Stockholm School of Economics
MSc Thesis in Business and Management

A Meaningful Virtual Workplace

Understanding motivation in virtual work structures through interaction and meaningful relationships

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Abstract

Virtualization of employee interaction within organizations shapes the socialization that in turn forms meaningful relationships between employees. With a shift towards widespread virtual work structures, induced by the COVID-19 pandemic, the relevance of this phenomenon becomes increasingly apparent. By explicating how and why meaningful relationships are affected, we can also understand how individual well-being and organizational effectiveness, derived from these relationships, are impacted. On a theoretical plane, this thesis namely brings literature relating to Communities of Practice together with literature relating to Self-Determination Theory. By distilling findings within these areