Yet other participants do not believe a system to be necessary at all, as it requires people to actively look for information; these participants argue that, on the contrary, an active dissemination of information is indispensable (e.g. Castor). Some of the participants reason that in the SwAF, it is hard to make people read documents. Those educating others need personal experiences as a person takes to heart what is taught through personal association and reflection (Mizar). The depicted attitudes on an information system to learn from imply that personal and oral interactions are highly valued.

Confusions in the Formal Design of Concepts and Processes

The definition and purpose of the formal process for work with learning from experiences is unclear, which creates confusion and makes it hard to carry out the work. Relationships are characterised by this confusion, and they also contribute to the confusion by taking various ways and forms. For example, participants in relationships may conclude what kind of work is expected through own interpretations of concepts and processes. There is ambiguity regarding the roles in who does what in management, evaluation and control related to the LL process (Försvarsmakten, 2008a). A protocol dated in 2008 reveals a discussion about who is ultimately responsible for implementing changes regarding missions, notwithstanding that it is stipulated that the LL process should be as locally managed as possible (Försvarsmakten, 2008b).

Contributing to the confusion is the simultaneous use of similar concepts for the formal process. The terms LL process, experience work and experience process are all used in the SwAF. Vagueness is also evident in the definition of the process. Somewhat similar definitions can be found in a number of SwAF reports. An FOI report (Swedish Defence Research Agency) from 1998 (Lindgren, Almén, & Rindstål, 1998) has served as the guideline for the LL process, providing a model for focusing on collecting, storing and disseminating experiences. This focus is reflected in a definition from the Headquarters (HQ) in 2001: “The LL process consists of structured methods to collect, cultivate and disseminate experiences in the organisation to support knowledge building.” (Försvarsmakten, 2001 Attachment 1, p. 4)

The process has been seen as a method not responsible for implementing change: “The LL process should not be responsible for the implementation and follow-up of recommended measures.” (Försvarsmakten, 2001) The variations in definition and purpose regarding the process relates to the key term “Lessons Learned” specifically. How the SwAF defines this term is ambiguous, which is stated in this quotation:

“Lessons Learned” (LL) is a wide-ranging term used in numerous contexts. Also within
the SwAF the word has been used in different contexts and with a somewhat different meaning. (Försvarsstakten, 2008a Sub-attachment 1, p. 1)

The concept Lessons Learned was still vague in autumn 2009, which was expressed by questioning the concept as such at a meeting between units and LL administrators about the need for a definition of LL and what this concept was supposed to cover. One participant even suggested that “an LL process about the LL process is necessary”. (observation 2009-11-17—2009-11-19) The ambiguity was also observed in the experience seminars where the presenters returned to expressions like “this is also a lesson learned” in order to describe an experience made or knowing gained. In a meeting in February 2010 it was asked how the process was intended to work (observation 2010-02-24). The empirical findings show that individuals are unaware of the framework regarding experiences, and they wish to know to whom or where to turn to for various kinds of information.

Issues of Power, Status and Trust

In the interviews, conversations and meetings it has been observed that there are sources for information likely to offer great value for trainers. These sources are however not available to them or they are unaware of them. This situation is perceived by some of the participants in part as a result of lack of trust from those who could ensure this access.

Learning from experiences is often perceived as something on top of the ordinary work. The formal process involves apparent cooperation with vague or no results, involving meetings considered as irrelevant to the own work. In reports from the HQ it has been concluded that the support of leadership is needed for the formal LL process to work (e.g. Åkerman, Emanuelson, & Ahlgren, 2007). One report in 2004 offers the following wording: “The principle for managing experiences should not be an organisation in the organisation but rather to facilitate managers to exercise leadership” [emphasis in original] (Försvarsstakten, 2004, p. 2). The engagement of leadership is a precondition for a systematic management of experiences within the LL process (Försvarsstakten, 2010; participant in observation 2010-09-27). The following quotation points out the necessity of engagement:

It is of crucial importance that managers view the process as an aid to produce and assure quality of decision material and not to fall into the belief that LL, which has been the case with certain methods for quality measurement, improves the organisation and the operations without involvement. (Försvarsstakten, 2004, p. 2)

It was expressed by participants that leaders need to demand that experiences are managed and presented; that is, if no demands are made other things will be prioritised (e.g. Castor; Rigel; Spica). A SwAF analysis concluded that the Supreme Commander and the Commander of Operations must show an interest in systematic management of experiences, and that the interest and understanding of all managers concerned is critical for the assignment. This analysis stated further that managers must allocate resources for the accomplishment of the assignment and for the implementation of the consequential suggestions of the assignment. Additionally, availability to personnel and communication of the assignment was mentioned. (Försvarsstakten, 2009) The report of this assignment underlines that special emphasis has been placed on the role of managers in the work of managing experiences, and that this role is central for how work is being prioritised and valued (Försvarsstakten, 2010).

Observations and participants interviewed imply that writing experience reports and managing them is considered uninteresting. The reports are validated, clustered, analysed and forwarded only locally, reaching no further in the formal LL process. Information has been piling up instead of resulting in a change, despite reoccurring reports with repetitive content (Försvarsstakten, 2008b). Focus in the learning
from experiences has been on collecting experiences and not on using them. At one meeting this was expressed as what should be focused on is the synchronising between process and training, not only within the process (participant in observation 2010-09-27). The work may often result in a piling up of the reports, when the process is not considered as adequate or clear, and also because of the lack of resources. The will and effort to educate in the best possible way is evident from the empirical data, which shows an open attitude where experiences are valued and learning from experiences is requested. Still, it is unclear how these experiences could be found and trainers seem not to relate them to the formal LL process.

Regardless of the type of report and rapporteur, the empirical findings show that there is no feedback to the rapporteur about what happens to the experience report filled in. In general, there is not even a confirmation of the report being received (alternatively, the feedback does not reach all the way). Even when basic feedback could be accomplished by simple procedures, it does not occur as illustrated by this example: A directive (classified) passed to an FS force (Swedish unit in Afghanistan) about remedying flaws exposed in an evaluation of this force’s final training was not communicated to the LWC (meetings and observations). A widespread sensing concerning experience reports and the LL process – as something outside of the ordinary work, and about the documentation itself – is that it is a superfluous obligation no one is really interested in. This is expressed by a participant as:

*The common man holds a casual view about LL and regards it as a sort of evaluation. One has to create insight in that in the end, it is about saving human lives, and that insight does not exist in the organisation today.* (Dubhe)

Another cause for the low interest could be a perceived or real small chance to influence as expressed by one participant: “We have the best employer, but too little chance of having an influence” (Andersson 2).

Participants have suggested that informal, overly fast and inadequately documented decision processes impede on tracing the information decisions are based on, and furthermore discourage insight in the process itself. One reason suggested for the preceding situation is the large pressure on decision makers to make fast decisions, partly because the force may be vulnerable in a mission setting, and partly because making fast decisions is to act in a determined manner. The preference for fast decisions is for example voiced by a participant in the following way: “*We are formed to consider that a fast decision is better than no decision*” (Dubhe). Moreover, fast decisions could also be the result of acting on direct experiences as expressed in this statement: “*We are often engaged in emotional analysis. Some general visits and is swayed by the situation down there, returns home and makes decisions after this visit*” (participant in observation 2010-12-16). Another reason suggested by participants, is that the decision makers have too much administrative work and lack enough field experience to make a well-founded decision. This reference to administration is raised concurrently with explanations otherwise apparent during the empirical study of the disinterest/unwillingness regarding documented processes, as many within the SwAF prefer to focus on practical rather than theoretical matters. One participant suggests that documentation concerns in particular equipment, whereas other issues regarding for example combat technique and threat scenarios are managed in meetings and seminars (Arcturus).

The aim of the HQ is to direct and control through documented regulations, whereas the rest of the organisation requests an active engagement from the HQ and the leadership, as previously referred to. It seems there is little mutual interest to engage and the parties are waiting for the other one to act. Positioning is present both on the formal and the informal arenas, where there appears to be a discrepancy between the HQ and the rest of the organisation according to reports, observations and interviews. Loyalty to the own unit/department
could be the cause of positioning between parties. The SwAF has according to participants a tendency to solve problems by acquiring equipment, although this does not remedy the situation. It is considered a safe and uncritical way to take action. One participant also states that “the SwAF is focused on the present, but not on what happened yesterday” (participant in observation 2010-09-27), which provides a way to escape problems. Lack of interest to engage in the work with learning from experiences could also infer to the high reallocation rate among personnel. Even if an individual becomes engaged, there will be a discontinuity and loss of what is known when the person leaves.

In the army it is perceived generally awkward to admit mistakes, as it is considered to harm the career (Löfstedt & Rode, 2007). According to some of the participants, reports telling about mistakes are often classified. The participants claim that mistakes and power relate not only to one’s career, but also to territory and prestige. The empirical findings have on several occasions involved expressions such as “Everybody thinks the same things, but nobody dares telling this upwards, as they are so fixated on their careers” (Andersson 2) and “The final reports of the FS forces never report bad things – people are only interested in their careers” (Andersson 3). The same point of view could be found in between the lines during observations of meetings and informal conversations. The general impression of the empirical findings is that flaws and shortcomings are managed differently, depending on the nature of the issue, where other concerns than equipment and technical aspects are considered delicate.

**DISCUSSION**

This study implies that efforts to make learning viable must address necessary preconditions for generating a nature of relationships that may impact on learning in a way beneficial to the organisation. The findings of the study are formulated as factors that enable and disable learning (see Table 1). Some of the factors

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<th>Table 1. Enabling and disabling factors influencing the work with learning from experiences</th>
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<td><strong>Enabling</strong></td>
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<td>Strongly engaged individuals</td>
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<td>Sporadic and informal implementations</td>
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surfacing in the SwAF case are likely to occur in other organisations as well.

Some factors can be both enabling and disabling as for example in the case of ‘strong loyalties’. It depends on how a factor influences learning in a particular setting. Loyalties may contribute to honest and open learning from mistakes in a local context. Loyalties may also block learning from mistakes if these are silenced or classified. What is positive for learning in one scenario may be negative in another, as in the example of swift undocumented decisions. The latter make things happen on the one hand but perhaps the wrong things on the other. These decision processes are part of preconditions for emerging and existing informal relationships. The informal relationships carry out these processes intertwined with, alongside with or instead of the formally designed ones.

A positive attitude to learn may be seen in the factor conveying efforts to keep an updated training by means of oral, local and informal exchange of information. At the same time there seems to be an attitude that results in hiding mistakes by classifying them. A cause for hiding may be the fear of making mistakes. The hiding and the fear contribute to keeping things local and oral. The factors also depict how engaged participants participate in relationships characterised by strong social loyalties to accomplish their work at the same time as participants are marginalised by information being classified and kept local. Simultaneously, participants are little engaged due to for example the factor stating that meetings are often considered meaningless, and to the factor declaring that there is a vagueness of the concepts related to learning from experiences. It is hard to be engaged if it is not even clear what kind of engagement is expected.

The factor ‘low status’ is revealed by the fact that not much has happened since 1998 regarding the studied learning. The low status is also reflected in the factor declaring that little engagement may be credited to leadership. Classifying documents results in resources of information being unavailable, and likewise, the lacking systematic feedback makes information as a resource scarce. The lack of systematisation, together with little attention given to working on the process formally designed, show how little resources have been addressed to this work.

The analysis of the studied setting thus presents factors featuring preconditions of attitude, participants, authority, resources and status. These preconditions profile the nature of relationships. For learning to improve in the SwAF, the preconditions need to change; especially important may be to increase status. This involves attitude change in addition to engaged participation. The importance of participation for learning has been discussed previously in this paper. This importance has been suggested for example by Wenger (1998) and by Ardichvili, Page, and Wentling (2003); that is, learning as a consequence of social interaction in participating. It is also necessary to interact with appropriate information. In the SwAF there is not enough adequate information available to for example trainers who are highly engaged and interact in trying to provide the best possible training. Despite their efforts they lack necessary and updated information. Much of the information available is obtained by participating in oral and local interaction. Learning is thus not sufficiently nourished with information.

People interacting need to know whom and what to interact with in order to access the information needed. This knowing is vague or lacking in the SwAF. In addition, valuable information is unavailable due to justified or arbitrary classification. They also need to clearly share a joint enterprise to be able to learn from each other; that is, clarity is needed regarding expectations. When people do not know what is expected of them, they may withhold from sharing what they know (Ardichvili et al., 2003), and this may decrease participation and therefore learning.

The studied case shows an organisation where the specific nature of relationships makes learning challenging and even absent. Therefore also knowing as a consequence of learning does not reach its full potential. Relationships emerge informally to carry out work that would
otherwise not be accomplished. The aspect of informality is evident in the oral and local learning characterising the whole organisation, including the LWC. The aspect of formality is substantial in the bureaucratic processes and attempts to create a formal process for the work of learning from experiences. This process is attended by participants but no one seems to believe in it. Instead relationships emerge within and alongside the formal process to cope with the various interpretations of it. This situation suggests that aspects of informality are stronger than formality, and that much learning in the SwAF resides in emerging relationships. The view that informal learning is more voluminous than formal is suggested by for example Nirmala and Vemuri (2009). Moreover, Eraut (2004) argues that the informal role of managers are probably more important than their formal, and he suggests that more attention should be paid to creating a culture promoting informal learning. This proposal implies that aspects of formality in roles of managers need to work with aspects of informality when they participate in interaction.

As formality and informality are intertwined it is a challenge to recognise and identify the attributes of them to understand a particular learning situation (Malcolm, Hodkinson, & Colley, 2003). In the case of the SwAF it is evident how these aspects are intertwined in the nature of relationships for example in the way training is carried out. The training is governed by directives along with contributions from those who participate. These contributions include aspects of both formality and informality, as relationships are carried out according to formal directives simultaneously as aspects of informality grow in them, and also in emerging relationships. Simultaneous support of formality and informality is suggested by Rasmussen and Nielsen (2011) in order to accomplish learning in organisations. Yanow (2004) argues that employees get really annoyed if their local knowing is overruled. Potential overruling of local knowing may explain the attitude of the participants in the SwAF that they perceive leadership as detached from the work with learning from experiences. However, power may reside in the local settings as well as in leadership. The issue of power in the nature of relationships may also explain the prospective positioning between employees and leadership regarding the studied work. Nevertheless, although hierarchy and chain of command exercise power formally it does not equal being listened to, which Galinsky et al. (2011) suggest is one way of expressing power.

The SwAF has faced this situation since long and it seems to be awkward for the organisation to encourage and nourish adequate learning in the studied setting. However, the SwAF may consider that they make such efforts, but with little result. The study thus supports the viewpoint that it is crucial for an organisation to know the impact that the nature of relationships has on how learning is accomplished and to what extent. It is then crucial to know what and how to approach the preconditions that shape the nature of relationships so as to contribute to learning in accordance with organisational goals. To approach this way may benefit the SwAF as well as other organisations.

Issues of power, status, trust and fuzziness in relationships may contribute to the lack of information as nourishment for learning as well as to the lack of engagement. Not only need relationships be functional and healthy for learning to occur but they also need information as nourishment. To provide a fertile ground for learning focusing on the nature of relationships is essential to any organisation that aims for organisational learning.

In the studied setting, there is much focus on the formally designed process although a substantial part of the work attributed to learning from experiences is accomplished informally. Participants in the SwAF have felt that they have a problem in learning from each other. Perhaps they do learn from each other but they set high standards and feel that they do not learn enough.
Nevertheless, there appears to be a problem of overview and access to valuable information. To conclude, formality and informality are aspects of all interactions in an organisation. Much research has addressed how people and organisations learn formally or informally as opposites. However, little attention seems to have been given to learning as being accomplished in relationships where formality and informality are aspects in social interactions rather than isolated learning approaches.

REFERENCES


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APPENDIX

Sources from the SWAF


2.4 Summary of part I

This part provides a thick description of learning in the studied setting; first by studying aspects of informality and formality separately, and then, by synthesising these aspects to explore the nature of relationships. The scientific works of this part describe a setting where the nature of relationships is explained by a strong culture of informality. Relationships built on this culture seem to succeed where the formally designed process has failed.

The next part of the study, part II, was designed to continue exploring the nature of relationships with a focus on the previously identified significant aspects of informality. Moreover, this part aims to further explore the dynamics between aspects of informality and formality in order to explain why the formally designed process at the SwAF failed.
The second part of the study consists of two papers. The first presents the findings regarding how participants’ views relate to the nature of relationships. The second is a conceptual paper discussing the implications of imposing formality on informality. As in the preceding chapter of part I, brief summaries are provided ahead of each full paper. The purpose for these summaries is to introduce each paper, not to fully reflect its content.

3.1 Learning in relationships in an organisation: participants’ views

3.1.1 Summary
This paper addresses two of the research questions – exploring the nature of relationships and how it relates to learning, and the preconditions that influence relationships. This is realised by focusing on how participants reason when they look for how and whom to approach for information. Literature in Communities of Practice and information behaviour guides the study.

Participants are major contributors to the nature of relationships through their patterns of interaction and participation. These patterns are influenced by how the participants continuously negotiate values and norms in a setting for the purpose of identifying expected behaviour and ways to access information. Thus participants’ views on how and where to find information in order to learn influence what actions they take to pursue their learning. The study presented in this paper encompasses interviews with participants within the Land Warfare Centre (LWC), a part of the SwAF. It builds on the previous study of the LWC and the SwAF in part I.

The findings in this paper reveal that the attitude and engagement of the participants in the LWC contribute to 1) local and oral learning, 2) bypassing or minimising formal processes and 3) treasuring colleagues.

3.1.2 The full paper
The paper is submitted.
Information and learning activities in organisations: participants’ views on where and how to engage

Karin Dessne
University of Borås

The purpose of this paper is to explore how people’s views, on where and how to engage in social interaction relate to how they interact. More specifically, the purpose is to examine how these views, based on negotiated social values and norms, may explain how relationships and learning within them are constructed. This paper is based on a qualitative study in the form of interviews at the Land Warfare Centre (LWC), a part of the Swedish Armed Forces (SwAF). A qualitative content analysis was carried out on the data guided by models that consider how people view and shape their interaction. The results show that interaction and learning in the studied setting are characterised by 1) local and oral learning, 2) bypassing formal processes and 3) treasuring colleagues. Furthermore, the failure of designed procedures in the studied setting may be related to these characteristics. Learning arises in relationships. People shape these relationships and thus they also shape learning. Therefore it is important to understand how people’s views relate to their actions in order to take steps to facilitate learning in organisations. Such steps involve for example the degrees, features and types of the intervening design. The conducted research provides empirical findings that show that people’s views clearly relate to how they interact and to how they construct relationships and learning within them.

Keywords: relationships, knowing, learning, knowledge, formal, informal

Introduction

This paper reports a part of a two-phase case study conducted at the Land Warfare Centre (LWC), which is a part of the Swedish Armed Forces (SwAF). The point of departure for the conducted research is that information as well as learning, is a social phenomenon. Thus, a social-constructivist viewpoint based on the works of Lev Vygotskij (cf. Talja, Tuominen, & Savolainen, 2005) is taken. In research, for example by Lave and Wenger (1991), Gherardi, Nicolini, and Odella (1998) and Johnsson and Boud (2010), it is substantially argued that learning is social, and according to Gherardi et al. (1998), this social emphasis is in line with a shift towards focusing on the social context rather than the individual mind. Context, in turn, is a widely used but vague concept (e.g. Case, 2012). It has, for example, been viewed as cultural factors that influence learning in an organisation (Baskerville & Duliprovici, 2006; Heisig, 2009), or as a construct shaped by social interaction. An example of the latter view is research on collaborative information behaviour and/or practices that emphasise how people embedded in a context interact socially (e.g.
Chatman, 1999; Hertzum, 2008; Lloyd & Somerville, 2006; Talja & Hansen, 2006; Veinot, 2009). Context as a social construct is further exemplified by the development of the concept Communities of Practice (CoPs), which was originally explored in the seminal works of Lave and Wenger (1991), Brown and Duguid (1991) and Wenger (1998). In these works, the authors used the concept of CoPs to explore learning in relation to information that is constructed and exchanged in social interactions, which, in turn, cause relationships to emerge. Furthermore, these interactions, and relationships are developed in local settings and in pursuit of a joint enterprise. These relationships were identified as emerging informally, in contrast to the formally designed structures. Nevertheless, they occur within organisations that are formally designed to accomplish organisational goals.

The concept of CoPs has consequently been used to understand the dynamics of social interaction, learning and relationships. Together with other practice theories, this concept recognises that information activities are embedded in a social setting (Cox, 2012). The concept of CoPs has been used to explore how people interact with information to learn in relationships. Such exploration can focus on specific issues that define CoPs, for example how interactions are formed by negotiation of meaning. This negotiation contributes to a shared repertoire of means for interacting in a setting, as suggested by Wenger (1998). Mental concepts, jargon, symbols and artefacts of technology are examples of such means (Wenger, 1998). Furthermore, Billett (2001) argues that people in an organisation strive to find meaning in their activities in the workplace, and this makes them engage in some activities and work values while dis-engaging from others. Also Chatman (1999), Sonnenwald (2006) and Widén-Wulff (2007) discuss how people in a setting construct meaning depending on how they understand such values and norms. Social norms are constructs based on what people believe to be the proper way to behave, values guide how people evaluate their world and attitudes represent feelings towards objects or social interaction (Stankov, 2011). Thus, how people construct attitudes as a response to values and norms shapes how they view themselves and others. This construction is part of, but also create the culture of a setting (Schein, 2003) and the worldview (Chatman, 1999). In this way, people navigate in their settings by relying on how they perceive signals and cues (Johnsson & Boud, 2010). Johnsson and Boud (2010) further argue this social context by asserting that ‘learning is discovered and generated together with others through a complex web of contextual, interactional and expectational factors’ (p. 360).

The original concept of CoPs emphasised that identity-development was an integral part of learning activities (Lave & Wenger, 1991; Wenger, 1998). How people socially develop an identity is studied by Lloyd and Somerville (2006) who explore how to become a fire-fighter. Identities are formed while negotiating meaning in interaction in a workplace. These interactions, in turn, are shaped by how people consider they ought to behave. Hence, choosing how to act, or not, in relation to the expected behaviour, illustrates how people identify themselves in relation to others. This is exemplified by Billett and Somerville (2010) who explore how individuals transform their identities through work practices, and thereby also work is transformed. Their focus is however on how individuals are transformed, and not on how relationships are shaped by these individuals’ views.
Although learning is closely interlaced with social identity, identity-development in relationships at work places seems to gain little attention in research that emphasises social learning. Indeed, according to Campbell, Verenikina and Herrington (2009), the significance of identity remains generally underdeveloped in the study of CoPs. However, Cox (2012) reasons that research on CoPs is more concerned with identity than other practice-based research. Still, research seems to be more focused on the activity of interacting rather than on the nature of the interactions. This focus on activity is realised in the efforts to design and manage activities in CoPs, for example expressed by Wenger, McDermott, and Snyder (2002), McDermott and Archibald (2010), Dubé, Bourhis, and Jacob (2005), Iaquinto, Isbon, and Faggian (2011) and Borzillo, Schmitt, and Antino (2012). According to them, support for learning in organisations ought to focus on how people interact to share what they know, and they consider it crucial to the design and management of CoP activities. Similarly, activity is in focus in research concerned with the facilitation of interaction, for example as seen in the works of Lave and Wenger (1991), Wenger (1998), Lesser and Storck (2001) and Thompson (2005). In this research, the authors emphasise how CoPs may be encouraged for example by providing spaces and opportunities for interaction. However, these authors also consider the nature of interaction important as they discuss how sensitive informal relationships are to interference. Therefore, they assert that it is necessary to support a CoP by encouraging activity in interaction that closely takes its nature into consideration.

The study presented in this paper addresses the nature of interaction rather than the activity of interacting. In the studied setting, this is explored by seeking to understand people’s views on how and where to interact and learn. As described above, views on how to interact are formed as people negotiate values and norms in a setting. In the first part of the case study, it was concluded that the SwAF’s formally designed process for learning from experiences made in training and field action had failed (Author, 2013a). Lack of commitment to the process and its low status were evident, and although some information was gathered, it was rarely used to update or follow up for example directives, rules and training. Instead, learning was accomplished by using personal, informal and local relationships. The analysis indicated that it would be fruitful to further explore whether emerging informal relationships and learning were consequences of this failure or of other factors. There were some indications of this issue in the observation and interview material. For example, it seemed that reasons for why the process had failed could relate to how participants in the setting shared views about what and whom it was important or not to engage with. Therefore, the aim of this second part of the case study is to explore how the participants’ views, from their perspectives, may explain why the informal relationships emerged to carry out the work that the SwAF’s designed process was intended for. In more general terms, the aim is to explore how participants’ views on where and how to engage in social interaction, relate to how they interact; that is, how these views, based on negotiated social values and norms, may explain how relationships and learning within them are constructed.

Next, the significance of people in social learning theories is briefly discussed to further explain the theoretical underpinning of this paper. Thereafter follows a description of the methods used. In the ensuing section, the findings are presented and followed by a discussion.
The significance of people’s views when participating in social interaction

In this research, people’s views have been identified as shaping and being shaped by iterative, interactive and dynamic negotiation of values and norms in a social context. The dynamics of values and norms are complex, and even though people negotiate them they may not even be aware of how they are part of them. Accordingly, people’s views are seen not only as individual understandings but as constructs that are part of a collective (c.f. Chatman, 2000). Chatman (2000) argues that social norms determine what people in a context consider “normal” and appropriate conduct, and such views further result in what information is valued, used, and shared or avoided, given up and ignored. Values and norms thus partly explain why people may reject potentially valuable and even vital information.

Still, views on how to behave may not concur with actual behaviour. Argyris (1991; 2002) argues that there is a discrepancy between the espoused theory and the theory-in-use. As a consequence of this discrepancy, it is difficult to identify and define attitudes. People may hold beliefs that are contrary to what would be expected, based on what they know as facts and norms. Nevertheless, attitudes may be shared by people in a local setting. This sharing may be described as being bound by a worldview, which, according to Chatman (1999), makes people construct a phenomenon called a small world. She explains that a small world is not only a metaphor, it also represents an actual setting, which is exemplified for example by her study of prisoners. She asserts that a small world upholds a ‘collective awareness about who is important and who is not; which ideas are relevant and which are trivial; whom to trust for information and whom to avoid. In its truest form, such a small world is a community of like-minded individuals who share co-ownership of social reality’ (Chatman, 1999, p. 213)

This collective awareness is therefore based on how people act on their attitudes. Accordingly, when seeking information to learn from, people connect through personal networks of trusted and valued colleagues.

Similarly, Widén-Wulff (2007), in her studies of two settings of claims handlers and biotechnology experts respectively, discusses how people value colleagues as sources of information for carrying out work. In the case of the claims handlers, this evaluation results in highly appreciated close relationships. Generally, she asserts, people consider information from colleagues as reliable, which is crucial when formal structures and channels do not suffice. However, trust is compromised when someone provides incorrect information, and it is important for people in the relationships to be aware of what can be shared with whom. Furthermore, she explores how common aims and values created and shared in a setting of claims handlers, such as respectful adherence to rules and to superiors, contribute to an atmosphere of trust and willingness to share. Moreover, perceived roles and status influence and are influenced by the nature of the claims handlers’ personal networks. In a setting of biotechnology experts, trust was more on an individual level and built on expertise. Widén-Wulff (2007) also describes how people in the two settings differ in their views on information. The claims handlers view it as something that belongs to the group whereas the biotechnology experts consider it personal; that is, as an asset to be shared with the group or chosen members of it. The settings of claims handlers and of biotechnology experts could be considered
small worlds, or even CoPs, where values and views are negotiated to know whom to trust and what information to consider or disregard.

Similar to Chatman (1999), Sonnenwald (1999) focuses on people and their worlds in the concept of information horizons. An information horizon is the space within which an individual may act, and it consists of resources such as social networks, colleagues, experts, and documents. Furthermore, Sonnenwald (1999) describes the role of social networks as fundamental to information behaviour and information horizons. She argues that these networks, by providing social interaction, are both part of and contribute to the construction of situations and contexts. Situations are defined as events occurring within a context, which, in turn, needs to be defined. The network, situation and context determine the resources available in information horizons. Thus this concept resembles a small world where social networks are likewise emphasised for access to information. Social interaction is therefore central to both concepts, although Sonnenwald (1999) does not emphasise attitudes and values the way Chatman (1999) does. Nevertheless, Sonnenwald (1999) describes the dynamics between social networks in relation to situations and contexts, and this suggests that a social reality, built on attitudes as argued by Chatman (1999), is created and re-created through mutual construction.

People’s views may thus be understood as dispositions to engage in relationships that constitute a setting for learning. Hodkinson, Biesta, and James (2008) argue that situated learning changes people’s dispositions; that is, attitudes, motivations and interests and sense of possibilities, and this means that people learn through becoming. They assert that what is learned becomes part of an identity, and therefore learning in any situation depends on who interacts in it. In learning through becoming, for example a fire-fighter, people need to access social and embodied information (Lloyd & Somerville, 2006). Lloyd and Somerville (2006) explain this access as being mediated through unplanned and incidental information influenced by shared beliefs, values and norms. This sharing, they argue, is based on the perspectives of experienced fire-fighters who convey their views to each other and to new-comers in various forms, such as story-telling.

Lloyd and Somerville (2006) also assert that training is crucial to becoming a fire-fighter, through experiencing a merging of body and mind. Training is a core activity in military settings as well, studied for example by King (2006). He argues that it is crucial for battle performance that the participating soldiers share common values and norms. He asserts that these are constructed first and foremost by taking part in training, where expected behaviour is constructed from how people appreciate and trust each other’s competence and behaviour. According to King (2006), training is thus the basis for emerging informal relationships built on trusted behaviour. Values and norms are, according to King (2006), transferred from the experienced seniors to newcomers. Similarly, O’Toloe and Talbot (2011) describe how training fosters soldiers to become embedded in a setting where they are expected to demonstrate proper behaviour and trustworthiness.

So far, this paper has described that people’s views regarding whom or what to approach to access information, as well as expectations on how to behave, are based on values and norms, of which they are more or less aware. Accordingly, these views shape both which interactions occur and how they occur, thereby constituting a factor in the forming of the nature of interactions and thus relationships. This suggests that a model that takes such views into consideration
could be used to explore their influence. A model by Sonnenwald and Iivonen (1999) includes issues related to these views. Their model is based on research presented by Ranganathan in the 1950s (Sonnenwald & Iivonen, 1999). A later version of research first presented in 1933, this research in the 1950s organised knowledge into facets of personality, matter, energy, space and time (Satija & Singh, 2013). In Sonnenwald and Iivonen’s (1999) model, personality relates to people and their social networks. Thus, they recognise that the previously argued significance of social networks influences behaviour through the provision of appropriate information and knowledge resources. The next component matter involves information, information resources and information technology used or ignored by people. This component clearly relates to the shared repertoire of CoPs. The energy component connects to actions taken by people as a result of, for example, problems and goals. The next component is space. It refers to the norms and cultural expectations that shape the context of a setting. Such norms may influence what is regarded as suitable or unsuitable topics of discussion at a workplace. This is articulated by Sonnenwald and Iivonen (1999) in the following quotation: ‘Norms such as these may influence interpersonal communication strategies that are part of larger information behaviour strategies’ (Sonnenwald & Iivonen, 1999, p. 436). Finally, time refers to the time limits imposed on studied phenomena.

The space component above relates to the participants component in a model designed by Author (2013b). She suggests a model called the Precondition Profile Model (PPM) for exploring preconditions that contribute to the emergence, growth and existence of informal relationships. The model consists of five intertwined and closely interdependent preconditions: participants, status, resources, attitude and authority. Thus the components proposed by Author (2013b) are to be understood together. The participants component refers to how people’s social identities influence relationships. Attitude refers to how open interaction is to new influences and to sharing both within and outside a setting, as well as to how people respond to power, status and trust. Status refers to how interaction is legitimised and by whom. Authority refers to how power and trust influence interaction. Resources refers to how interaction is influenced by the availability and characteristics of resources. The participants and attitude components in this model thus correspond to the personality and space components in the preceding model by Sonnenwald and Iivonen (1999) with regard to how people interact and develop social identities in accordance with perceived values and norms. Consequently, these norms, values and behaviour attributed to interaction and relationships explain people’s views. The status, authority and resources components correspond to the participants and attitude components, for example, by how people perceive and construct issues of these components.

To summarise, the PPM relates to the concept of information horizons as well as to the model by Sonnenwald and Iivonen (1999). Accordingly, the relevant part of the information horizon concept in comparison with the PPM is the perspective of the individual and the notion that an individual’s social networks contribute to situations, and vice versa. According to Huvila (2009) this perspective of a person distinguishes information horizons from other spatial metaphors. Nevertheless, both models discussed above offer a similar approach to understand social reality from the perspective of people who are embedded in the setting. The
previously discussed studies emphasise how people embedded in a setting interact and develop their identities as they learn, and they base this on negotiated values and norms. Therefore, they all provide a focus and a theoretical basis for conducting this study.

**Method**

A study of the LWC, a part of the SwAF, was conducted as a continuation on a previous part of a case study of the organisation. The prior part focused on collecting empirical data regarding a learning process called Lessons Learned. This data encompassed approximately 2,400 pages of documents related to this process, 20 observations and 14 interviews. The observations concerned trainings and exercises, seminars with home-coming international forces and meetings connected to learning from experience in the SwAF. This first part of the case study provided a thick description of learning in this setting. However, the findings showed cause for further exploration. This resulted in a follow-up study focusing on a selected sample of interviews. The method for conducting the interviews was chosen in accordance with the aim of this paper; that is, to gain insight into the views of the participants in the setting from their perspectives. Six experienced participants were recruited for the present study based on their involvement with training and development at the SwAF. Furthermore, the choice was based on previous meetings that took place during the preceding part of the case study. The six participants were interviewed in May-June, 2013. Each interview lasted approximately one hour; the shortest one lasted one hour and the longest one an hour and a half. The total interview time amounted to about eight hours. These participants were all repeatedly assured that their identities would not be revealed when the findings were presented. The interviews were semi-structured following an interview guide that gave room for follow-up questions in an attempt to explore the participants’ views. The guide aimed to identify positive and negative attitudes to various kinds of interaction and to the people they interacted with, as well as the reasoning behind these attitudes.

In an interview situation it is crucial to establish trust and openness (Wildemuth, 2009). Audio-recording may make interviewees uncomfortable and confidentiality may be compromised (Sommer & Sommer, 1997). In addition, the topics discussed in interviews may be more or less sensitive to talk about. In this study, talking about relationships with colleagues and superiors implies that the topics could be considered delicate. The participants interviewed in the earlier data gathering phase of the case study confirmed that audio-recording would have made them less open. This fact, together with the possibly sensitive character of the topics, contributed to the choice of taking notes by hand instead of audio-recording. Note-taking by hand requires that notes are written up immediately afterwards to fill out any possible gaps (Wildemuth, 2009). This procedure was used and shortly after that the interviewees were given an opportunity to revise or add to the notes, to verify and validate their content. When the interviewees revised the notes, several of them confirmed that what they had said had been captured in essence, and that they recognised themselves in the wordings. One consequence of note-taking rather than audio-recording is that quotations are often not exact. However, at the same time, note-taking is a technique that facilitates the capturing of essential expressions rather than everything. This technique was used by writing down key phrases
relevant to the topics discussed. Using this technique, quotations were firmly anchored despite not always being exact. Quotations from the interviewees presented in this paper are thus excerpts based on note-taking, and they are also translations from Swedish. To anonymise the interviewees, their identities are kept confidential and they are referred to with aliases; ‘Pettersson’ together with a number.

The empirical data were analysed by focusing on exploring what kinds of attitudes participants had about where and how to interact, how they perceived that they interacted in relationships and which relationships they favoured or disfavoured. The analysis was guided by the previously described models, and they were thus helpful in identifying emerging themes in the data. Accordingly, the qualitative analysis consisted of these themes based on participants and their attitudes, as well as personality and space. Therefore, the themes focused on:

- which interactions appeared,
- how they viewed other participants that they interact with and their interaction setting,
- what was perceived as positive and negative in interactions,
- what kind of interactions were valued most and least,
- what circumstances made the participant feel satisfied or dissatisfied at work,
- how or where they felt that they learned most, and
- how important informal ways of accomplishing things were perceived in relation to formal ways.

The participants’ views were also addressed to aggregate the findings into a coherent illustration, which is depicted in Figure 1 in this paper, and synthesising the attitudes conveyed by the participants into a representative attitude set. These attitudes were then used to demonstrate the dynamics of their views, presented in Figure 2.

Findings

Interviews

According to all the participants, interaction and learning is often afforded through local and oral meetings between colleagues at breaks and through personal communication. All participants thus claimed that they learn most from interacting with colleagues, for example through passively listening or taking part in unplanned conversations in local settings, such as training or evaluation sessions. This local and oral learning is accomplished at breaks, for example, which is described by Pettersson 4: ‘You look for opportunities to connect with people and when you have something to talk to them about you can do that face-to-face during a break since they’re there anyway’. Likewise, Pettersson 5 stated that talk about work and hobbies merge during breaks, and that this is because they find their work engaging. However, sometimes they also need this time to address various work issues. Breaks are often used to talk about work-related issues in general (Pettersson 2), as well as to specifically discuss current issues at hand (Pettersson 3). Furthermore,
they are used as a “fast track” for resolving issues (Pettersson 1). Pettersson 6 stated that whether the topic discussed concerns work or leisure depends on which colleagues are present. In addition, people often drop by to just check things out (Pettersson 6). Also, Pettersson 1 and Pettersson 2 referred to learning as local by claiming that people often lack insight into each other’s work. Likewise, Pettersson 6 argued that bureaucracy inhibits communication.

All participants felt that the informal way of getting work done is the way it is supposed to be. They concluded that work in the organisation is generally expected to be carried out informally, and that this is a tradition deeply rooted in the SwAF. This is expressed in the following quotations:

‘We are all fostered to talk and interact with each other and you don’t wait for formalities when you are out in the field and hungry for food – you fix it. People get upset when formal procedures replace common sense. Make a call and talk, don’t trust emails to be read; you only read them once a week’ (Pettersson 5)

‘There is much that is deeply rooted in the organisation, the culture is that “things have always been done this way”’ (Pettersson 4)

‘Plans and documents are written, but on a detailed level people don’t put it in writing. The formal documentation is more on a general level and then you do things the way you do them anyway’ (Pettersson 6)

‘The informal ways are the only ways to get things to work’ (Pettersson 3)

‘When you want something to happen and not take too long, you use your own contacts. In reality, it isn’t possible to do things any other way’ (Pettersson 2)

However, some of the participants seemed to prefer more order and less arbitrariness. Pettersson 3 expressed this viewpoint: ‘I would like things to be more like they were before, that rules were followed and there is some kind of direction’. Pettersson 4 stated: ‘I want the formal rules to apply because otherwise there will be arbitrariness. There is a big problem with arbitrariness in this organisation’. Some also felt that the SwAF’s identity has changed and that they therefore do not relate to the organisation the way they used to (Pettersson 3, Petterssson 5). Pettersson 4 pointed out that informal relationships in the organisation are not without conflict. This is a consequence of that two different army units along with their different sub-cultures have been re-organised into one unit; that is, the LWC (Petterssson 4).

All participants considered that it is often necessary to bypass or sidestep rules and directives, generally speaking, as they could not be strictly followed in practice. Moreover, Pettersson 1 believed that most people were unaware that they were breaking rules. Pettersson 2 expressed this attitude in: ‘People do as they want and in accordance with their own views. You see it all the time’. This attitude was further conveyed, for example, in how the participants more or less ignored a directive to use a specific administrative system as they found it more inhibitive than useful. Even open hostility towards the system is evident in citations from two participants: ‘It is a fiendish system’ (Pettersson 5) and ‘It’s the devil’s invention’ (Pettersson 3). To illustrate, one participant ironically stated that you could not even use this system to order more coffee to the workplace, a short-coming that would possibly compel them to sidestep the system (Pettersson 5). Moreover, the attitude of bypassing and sidestepping was emphasised by the same participant when he
implied that management seems more interested in making people document their work than carrying it out (Pettersson 5). Furthermore, while decisions already made by managers may be sidestepped by participants, there are other occasions where managers may seek to regain control by making ex post decisions (Pettersson 4). According to Pettersson 1, managers may not even be informed enough to make adequate decisions, and Pettersson 5 stated that sometimes managers do not want to take responsibility for actually making things work. Still, managers were generally considered by all the participants to be necessary for formal decision-making. The marginalising attitude towards management was further underscored by the generally held view that managers seemed to be afraid of making mistakes. This attributed fear was expressed by one of the participants: ‘They [managers] want to show that they have done nothing wrong’ (Pettersson 4). Another participant, Pettersson 1, asserted that one strategy to avoid making mistakes is to avoid making decisions. Notwithstanding their attitudes towards rules, directives and managers, all participants seemed to desire more direct communication with engaged managers. Some described their relationship with their immediate superiors as detached while others found this relationship relaxed.

All participants argued that they were aware of the general goal of the organisation, but also that they solved problems and work tasks in line with their own constructed guidelines rather than according to formal rules and directives. At the same time, it was clear that they needed managers to make decisions, although major decisions could appear to be symbolic with regard to the everyday minor decisions the participants themselves took to carry out their work. Still, Pettersson 5 stated that it is important to relate to and work in accordance with an overall goal, while Pettersson 1 asserted that major decisions need to be formally made. Although the participants were very different in how they worked – some preferred multi-tasking, others preferred to concentrate on fewer tasks at a time – most of them appreciated the freedom they had to carry out their work in their own way. For example, Pettersson 5, in accordance with similar statements by Pettersson 1 and Pettersson 4, declared that sometimes people in the lower executing levels do things without involving managers until they have already come to an agreement: ‘People in the lower levels talk with each other and then their superiors act on what has already been agreed upon’.

Most formal meetings were considered by all participants to be tedious, time-consuming, irrelevant and repetitive. This attitude was based on the fact that many meetings concerned matters that were not considered relevant to the participants’ work tasks, or that they felt that they had heard it all before: ‘Spending time in meetings that don’t result in anything is frustrating. Meetings should result in some kind of decisions’ (Pettersson 1). In contrast, the participants felt engaged when they considered meetings relevant to their own work. Pettersson 6 suggested that sometimes it seems as if meetings are used by managers to reinforce their official status.

The participants valued and treasured their relationships with their close colleagues the most. In addition, they seemed to value an open atmosphere where opinions could be voiced freely: ‘You are there for each other’ (Pettersson 3). All participants shared the attitude that they work for their colleagues. The colleagues were described as competent, helpful and engaged. The participants also viewed themselves as helpful to colleagues and expected colleagues to be equally helpful.
Moreover, they were of the opinion that their work was appreciated by their colleagues. This appreciation was mostly expressed informally at breaks and other informal spaces, or indirectly when seeing the changes that their work resulted in, but sometimes also as appraisal from managers. All participants appreciated being listened to, and being able to improve conditions for their colleagues. This made them feel engaged in their work. For example, Pettersson 5 said: ‘If I, at the end of the day, can say yes in answer to the question if I or any of those I train have become better soldiers today, then I am happy’. Most of the participants felt appreciated by managers, especially when appreciation was linked to work tasks that were highly esteemed in the organisation. In contrast, the participants were dissatisfied when they felt unappreciated and stressed due to a lack of time. Furthermore, as previously described, they lost interest when activities were deemed irrelevant or inefficiently carried out.

**Summary of the participants’ views**

To summarise and illustrate the participants’ views, the perspective of a participant is presented in Figure 1. Here, the large hexagon in the innermost circle represents one or all participants interviewed and serves as the starting point for how the participants view relationships and learning. One aspect of this starting point is the overall organisational goal, which appeared to be well known and well linked to the participants’ daily work, from their perspective. This goal, in the form of a cloud, is therefore located in the innermost circle and, in accordance with the empirical findings, is interpreted by the participant. Other participants in the setting, such as colleagues and managers, are represented by the smaller hexagons. The lines of the hexagons representing managers are dotted, as are the directives. The levels of the circles represent how the participants view their colleagues: they may be people they interact with on a daily basis, people they feel they work for, people in the rest of the organisation who may be more or less aware of them and the work they do, or people who have the role of managers. The managers are placed outside the circles to emphasise that they (especially top managers) are mostly perceived by the participants as necessary, sometimes distant, formal decision-makers rather than as people who actually interact in the “real” work. According to the empirical findings, managers seem to be viewed as part of bureaucratic work and part of rules and directives. These, in turn, seem to be viewed as existing and important for structure, but at the same time – contradictory – not particularly interesting, sometimes not even necessary or influential. Therefore, directives are also located outside the circles. Still, the participants consider their closest managers necessary and some also consider them important and directly influencing their work. This ambivalent attitude towards managers, rules and directives is represented in the figure by the arrow between their outer and inner positions. In short, “real” work is accomplished in interaction within and between the circular worlds.
In summary, the participants’ views are based on their perception of their immediate environment, and their attitudes towards various relationships are depicted in the italic texts in the figure. From a participant’s perspective this means: *We work together here*; that is, we and our close colleagues. We work with, for example, training and educating our colleagues, such as members of army units; that is, we work *for those people there*. Other colleagues, with whom we do not interact with on a daily basis or else train or educate, *may see our work*. We try to work in accordance with directives that *exist to be used or rejected* depending on whether we consider them necessary, helpful, efficient and sufficient. Moreover, we have managers who *are there and we may need them* to make formal decisions, but sometimes we are expected to make our own decisions or we just create our own ways of accomplishing our work tasks.

The findings show that the participants have relatively similar views on the immediate environment in which they interact. They share loyalties to the close colleagues and thus interact locally and orally with them, share the goal of providing services to all colleagues, share a sometimes lukewarm attitude towards their managers and an ambivalent attitude to regulations and directives. This ambivalent attitude makes them consider it sometimes necessary, even expected, to bypass or
reduce regulations from these sources. The participants’ attitudes, as they were expressed by them, are summarised as follows:

- Formal meetings mean something when they are used for decision-making
- A significant amount of work is performed through personal connections by phone, email and physical meetings such as during coffee and lunch breaks
- Informality is what makes everything work
- Loyalty to colleagues is natural and important
- Duty to managers is necessary
- Some rules and directions are followed while others, more or less intentionally, are not
- Loyalty to work tasks matters
- Freedom in deciding how work tasks are accomplished is valued and stimulates work
- Connectivity to colleagues is a prerequisite for accomplishing work
- Lack of time is stressful
- Lack of insight is constraining
- Bureaucracy is in the way
- Different values may cause conflicts
- Involvement creates motivation and commitment
- Being able to influence and develop is inspiring
- An open atmosphere is desirable
- Feeling insufficient or being questioned is not fun
- Learning is mostly achieved through colleagues

These attitudes may be used to illustrate the dynamics of the participants’ views, and this is illustrated in Figure 2. The attitudes may result in aspects of informality or formality in relationships being strengthened or weakened depending on what action is taken. For example, the attitude found in the studied setting, that formal meetings mean something when they are used for decision-making makes the participants less inclined to attend or engage in them. Thus, the formal procedure of holding meetings is weakened. Furthermore, this attitude, together with the attitudes informality is what makes everything work and learning is mostly achieved through colleagues, depicts how the participants tend to interact informally with colleagues. Another example is the attitude bureaucracy is in the way, which, in accordance with the previous related attitudes, makes the participants more likely to engage in informal interaction as they find it being able to influence and develop is inspiring, and that involvement creates motivation and commitment, which are two other attitudes found in the setting. The intensity of informal relationships is likely to be relative to how much room there is in formal procedures for the participants to be involved and appreciated.

Thus participants interact in accordance with the attitudes that form their views. In a simplified manner, Figure 2 depicts how the views are shaped by attitudes and that action is then taken based on these views. The nature of this action depends on the dynamic interaction between the attitudes as exemplified above. A course of action strengthens or weakens either formality or informality. The figure
also illustrates how the dynamics of informality and formality are aspects of relationships. The squares represent how these aspects of formality and informality are merged in relationships. This synthesised nature of relationships, in turn, provides the setting in which the participants’ views once more are re-formed through upheld or changed attitudes. This development is iteratively repeated.

![Diagram of dynamics of the participants’ views](image)

**Figure 2 Dynamics of the participants’ views.**

**Discussion**

In summary of the findings, three themes that describe the studied setting emerge: 1) local and oral learning, 2) bypassing formal processes and 3) treasuring colleagues. The findings show that the LWC participants share a notion that work is mostly carried out informally through connecting with others. Their views on how to accomplish work makes them act accordingly. Thus they engage informally to get the job done and to solve problems. Hence, their views followed by action strengthen the nature of informality in relationships. In contrast, formal ways are not considered to be necessary to uphold strictly, which makes the participants less inclined to engage in them. Aspects of formality in relationships are thereby weakened. In addition, the statement by one of the participants, who longed to get back to the perceived days of more direction and order, implies that perhaps aspects of informality have gained in strength.

The participants attribute values of strength, efficiency and power to their relationships. These values, together with the participants’ assessments of how to behave, create a collective set of beliefs in the setting. Through sharing these
beliefs, the participants could be seen to be part of a small world as defined by Chatman (1999). This small world is furthermore defined by how participants act according to beliefs or views. The participants at the LWC assert that they primarily learn from close colleagues, and this suggests that they know whom to approach for information or help. The study thus implies that the participants navigate in the setting through assessing norms, values and expected behaviour. This navigation is facilitated by, and contributes to, the participants’ views. This assessing of the setting, for example, understand whom to approach for information and help is in line with Johnsson and Boud’s (2010) reasoning that people learn together while making sense of signals and cues. Furthermore, this navigation is used to negotiate identities and work as suggested by Billett and Somerville (2010), which is especially crucial in training in a military setting, as described by for example King (2006) and O’Toole and Talbot (2011). This navigation thus provides the participants with the understanding that it is most efficient to engage informally to carry out their work. Accordingly, they uphold relationships through interacting informally. The consequence is that the informal nature of relationships is reinforced and continues more or less undisturbed.

Interaction at the LWC is typically oral and local. Thus, treasured and trusted close colleagues are the most valued resource in the participants’ information horizons, which compares to how Widén-Wulff (2007) described claims handlers view of their colleagues. Learning orally means that there is orally-based information, which according to Turner (2010) is a new and important research area in information science. Turner (2010) argues that the use of oral communication is flexible, not easily replaced, adaptive and influenced by context and time. The participants in the study assert that everybody in the organisation engages extensively in this informal, oral communication in relationships to access, construct and exchange information. Therefore, a considerable amount of oral information seems to be exchanged and constructed in these relationships. This may be explained by the participants’ attitude that oral interaction is the most efficient way to accomplish work tasks and get the job done. However, this does not mean that the nature of interaction in the SwAF is devoid of issues of power, status and trust. For example, accessing information in such an oral culture depends on perceived social position (Meyer, 2009). Although the findings suggest that the participants are loyal to their colleagues, work tasks and managers, they are also critical. Moreover, the lack of insight, together with deliberate disregard of rules and directions, implies that there may be conflicts that need to be resolved.

Nevertheless, when talking about their colleagues in the interviews, the participants in the study appeared relaxed and confident. When talking about formal procedures and agendas, the participants instead seemed uninterested and occasionally tended to distance themselves by joking about procedures or expressing aversion. This demonstrated appreciation of colleagues ought to contribute to actively engaging in relationships with them. In contrast, relationships characterised by formal procedures and agendas ought to result in attending to these passively. Moreover, the commitment to social interaction at work, depicted in the findings, moreover implies that the participants in the studied setting have become deeply embedded in it. Thus their preferences for oral information rather than documents may be explained by Lloyd and Somerville’s (2006) suggestion that
when the initial need for textual information has been fulfilled, the participants need to access social and embodied information.

The importance of interaction in relationships to learn has been proposed, for example, by Lave and Wenger (1991), Brown and Duguid (1991), Wenger (1998), Ardichvili, Page, and Wentling (2003), Gherardi (2000) and Billett and Somerville (2010). Nevertheless, the role of the participants has mainly emphasised interaction in relationships to facilitate (e.g. Lave & Wenger, 1991; Lesser & Storck, 2001; Wenger, 1998) or design (e.g. McDermott & Archibald, 2010; Wenger et al., 2002) relationships for learning. However, such focus on activity does not extensively explore the nature of activity and what constructs or influences it. In this paper, it is therefore suggested that the nature of relationships may be explained by which relationships are considered to be valuable for work, information and learning from the participants’ viewpoints. If they view informality as the best way to accomplish things, informality is what they will engage in. Thus aspects of informality, such as oral communication and local relationships, or working around rules and directives, depict the nature of relationships and learning within them. As participants engage in informal relationships, these are likely to be strengthened and successful in getting things done. Success, in turn, reinforces existing attitudes and views, which seems to be the case in this study. However, success may also be a matter of individual or collective beliefs. Thus, the views forming and re-forming the local and tightly-knit nature of relationships in the studied case may turn out to be limiting and biased through heavy reliance on traditions and norms. Such a situation is important to consider when supporting learning in an organisation where informality holds a strong position.

Consequently, this study confirms the findings of the previous part of the case study, which implied that informal learning was essential for learning. Moreover, this study proposes suggestions for explaining the emergence of the informal relationships and learning within them. The failure of the formally designed process for learning from experiences described in the previous part may be explained by the fact that the designed work already existed in place informally as a result of acting according to prevalent views. It may also be explained by the participants’ greater reliance on informal ways. Therefore, they turned the designed procedures of this formal process into corresponding informal ones. Hence, in accordance with the aim of this part of the study, it has been shown that the participants and their views are essential for understanding the features and construction of the nature of interactions and thus of relationships and learning within them. Furthermore, it has been shown that the followed informal tradition can explain the failure of the studied formal process.

To conclude, although the nature of relationships varies, an awareness of the current setting is crucial to successfully support learning. As any intervention will be designed, with the result of formality being imposed on informality, any support will need a design that is appropriate in relation to the aim, as well as to existing values and views. Therefore, it is necessary to understand not only how relationships are carried out in a setting, but also the nature of them. Intervening with design is to intervene with values, norms and expectations that shape the views of participants. In addition, these views are part of the everyday negotiation of identities of belonging to a setting; that is, in becoming and being for example a
soldier in the SwAF. Facilitating learning in organisations thus faces challenges attributed to deeply embedded values that create identities.

References

Author, 2013a
Author, 2013b


3.2 Imitating CoPs: imposing formality on informality

3.2.1 Summary

This conceptual paper addresses the research question that is focused on exploring implications of intervening with the nature of relationships. Any kind of support or management of learning imposes formality. Such intervention is discussed by arguing whether CoPs can be designed and managed. Two core elements of CoPs as emergent phenomena are discussed: interaction and identity.

It is also discussed whether the idea of designing CoPs challenges their original definition. An emergent CoP is a consequence of participants engaging in a joint enterprise, whereas a designed CoP would be based on a constructed counterpart. Supporting, cultivating or managing CoPs could be seen as constituting such a designed construct. Design could for example be expressed through providing spaces or means for interaction. Providing social preconditions to form a collaborative culture seems less interfering. However, the main focus for designing and managing CoPs appears to be connecting people, rather than the nature of the connections.

Related to this focus on connections is the issue of identity. Identity is essential for interaction in the emergent CoPs, where continuous everyday encounters may be vital for negotiating identities. The motivation to interact may also come from the desire to belong and identify, and the other way around – that belonging is an outcome of participation. When CoPs as well as other collaborative practices and relationships are designed, this idea of becoming and belonging risks being overlooked or denied.

3.2.2 The full paper

The paper is forthcoming in the *Journal of the Association for Information Science and Technology*. 
Imitating CoPs: Imposing Formality on Informality

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The aim of this paper is to explore the claim that Communities of Practice (CoPs) can be designed and managed. The concept of CoPs was originally developed as a social learning theory, and CoPs were defined by their informal emergent nature. This informal nature has been recognised to be of value to organisations, resulting in a desire to design CoPs. In this paper, the nature of CoPs is addressed by focusing on aspects of formality and informality in relationships and learning. CoPs are therefore described as emergent and designed practices. Furthermore, it is questioned whether a designed CoP may realise the essential characteristics attributed to an emergent CoP. It is argued that it is crucial to recognise the informal nature of CoPs in order to either encourage them as informal phenomena, or use the concept of CoPs as inspiration for designing imitations of them. However, when attempting to design them, the original meaning of a CoP is lost, even though, in some cases, the consequences of such a design may be beneficial to organisations. Nevertheless, when not taking the nature of a CoP into account, a designed construct may have a negative impact on learning and knowing.

Introduction

The nature of relationships in an organisation may be described through aspects of formality and informality. These aspects are intertwined as informal relationships emerge within the framework of formal relationships, and formal relationships are impossible to design and control in such detail that informality will not emerge within them. For example, a formally designed meeting includes coffee breaks where people often merge formal and informal content in their conversations. During these breaks, people may talk about unrelated content such as news they have heard, personal interests or the weather. They may also exchange or argue opinions on issues recently discussed in the meeting. Opinions regarding the current meeting could be voiced, for example through claiming that some matters were given too much or little focus, or that some attendee had a good or bad point. Such expressed opinions may then influence how the meeting proceeds after the break.

Formal relationships will not work without informal ones, and Orr (2006) argues that strictly following a designed formality could even result in a total break-down of work. Although it seems unmanageable to treat aspects of formality and informality as purely one or the other in real-life settings, they may be useful as conceptual, abstract constructions for understanding the nature of relationships and their role in social learning. As these aspects are intertwined, the challenge, when attempting to understand a particular learning situation, is to recognise and identify attributes of formality and informality (Malcolm, Hodkinson, & Colley, 2003).

Relationships may also be referred to as structures. Intended and designed structures are often called formal (e.g. Burns & Stalker, 1961; Conway, 2001; Meyer & Rowan, 1977; Wang & Ahmed, 2002), whereas unintended and emerging structures are called informal (Brown & Duguid, 1991; Conway, 2001; Wang & Ahmed, 2002). Both types of structures are social by nature as people are involved in their design as well as in their emergence. When people learn in organisational settings, they learn within social relationships. The idea of learning as a social phenomenon was explored by Lev Vygotsky in the beginning of the 20th century. In the late
1980s, after a period of heavy focus on cognitive theories, research on learning turned to situated and relational theories (Handley, Sturdy, Fincham, & Clark, 2006), and Vygotsky gained renewed influence. His work has inspired research in the area of social learning in the last few decades (Säljö, 2003). Theories about learning are of interest to researchers in various fields and this interest has given rise to an immense amount of multi-disciplinary literature. One such theory of social learning is Communities of Practice (CoP), presented by Lave and Wenger (1991) and further developed by Wenger (1998b). The CoP concept seems to be a commonly used model for understanding informal relationships in an organisation and has been thoroughly used, analysed and criticised. This paper will concentrate on some core ideas of CoPs for the purpose of exploring their nature and use.

The division of learning into formal and informal parts has been debated for a long time, and according to Malcolm et al. (2003) and Marsick (2009), among others, there is still no agreement on definitions. Nevertheless, learning informally in relationships has been estimated to be widespread (Nirmala & Vemuri, 2009), which makes it valued by people and organisations. In order to harness this value in an organisational setting, a considerable amount of research has proposed an approach of managerially designing informal structures in the form of CoPs. Even Wenger, who argued in 1998 that CoPs were phenomena of uncontrolled emergence, has in later works (Wenger, McDermott, & Snyder, 2002) addressed the possibility of benefiting from the creation of CoPs by cultivating them to be productive and aligning them with organisational goals. In the same manner, Agrawal and Joshi’s (2011) literature review on CoPs found that “[...]extant literature provides evidence which demonstrates that CoPs can be intentionally deployed which is contrary to the common view that CoPs need to emerge naturally” (p. 9). They claim that a considerable amount of research treats CoPs as entities which can be designed and managed, and that this in itself is enough evidence that it is possible to design and manage CoPs. Nevertheless, the question remains of whether it is possible to formally design a phenomenon that by definition is emergent and informal. This paper attempts to probe whether a designed CoP still can embody the strengths and the characteristics of a CoP as originally defined.

Next follows a brief introduction to the concept of CoP as it was originally presented and also to how the concept has been subsequently treated. Thereafter follows an evaluation of the idea of designed CoPs. The paper ends with some final remarks on how CoPs may be approached and the implications of the various approaches.

The emerging CoP

The concept of a CoP was originally defined as an emerging informal network or structure based on engaged participation by members in a joint enterprise. The concept was a reaction to a previously cognitive focus on learning, and the view that it is possible to separate knowledge from the person ‘possessing’ it. Instead, the focus was placed on people as part of a social setting – as persons-in-the-world (Lave & Wenger, 1991). In this early work by Lave and Wenger, the intention of the concept was to understand and analyse learning as a social construct, rather than use the concept as an instrument to enable learning. Later, Wenger elaborates on the concept as a social learning theory (Wenger, 1998b), and a CoP’s nature is described as follows:

Membership in a community of practice is therefore a matter of mutual engagement. That is what defines the community. A community is not just an aggregate of people defined by some characteristic. The term is not a synonym for group, team, or network. (Wenger, 1998b, pp. 73-74)

Wenger (1998b) also defines a CoP as organically evolving in “[...] ways that tend to escape formal descriptions and control” (p. 118). CoPs are also self-initiating and based on voluntary membership (Hislop, 2013). CoPs thus emerge through the participation of people in charge of their more or less conscious choices. According to Wenger (1998b), a CoP emerges in a particular setting through possibilities to engage and become any kind of member, from full to peripheral. Interaction in informal learning models is based on this power and ability to choose both which tools to use and whom to interact with (Lucas & Moreira, 2009). Becoming an able member in a CoP is to learn and grow into its context. A competent member is good at reading the local context and at acting in ways that are valued within that context (Contu & Wilmott, 2003). Such a context may be found in the shared repertoire and joint enterprise.
People learn through connecting and making sense of patterns in order to interpret and understand (Lucas & Moreira, 2009), and this sense-making fosters the emergence of the shared repertoire. People also learn through experiences in their everyday practices whether or not they are aware of it (Gherardi, 2000). Thus, even those who may not be aware of what they know may influence a practice through the way they interact. This unawareness may therefore be part of participating in a CoP as an everyday practice. People bring beliefs, values, histories and prior socialisation into their learning (Marsick, 2009), and this contributes to how participation and learning in CoPs are accomplished through the emerging shared repertoire and joint enterprise.

Participation is central to the development of both identity and practice (Handley et al., 2006), and becoming a member is to assume an identity. People learn and shape their identities through interpreting and engaging with information (Lloyd & Somerville, 2006) that is created and shared through interacting in relationships within a CoP. Participants define and are defined by these relationships as they learn, and through this learning they develop their identity (Lave & Wenger, 1991; Wenger, 2010). As identities develop and are established (Wenger, 1998b), the perception of these identities may influence potential engagement in a CoP. Participants may be peripheral newcomers or full members, and they may also assume roles or partial roles of leadership (Wenger, 1998a). How people perceive themselves and others is influenced by norms and expectations. It is not only a matter of defining one’s own self, but also a matter of others recognising this self (Brown & Duguid, 2000, 2001) – for example being a soldier, a fire-fighter, a technician or a Greenpeace activist.

The emergent informal nature of CoPs with various kinds of chosen membership makes them hard to identify and distinguish from other informal groups that share similar characteristics. A CoP exists when there is enough substance for intensity in the comprising parts (Wenger, 1998b). It seems that the keyword enough has not been sufficiently elaborated on to facilitate the identification of CoPs in real-life settings. Adding to the problem of identification, the members of a CoP may even be unaware of their memberships (Roberts, 2006).

Despite this difficulty of identification, CoPs have been investigated (e.g. Hara & Schwen, 2006; Iaquinto, Isbon, & Faggian, 2011; Probst & Borzillo, 2008; Schenkel & Teigland, 2008). Hara and Schwen (2006) suggest that there is little agreement on the definition of CoP and base their classification on selected variables that have been recognised in previous research. However, exactly how the classification process was conducted remains unclear, only that it was achieved through observations and interviews. Iaquinto et al. (2011) claim to have identified key members in CoPs within an organisation through a workshop; again without elaborating how this identification was achieved. Probst and Borzillo (2008) assert to have approached 57 leaders of CoPs in several organisations, but do not further specify how these leaders were identified. However, Schenkel and Teigland (2008) do explain how they approached the difficulty of identifying a CoP. They base their classification strategy on the essence of CoPs which they referred to as mutual engagement and collaboration. They describe how they chose a setting where unexpected everyday work situations, not covered by formal procedures, encouraged the members of four departments to continually collaborate through informal face-to-face interactions.

To conclude, an emergent CoP is an elusive phenomenon that involves building social identities based on participation, and it is a phenomenon with a tendency to avoid scrutiny.

The designed CoP

A CoP, as originally defined by Wenger (1998b), evolves in ways that tend to escape formal description and control, as discussed in the previous section. Since then, CoPs have sometimes been claimed to be possible to design and/or manage (e.g. Borzillo, Schmitt, & Antino, 2012; Dubé, Bourhis, & Jacob, 2005; Iaquinto et al., 2011; Lesser & Storeck, 2001; McDermott & Archibald, 2010; Scarso & Bolisani, 2008; Wenger et al., 2002). This claim is evident in the literature reviews conducted by Agrawal and Joshi (2011) and Murillo (2011). Some researchers have even used the term “formal CoPs” and “formalised CoPs” (e.g. Dubé et al., 2005; Iaquinto et al., 2011). Furthermore, it has been suggested that CoPs should be cultivated, managed, and formalised, and that they need explicit and effective management (Scarso & Bolisani, 2008).

According to Cox (2005), CoPs are not only treated as a managerial tool by Wenger et
relationships. The attempt to benefit from CoPs learning occurs through activity in social relationships. Gherardi, Nicolini, and Odella (1998) argue the necessity of rejecting a consensus view on CoPs, and instead addressing them as practices where people feel they are part of a network, (2) addressing them as practices where learning occurs through activity in social relationships. The attempt to benefit from CoPs seems to be based on the exceedingly positive assumption, as exemplified by Lesser and Storck’s (2001) assertion that CoPs create organisational value by contributing to behavioural change that benefits organisational performance. Similar attempts to benefit from CoPs are also evident in later works by Wenger (e.g. Wenger et al., 2002) where the purpose is to provide managers with guidance on how to foster CoPs. Even Brown and Duguid (1991) argue for the organisational value of CoPs as places of innovative and adaptive work. Brown and Duguid (1991) assert that these places demonstrate the actual work carried out, which may differ from assumptions of how work ought to be accomplished. Moreover, they argue the importance of CoPs in organisations for cross-fertilisation and competitive advantage (Brown & Duguid, 1998).

When attempting to design a CoP, focus usually lies on membership, tools for interaction and leaders. Borzillo et al. (2012) claim that community leaders should play an intermediary role between organisational sponsors and members of the CoP. This role implies using community leaders to transfer and communicate organisational goals to align the CoP with the organisation and define the CoP’s agenda. McDermott and Archibald (2010) suggest that members need to be fostered and engaged by the community leaders and that the organisation should train leaders in these skills. They also argue that CoPs should be strongly connected to the formal top management of an organisation, and that CoPs should be assigned organisational goals in order to be productive. McDermott and Archibald (2010) thus appear to view CoPs as neither self-sustaining nor self-organising, but rather in need of structure and control. Scarso and Bolisani (2008) also suggest that CoPs are not self-sustaining. Further, they assert that there are four dimensions of concern when designing and managing CoPs: the organisational, the cognitive, the economic and the technological. They attempt to describe the characteristics of a CoP through these dimensions while focusing on relationships, knowledge practice, performance and tools. One element for growth is economic performance. Another is the various roles of participants such as knowledge contributors or users, active or less active members, and leaders. Although they describe the characteristics of CoPs as sensitive to interference, their basic claim maintains that CoPs should be managed in order to be successful.

Lesser and Storck (2001) propose three ways of intervention to form CoPs. They assume that CoPs may be formed by manipulating pre-conditions of social capital. They describe social capital with dimensions of (1) connections where people feel they are part of a network, (2) relationships that contribute to trust and mutual obligation, and (3) a shared understanding of a context. The first way management can intervene is thus to provide opportunities for individuals to make new connections for example by providing events, training and other activities that are based on interaction, as well as by providing technologies for collaboration and
locating expertise. The second way is to provide time and space for building relationships by focusing on work activities. The third way to intervene is by finding strategies for communicating the norms, culture and language of the community and the organisation, as well as means of influencing the CoP with organisational values. Lesser and Storck’s (2001) approach thus gives the building of identities a significant role when supporting a CoP.

Wenger et al. (2002) seem to take a similar approach when they point out that a CoP is not a consequence of a design, but an answer to one. Accordingly, they contend that it is possible to design organic elements:

The organic nature of communities of practice challenges us to design these elements [knowledge, events, roles, activities] with a light hand, with an appreciation that the idea is to create liveliness, not manufacture a predetermined outcome. (Wenger et al., 2002, p. 64)

The view that CoPs are possible to design and manage may have its basis in the shift from organisational learning to knowledge management. Gherardi (2009) asserts that knowledge management (KM) gained in popularity among scholars through the desire to manage knowledge as a transferable object, to the detriment of the previous interest in organisational learning. This background makes KM and learning theories trajectories of different perspectives and origins, albeit still connected. In KM, CoPs have been treated as an asset to be managed, designed and harvested for knowledge, in contrast to organisational studies where CoPs are treated as emergent, uncontrollable structures (Murillo, 2011). KM as a field enjoys a strong position in management literature (Lambe, 2011), and this makes the desire to manage the knowledge that is perceived to exist in CoPs consistent with a managerial view. Perceiving CoPs as an asset represents a still existent view of knowledge as an object, which, for example, is evident in Scarso and Bolisani’s (2008) discussion when they analyse the cognitive dimension of CoPs from a perspective of transferring and sharing knowledge. This object view, in contrast to a process view, focuses on different aspects of either the created knowledge or the activities that result in knowledge (McInerney & Koenig, 2011). Knowledge sharing is considered appearing in CoPs (Hislop, 2013; Wenger, 2004), and therefore this sharing is the objective to be harvested, managed and controlled. Knowledge as knowing is rather an ongoing activity performed by persons-in-the-social-world. The name of the field itself, Knowledge Management, may contribute to the idea that a CoP could and should be designed. If, instead, KM were to be called for example Knowing Support, such a name would imply that CoPs are not to be managed as objects for transferring knowledge, but instead facilitated and encouraged as phenomena of activities that create knowing. Using knowing rather than knowledge is not only pure semantics, it also indicates a more or less deliberately intended focus.

To conclude, a designed CoP is a normative construct based on the desire to connect people and promote social learning.

The implications of design

When evaluating the designed CoP, this paper focuses on the two core elements interaction and identity that are evident in the emergence of a CoP. Likewise, any designed CoP will need to include these elements.

Interaction

Any attempt to design CoPs challenges the fundamental definition of CoPs as emergent phenomena that grow out of interactions. A designed CoP does not emerge through participants’ engagement while sharing a joint enterprise. Rather, both the participation and the joint enterprise are constructed, with participants assigned (at least initially) roles within which they are to participate. It seems obvious that this designed CoP deviates from the characteristics of the emergent CoP. Therefore, there is reason to doubt whether this design will involve informal relationships at all in the same manner that an emergent CoP does. On the contrary, it looks more like an ordinary working team or working group. Nonetheless, Wenger et al. (2002) argue that CoPs, even when cultivated, differ from such teams since they are developed for people sharing a mutual interest or area of expertise, rather than for shared or similar work tasks. They further contend that there is an additional difference, in that these CoPs are more informal and self-managed even though they are highly institutionalised. Then again, including the characteristics of informal relationships in a design does not mean that the outcome is informal. However, it is possible that un-designed aspects of informality will emerge as formality is inher-
ently linked to informality. Nevertheless, if the definition holds that formality is inherent in designed constructs and informality in emergent ones, then a designed CoP is by definition not a CoP. The ideas that CoPs can be supported, cultivated or managed express various degrees and forms of design. This is exemplified by providing meeting spaces and repository assets to digital habitats for interaction as discussed by Wenger et al. (2002), Wenger (2004) and Wenger, White, and Smith (2009). These kinds of supportive means involve considerable interventional design for how interaction may be accomplished, although Wenger et al. (2002) argue that cultivating a CoP ought not to interfere with the CoP’s inherent dynamics. Wenger (2010) claims that it is fundamental for CoPs to distinguish practice from some kind of prescription. He means that using CoPs as a technique puts their nature of self-governance, voluntary participation, personal meaning, identity, boundary-crossing and peer-to-peer connections at risk. Simultaneously, Snyder and Wenger (2010) argue that CoPs could be cultivated through an evolutionary design process by creating structures that provide support for members through sponsorships and designing means of connecting with each other. The goal, according to Snyder and Wenger (2010), is to design a system of learning that combines formal and informal structures.

Although the above authors argue that cultivation only entails minor interference, the suggested forms implies more substantial designing than light supportive nurturing. Facilitating the emergence of an informal network, such as a CoP, by providing social preconditions (Lesser & Storck, 2001; Thompson, 2005) and by promoting a collaborative culture (Cross, Nohria, & Parker, 2002) are methods that attempt to maintain the informal nature of CoPs intact through indirect, supportive means. Less designed support may therefore focus on preconditions with the intention of allowing and encouraging CoPs to emerge, exist and grow in an informal manner. The intention is reflected in the level of interference. For example, tools and spaces may leave room for creativeness and fantasy, or impose a finished layout that leaves no such room. Thus, the level of interference varies with different kinds of support. Even investigating relationships in order to understand and support them may result in formalisation as described by Solomon, Boud, and Rooney (2006). They found that uncovering informal learning in an organisation made it necessary to codify or formalise what had been uncovered in order to study it (Solomon et al., 2006).

Formalising the processes of a CoP results in a loss of richness and can possibly distort information, according to Koeglreiter, Smith, and Torlina (2006). They argue that these processes are often messy, unstructured and iterative, characterised by tacitness rather than explicitness. Several claims can be found in research that formalising the informal may destroy it, and therefore treading lightly is recommended (e.g. Wenger et al., 2002). Nevertheless, there does not seem to be much research describing exactly what the destruction of informality of CoPs looks like. One example, however, is presented by Thompson (2005), who describes how interfering with an existing practice of strong informal nature resulted in a decline of activity and perceived loss of identity among the members. He had studied a setting where a CoP was acknowledged and appreciated by the organisation, and the organisation started to expand it. New employees were provided with a considerable amount of documentation so they could rapidly take a position rather than being allowed to take the time to become members of the practice. Management also urged the CoP to align with the rest of the organisation instead of upholding its own set of attitudes and behaviour. Moreover, the management changed routines, creating incentives for individual rather than group performance. One of the most damaging acts against this CoP appeared to be the opening of their physical space, their office, for other parts of the organisation. As a result, for example, decoration of the walls and music were not allowed anymore, which removed the symbolic expressions that had originally contributed to the CoP’s group identity. According to Thompson (2005), people started to withdraw from participating in the CoP, and its dynamic interaction was replaced by formal routines. Hence, Thompson (2005) argues for promoting the emergence of CoPs instead of trying to control them. He reasons that the CoP went from being itself into being a representation of its former self. Another example of this kind of transformation can be found in a study by Boud, Rooney, and Solomon (2009) where the formalisation of everyday talk resulted in it being transformed into compulsory talk, which made the workers feel it had changed into something pointless (Boud et al., 2009). Thus, something
that is informal and inspiring may turn into “just another meeting” (Rooney & Boud, 2006).

The above examples support the claim by Gutwin et al. (2008) that everyday encounters with other people at work are the foundation for informal collaboration. Such encounters also embody the localness of face-to-face meetings that are important for the emergent nature of CoPs. When attempting to design or support CoPs, it is therefore essential to pay attention to the consequences of intervening with everyday activities, changing them or replacing parts of them. However, this aspect seems to be missing in the literature that maintains that CoPs can and perhaps even should be designed and managed, and where they seem to focus on connecting people rather than on the nature of these connections.

Designing membership by building on already existing social relationships (Iaquinto et al., 2011) may explain how a well-designed and well-composed grouping is created – even if it is not a CoP. Such considerations could explain successfully designed groupings, but success does not necessarily imply that a CoP, rather than a well-functioning working group, has been created. Building on existing relationships may be more rewarding than not doing so, but existing ways of interacting may nonetheless be compromised if the designed CoP is successful in overriding these ways. Imposing formal design on informal relationships may also be futile. In the case of the Swedish Armed Forces explored by Dessne (2013), a formal process for learning from experiences was implemented in the 1990s, but seemingly little learning had been achieved through this process since then. There were, however, strong informal relationships in various local settings that facilitated learning. Participants in these relationships did not identify themselves with the formal learning process and therefore continued to conduct their work in the manner they were used to. This case shows how formality – although not in the form of a designed CoP – seems to have been unable to affect existing informality; or to put it differently, the designed process has not damaged the existing informal learning repertoires of the local practices.

To conclude, interaction between participants is a crucial element that contributes to the emergence of CoPs. This interaction is spontaneous and intervention with its nature will not be easy or desirable. Various degrees of intervention may be used to both facilitate and encourage CoPs, as well as to hamper CoPs. Supportive intervention may be seen as a kind of design expressed for example through specific tools for interaction, or through preconditions to promote collaboration.

Identity

The setting studied by Thompson (2005) illustrates how crucial identity is for the dynamics of a CoP considering the importance of symbolic expressions and the possibilities to uphold identity through everyday encounters. On the other hand, Dessne (2013) demonstrates the opposite where local practices, possibly definable as CoPs, may prevail despite attempts to implement designed and supportive means aimed to enhance learning. Wenger (2010) describes how this essential identity acts as a foundation for the community, and how connectivity builds the network of relationships. He argues that a community may become closed or inbred due to excessive focus on its own identity rather than on connectivity, and that connectivity without a sense of community may make the network fragmented and disconnected from potential learning.

Everyday encounters may be vital for creating and upholding identity. This is exemplified by Solomon et al. (2006) who argue that these informal spaces between formal structures provide opportunities for learning. Further, these spaces provide opportunities for CoPs to emerge, grow and exist. Bunniss and Kelly (2008), for example, argue that the motivation for informal learning has been shown to grow out of the members themselves being continually exposed to one another in their work. A local practice thus emerges from localness in a particular joint enterprise. The motivation to participate in informal learning and interactions may also be a consequence of an aware or unaware desire to belong and identify, as well as the other way around – that belonging is a result of participation. The idea of becoming an identity through belonging and interacting risks being unrealised, if a CoP is designed and people are assigned memberships instead of being allowed to choose their own level of engagement. Moreover, the designers probably do not participate in the local practices and therefore lack insight into the characteristics of the specific context and its influence on identities and interactions. This may result in a designed CoP that is not based on such characteristics.
In designed CoPs, members are assigned or requested to participate. When the informal is formalised, people are being re-formed by others instead of being allowed to govern themselves (Boud et al., 2009). Designing who will participate not only interferes with the freedom of choice to participate, as in emergent relationships, but also influences which identities will participate and how. As people participate in a community they bring with them their personal histories of norms and prior practices, which may result in conflicts that need to be negotiated and perhaps never resolved (Handley et al., 2006). CoPs may include conflicts as well as cooperation (Wenger, 1998b), and these conflicts are included in the construction of identities (Wenger, 2010). In comparison, designing a CoP implies prescribed cooperation, even though conflicts may occur. These conflicts may grow or be resolved in other ways than they would in an emergent CoP due to the managerial attention paid to the designed CoP. In addition, depending on its nature, an emergent CoP includes the possibility of disengaging. A designed membership undermines the power of the individual and the informal group, for example through the lack of choice on how much or how little to engage, or to not engage at all. In an emergent CoP, people may join without any intentionally formal constraints. People may participate as core or peripheral members (Wenger, 1998b) influenced by personal choices based on expectations, norms and needs. Hence the lessened power and freedom of choice likely influences the way one’s own and others’ identity is perceived. Therefore, how interfering impacts on members’ perception of their identities in a designed CoP is essentially different from how they would understand and engage in an emergent CoP, and this difference, in turn, alters the nature of the group’s interactions and practices. In contrast, an emergent CoP is based on the idea of social learning characterised by relationships and interactions where identity is negotiated, not enforced (Wenger, 1998b). However, choosing to be part of an emergent CoP may seem to be free and voluntary, but social hierarchies built on social values and norms could mean that choices are enforced when people perceive expectations on their behaviour.

Further, participants credit each other with status and power in accordance with the experience and competence that have been ascribed to them (Wenger, 1998b; Yanow, 2004). This kind of recognition is not only found in CoPs but in all informal relationships, such as the ones explored by Dessne (2013) in a study of a military organisation. The studied military organisation featured strong, local, informal relationships where formality and informality merged in hierarchical designed relationships, as well as emergent, informal relationships for efficiently accomplishing work. Consequently, CoP leaders emerge through accredited worth. The idea of leadership has been explored in the design of CoPs, shown in the literature review carried out by Agrawal and Joshi (2011). However, to claim that CoPs could be designed, including its leadership, would overlook the way participants value and relate to each other through identity and competence. Assigning leadership roles to specific members contradicts the way informal leaders appear in emergent CoPs. Aligning community leaders with the formal hierarchy will not necessarily strengthen an existing CoP as it interferes with the participants’ own self-regulating activity and negotiation of identities, status and power. Such interference may however be preferred if a CoP’s self-regulating activity is deemed to be mediocre or obstructive to productivity (Wenger, 2010).

To conclude, identity in relationships is a vital element that contributes to the emergence of CoPs. The forming and reforming of identities is continuously negotiated in everyday situations and spaces. This ongoing negotiation makes intervening with the nature of relationships a delicate matter. Design may assign roles that enforce actions on people. When complying with such roles, the perceived freedom of negotiation is substituted with directives that impinge on the very essence of being.

**Final remarks**

CoPs depend on everyday encounters as spaces for interacting to create, negotiate and maintain identities. As has been previously discussed, intervening through supportive design may cause disturbances in such social fabrics of ongoing activity. Designing through assigning participants roles and activities, would indicate that people are formed and reformed by others instead of having the opportunity to govern their own habitat. Moreover, participants have little opportunity to disengage from their engagement in a CoP where their participation follows assigned work roles. Designing thus causes an enforced approach in contrast to the emergent creation of relationships. However, social hierar-
chies may be perceived as likewise enforcing if norms of expected behaviour are hard to challenge. Socially developed leadership can be just as limiting as assigned leadership, although it seems participants in an emergent CoP enjoy a greater opportunity of creating their leaders than those in a designed CoP have of influencing their assigned leaders.

Interaction and identity are therefore crucial for the emergent CoP and challenging elements to consider when facilitating (or attempting to design) CoPs. Accordingly, to construct a CoP is to use the original emergent CoP as an inspirational model. Although a designed CoP challenges a CoP’s very essence, it may still provide fertile soil for a CoP to grow in. Consequently, the outcome of this designed support may be that informal relationships are stimulated where aspects of formality remain pronounced. Thus, such a designed CoP might still positively influence organisational performance as well as stimulate learning. This positive outcome may be related to the efforts of actually attempting to imitate a CoP with its attributes of engaged participation by stimulating and motivating engagement in work tasks.

However, the nature of emergence may be lost when attempting to design CoPs, instead of gently facilitating them through minimal interference. Supporting CoPs is crucial as they are spaces where informal, actual, situated, social and intangible learning is carried out, assisting workers to work-beyond-the-rules so as to become experienced fire-fighters, soldiers, nurses, technicians, teachers, etc. A design that imposes formality on informality risks being counterproductive, if accepting that a certain degree of informality is inherent in and key to efficient work. However, in cases where aspects of informality for various reasons have been proven to be inefficient or undesired, it may instead be required to impose formality in the aim of diminishing these undesired aspects of informality.

There is no need to compare and contrast different CoPs, as suggested by Agrawal and Joshi (2011) who claim that CoPs may be intentionally created. There is, however, a need to recognise the essentials of CoPs and understand that they, as emergent informal structures, cannot be defined, managed and designed. They may be sufficiently understood for the purpose of gently facilitating or encouraging them, a gentleness necessary to not disrupt the foundation of informality through such acts of formal support.

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3.3 Summary of part II

It was concluded in the previous part of the study, part I, that participants’ interactions are crucial for the nature of relationships and learning within them. This was manifested in how informally constructed relationships for carrying out work were favoured over a formally designed process.

This second part of the study confirms that participants contribute to this nature through the way they perceive their local setting and also the organisation as a whole. Furthermore, this part addresses implications of imposing formality on informality, exemplified by the consequences of implementing the LL process in the SwAF.
4 Discussion and conclusion

The research in this thesis is built on a synthesised view on learning. This means that ongoing, dynamic, interactive and interdependent aspects of informality and formality in social interaction together shape the nature of relationships and learning within them. These aspects are thus used as theoretical abstractions in order to characterise and analyse the nature of relationships. Thus, emphasising the dynamic nature of relationships serves to re-fuse as well as refuse a dichotomous tradition of separating formal from informal learning. Therefore, this synthesised approach is taken in order to propose how learning can be facilitated in organisations.

The research questions guiding the research are:

1) How does the nature of relationships, expressed as aspects of informality and formality, manifest itself and relate to learning in an organisation?
2) What are the preconditions that influence the nature of relationships in an organisation?
3) What are the implications of intervening with the nature of relationships?

The findings demonstrate how complex learning in an organisation is. It may be presumed that a military organisation is especially characterised by strong hierarchical structures leaving little room for informality. However, this is not the case in the SwAF, which is in line with prior research of military settings exemplified by King (2006), O’Toole and Talbot (2011) and Catignani (2014). On the contrary, it seems as if a high degree of formality generates informality. Although rules and directives govern the main outline of their work, the participants in the SwAF credit informality with power and efficiency. This attitude is based on the fact that they consider it efficient to interact informally to carry out work tasks, and moreover, that they perceive such informal interaction to be expected of them.

This chapter provides an overall discussion on the implications of the findings. Thus the following themes are discussed: the dynamics between informality and formality, values, norms and expected behaviour, and facilitating learning. The chapter concludes with discussing paths for future research.

4.1 The dynamics between informality and formality

The nature of relationships in the studied setting shows a complex ongoing interaction where aspects of informality and formality are closely related and depend on each other. The findings thus strengthen the claim in the beginning of this
thesis; that is, that these aspects exist in all learning, as is also argued by Malcolm et al. (2003). In the following, the nature of relationships in the SwAF, specifically focusing on the LWC, is described in order to illustrate how this nature develops. This illustration draws on a synthesised view of all findings.

An analysis of the findings found three reasons that explain the dynamics between aspects of informality and formality in the SwAF: 1) an attitude that informality rather than formality is the traditionally accepted and expected way of efficiently carrying out work tasks, 2) an attitude that formal ways are insufficient for providing information, for example for keeping training and exercises up-to-date, and 3) an attitude that it is often necessary to sidestep or bypass formal directives, regulations, procedures and managerial decisions. These three reasons for favouring informality over formality thus depict participants’ attitudes and actions carried out in accordance with these attitudes. The reasons show that participants perceive, relate to and negotiate values and norms in relation to how they compare and then credit aspects of informality and formality. This is influenced by how they relate to the perceived tradition of how to act in their setting.

Building relationships in the SwAF is thus based on following a tradition of how to act. This tradition is likely instilled in a SwAF participant from the very beginning, especially through participating in training where they learn from seniors. This role of training for participants’ understanding of expected behaviour is described by King (2006) as well as by O’Toole and Talbot (2011). Similarly, Lloyd and Somerville (2006) describe how fire-fighters are fostered and included by experienced senior participants. When observing training in the SwAF, several involved participants described how important it was for the soldiers being trained to hear stories and examples of success in order to trust and relate to rules of engagement. O’Toole and Talbot (2011) argue this role for formal training to provide opportunities for informally connecting and developing relationships based on trust in a military setting. King (2006) also emphasises – further supporting the interaction and dependence between aspects of informality and formality – that informality is a consequence of how participants interact according to formal procedures.

In the studied setting, informality manifests itself in the oral and local learning that characterises overall interaction in the organisation. The findings show that this conduct contributes to that information remains local, and thus also learning and knowing. Such oral and local learning is also seen in other military settings, for example in the Australian army (O’Toole and Talbot, 2011) and the British army (Catignani, 2014). Catignani (2014) argues the necessity to institutionalise this learning in order to not repeat mistakes and lose information when participants leave a setting. This is also a problem in the SwAF, where mistakes often remain local due to an oral tradition and the fact that people are repeatedly reallocated. Furthermore, in the SwAF, participants communicate by email and telephone as well as through physical encounters during breaks, lunches and training. They are thus considerably engaged in physically moving around, which is similar to the walkabout described by Bellotti and Bly (1996) (see 1.3.4). This can, to a large extent, be attributed to the
practical nature of their work, but it may also be the result of extending the face-to-face interaction learned in training to other spaces of interaction.

Although participants in the SwAF are formally allocated to perform specific work tasks, it seems that there is considerable room for making own choices of whom to interact with and how, and this is a fundamental feature of informality in relationships. Choosing oral communication as the means for interacting could reflect such freedom of choice, although this approach to getting work done may at the same time be fundamentally rooted in the previously described tradition, making the choice less free. Nevertheless, the participants’ preference for oral information over documents may be explained by the suggestion made by Lloyd and Somerville (2006) that when the initial role of textual information has passed, participants need to access social and embodied information. This explanation is supported by findings that depict how some participants long for the good old days when adherence to regulations was expected and ensured. This suggests that the SwAF were more hierarchical and systematic a couple of decades ago, or at least, that is how participants perceive their development. This, in turn, implies that not only individual participants but the organisation as a whole are embedded in a culture that strengthens oral interaction rather than adherence to rules and directives. However, this preference for oral information may also be explained by a shared understanding of how and where to find information. This understanding, in turn, is for example built on perceived efficient and inefficient ways of accessing information, and on failures in formal procedures. Describing a military setting, O’Toole and Talbot (2011) explain how important it is to gain access to information through informal channels when the formal channels fail to deliver the requested information. Thus, their study of the Australian army describes a military setting that faces problems with formal procedures that are similar to those in the present study. Nevertheless, both explanations illustrate how perceived or real aspects of informality and formality develop while being influenced by each other.

The studied setting thus portrays a formal design that accommodates the emergence of seemingly equally strong, or stronger, informal relationships. The findings show that informal and formal ways of accomplishing work sometimes coincide, and that they sometimes conflict. For example, solving a problem may be considered to require action that abides by the rules or action that does not. Furthermore, lower level participants may normally interact and solve issues without involving managers until an agreement has already been reached. However, this is often the supposed and expected way to act, also by managers who therefore expect this work to have been carried out before being involved. On other occasions, managers attempt to control previous informal agreements, more or less successfully, indicating a conflict. In order to understand such expected behaviour, it is necessary to successfully navigate in this setting. This is accomplished through negotiating values, norms and expected behaviour, which are discussed next.
4.2 Values, norms and expected behaviour

Drawing on the findings of the whole study, a specific language or jargon is found to be used in the SwAF, which depicts what Wenger (1998b) describes as a shared repertoire. This is attributed to the military symbols and terminology used in training and field action. In their studies of military settings, Sonnenwald (2006) and King (2006) confirm the need and efficiency of such specific communication for sharing information, especially in field action. However, in the SwAF, this language also spreads to all everyday interaction, and it is apparent in how the participants talk.

Symbols conveying formal values inform the participants in the SwAF of expected behaviour, for example due to rank or physical setting. They dress in military clothes and move around in spaces full of military equipment every day. These formal symbols are always present and impact on the identity of being a participant in the setting. Furthermore, these symbols are continuously negotiated by participants to create and uphold a common ground, as studied in a military setting for example by Sonnenwald (2006). As King (2006) also argues, training and field action reinforce symbols and military terminology and how to behave towards each other. Symbols and terminology are thus crucial for developing an identity and becoming part of the practice of being an experienced soldier or a member of military staff. Thus, the informal relationships built on experience embodied in training and field action emerge through conforming to these formal symbols. Such formal values exist in all organisations, although perhaps not always as visibly pronounced.

Identity-development in the SwAF, based on negotiation of values and norms, thus constructs beliefs of how things are done. The participants strongly believe in working informally with colleagues. Similarly, Widén-Wulff (2007) found that such collegial appreciation existed in a stable work environment of claims handlers where routines and decisions were adhered to. The work environment of the studied setting of the SwAF, however, is not as stable, due to continuous demands on updated training. Nevertheless, it is a setting that is similarly dependent on rules, which may provide stability. Furthermore, Widén-Wulff (2007) describes that in another setting, which was dependent on development and innovation, participants trusted colleagues who were considered sources of expertise. Participants in the SwAF similarly trust and value colleagues as sources of the information that is necessary for developing and updating training. The organisation is thus a setting characterised by stability but also development. Colleagues are held in high esteem that is attributed to both a shared understanding and a promise of information.

The beliefs held by the participants in the SwAF relate to Chatman’s (1999) description of a small world defined by its participants interacting in accordance with their norms and values to create trusted relationships. Chatman (1999) argues that people in this small world know whom to trust and turn to for help. Similarly, the participants in the SwAF turn to trusted and appreciated colleagues in order to
carry out work. Trust is thus informally constructed as a consequence of mutual dependence, to carry out work in a perceived efficient way. The participants also seem to share a commonly held opinion that mistakes are dangerous for their careers, although some of them claim that they are not afraid of pointing out mistakes that have been made. However, they still appear to be concerned about making their own mistakes. In addition, the participants especially attribute the fear of making mistakes to certain decision-makers, and this, the participants assert, results in information being classified unnecessarily in order to hide mistakes. Over-classification information makes it less accessible, which, according to Catignani (2014), is a problem in the British Army as well.

In the SwAF, the above described conflicting emotions and perceptions of mistakes may make people prefer to interact orally with trusted colleagues. This is a way of avoiding attention from others and maintaining personal or group status connected to competence and ability. As King (2006) describes, status in a military setting is based on the successful achievement of being a participant. Also, the argument by Tyler and Blader (2001), that people prefer to identify with a setting of perceived high status, is relevant for understanding how participants in the SwAF, as well as in other settings, aim to be part of success rather than failure. Accordingly, mistakes, at least formally admitted ones, may best be avoided. Nevertheless, this preference for oral interaction may also depend on the practical kind of work that is being carried out. Some participants in the SwAF state that many view action as more valuable, appreciated and operative than documentation. Also, other participants assert that the SwAF are generally focused on the present, not the past. Thus they contend that swift undocumented decisions are considered expressions of high-status determination and willpower. Consequently, when participants choose action over documentation, they contribute to the magnitude of informality in the organisation as a whole.

Participants in the SwAF thus trust informal relationships more than formal procedures, even though these are followed as well – if they are considered efficient or otherwise necessary. How participants interact in accordance with such beliefs and attitudes connects to how Lave and Wenger (1991) and Wenger (1998) describe people constructing a shared understanding to carry out work. Participants in the SwAF are loyal to their colleagues, work tasks and managers, but they also criticise the lack of insight into processes and colleagues’ work. In addition, the participants’ beliefs are also dependent upon their interpretation of what the organisation should do and deliver, which could explain purposeful nonconformity to rules and directions. These beliefs are shaped by evaluating formal directives together with informal understandings. Nevertheless, the participants’ beliefs, reinforced by expected behaviour, contribute to informality being continuously perceived as a powerful and efficient way to access information and learn from others’ experiences. Acting in accordance with these beliefs seem to be evident in other military settings as well, such as the ones described by O’Toole and Talbot (2011) and Catignani (2014).
4.3 Facilitating learning

The findings depict a formal process substituted by relationships that are mainly characterised by informality (c.f. Orr, 2006). In the second part of the study, it was confirmed that such sidestepping of formality in the SwAF was not limited to the LL process. Rather, it seemed as if this kind of informal behaviour was commonplace. Although this later study confirmed an existent tradition of informality in the SwAF (and the LWC in particular), it was not clarified whether implementing the LL process had caused aspects of informality to emerge, or whether they already existed. However, the findings show that the LL process in itself has had little influence on learning from experiences. Instead informal relationships are the key to getting work done. The conclusion is that the nature of relationships does not seem to have been considered – at least not successfully, when the LL process was implemented. Therefore, this unsuccessful intervention in learning can serve as an example of the importance of taking this nature into consideration in order to, at least to some extent, ensure predictability of possible outcomes.

A study by Forsgren and Byström (2011) supports the importance of knowing how to intervene with norms and values in existing relationships. They show how the design of social media was questioned by its intended users. The reason for this was that the design did not sufficiently match the users’ perceptions of how their work ought to be accomplished. Another study by Thompson (2005) describes how disregard for and interference with symbols and interacting spaces of informal relationships disrupted the negotiation of meaning and identity. This resulted in people withdrawing from their former engagement (Thompson, 2005). Accordingly, the organisation failed in its attempt to benefit from these strong successful informal relationships, which instead were weakened. In contrast, the attempt to implement the LL process in the SwAF resulted in a strengthening of, or at least not disturbing, aspects of informality. This suggests that informality in the SwAF is as traditional and strong as the participants of the study claim it to be.

In the SwAF, as previously described, the findings show that participants’ ideas on how to get work done influence relationships and learning, and moreover, that their beliefs shape embedded identities. Thus learning is deeply integrated with the development of a social identity, and this is fundamental for how learning is understood in the concept of CoPs (Wenger, 1998b; Lave and Wenger, 1991). However, it is important to return to the original understanding of CoPs as emergent phenomena. This is necessary in order to refocus on the role of the participants’ shared understanding instead of on the role of participants’ interaction as such. An instrumental use of CoPs, focusing on assigned roles and membership, takes precedence of otherwise possible free choices of negotiation, participation and identification. In the SwAF, participants are assigned clear hierarchical military roles, and as discussed above, training fosters the participant to embody these roles. However, informal roles also emerge during training. Thus, it seems as if the design of membership in groups/military units also contributes to emerging informal
interaction within the same groups/military units. This shows how informal and formal aspects of relationships merge and depend on each other. In other words, assigned roles of authority merge with informal roles, which are characterised by status that, in turn, depends on accredited competence, as discussed earlier. Thus, although formally assigned roles strongly influence interaction, informal roles and identities emerge due to how competence is valued and ascribed, which according to Wenger (1998b) is characteristic for emergent relationships in CoPs. Still, there may be a tension between how authority and leadership are constructed in emergent relationships and how leaders are appointed and tied to overall organisational management. How participants with assigned membership act in designed relationships is essentially different from how they would engage in emergent relationships, where they are supposedly freer to negotiate and set their own rules of conduct. Nevertheless, formally assigned roles may be informally ignored depending on how strong or tightly-knit a setting is. This is evident in the SwAF, as previously discussed, and exemplified by how participants may take informal routes to accomplish tasks.

Using CoPs to understand aspects of informality and formality in all relationships is to recognise a dynamic world created by participants negotiating values and norms; a negotiation that guides their information and learning activities. Although Lesser and Storck (2001) argue for intervening with informal relationships, for example by providing opportunities for forming and re-forming relationships, there are situations where more design may be needed. For example, careful and precise design may be needed when intervening in a setting of tightly-knit groups of people in order to dissolve dense connections. Depending on the aim, intervention could be intended to align with the existing worldview of such a tightly-knit setting, or it could be used to break it up, for example in order to make its practice more open to proposed change. A tightly-knit group may thus be dissolved by using an invasive design, which is desirable if the group is deemed to hamper efficiency, but detrimental if the group is the source of efficient work. Thus, if the SwAF – an organisation where aspects of informality seem vital for constructing information, learning and knowing – were to succeed in formalising the informal, the effect could be devastating.

In sum, the nature of relationships appears in organisations with simultaneous and intertwined aspects of informality and formality. This makes it difficult to study and support learning as either informal or formal. Instead, it is necessary to understand that these aspects depend on and interact with each other. The conclusion is that there are various ways of intervening with the nature of relationships, from gentle facilitation to intrusive design. Success or failure depends on which intervention is suitable.

4.4 Paths for tomorrow

In this thesis, it has been concluded that the interaction and identities of participants define not only them but the way learning is viewed and carried out in their context.
Moreover, it has been concluded that information is inherently a social construct. These conclusions are part of the social emphasis connecting LIS and IT, for example by addressing studies in information behaviour and knowledge management that focus on social interaction.

Within LIS, this thesis is thus guided by research in KM as well as by research in relevant areas of IB. It aligns with studies based on learning where information is regarded as social, such as the practice-based studies exemplified by Lloyd and Somerville (2006) and studies of small worlds explored by Chatman (1999). In this research, the participants’ views on how and where to interact and learn is fundamental to how perceived values influence their interaction. In this thesis, this interaction is argued to involve aspects of informality and formality. Nonetheless, their interdependent dynamics seem little explored when it comes to understanding how people interact and learn. Instead, research on how to facilitate learning focuses on either informality or formality. Furthermore, such research focuses on supporting learning that is influenced by concepts as ambiguous as context. This context may be defined in various ways such as organisational culture, motivation and social networks. When studying learning in the guise of a social construct picturing informality and formality, these aspects are not context but rather the very core of learning and knowing. Learning and knowing emerge, exist and are endorsed by those who simultaneously are part of the construct themselves, as they act based on their cultural, motivated and social identities. Actions take the form of creating or exchanging information through oral, textual, embodied or unaware means for others to interpret in an iterative way. In the thesis, this social core of learning and knowing has been argued and the findings illustrate it. Hence it is proposed that more research based on this fundamental social core of informality and formality is needed.

As has been discussed and concluded in the thesis, participants are not merely subjects for transferring objects, they are also actively negotiating values and norms that shape their identities. In addition, they are more or less aware of and free to choose which paths to follow or not. Their interaction is full of potential conflicts as well as consensus in a dynamic dance. The perspectives and identities shaped by such choices and attitudes are thus vital for whether and how learning is accomplished. In this thesis, it has been shown that any intervention with the nature of relationships must take participants’ views on how and where to access information and learn into consideration. However, as has also been argued, previous conducted research with the aim of facilitating learning seems to have focused more on interaction than on participants’ views and identities. Hopefully, the findings of this thesis will support future research claims that consideration to and involvement of participants’ views and identities are essential for successful intervention.

Finally, by emphasising social interaction and the nature of relationships and learning within them, the research in this thesis provides a synthesised view on the dynamics of information, learning and knowing. This view is derived from an interdisciplinary understanding in order to draw on similarities rather than on differences, but also to sort out fuzzy conceptualisations. Specifically, the
synthesised view elaborates on preconditions for the nature of relationships as well as implications of intervening with it. Intervention may be seen on a progressive scale ranging from little to considerable, where all levels are used more or less successfully depending on the aim of the intervention. Throughout this thesis it has been argued that it is vital to recognise the essence of relationships, and that intervention is not always possible, suitable or desirable. However, recognising the dynamic nature of relationships is fundamental for assessing the various impacts that any action taken may have on information and learning activities.
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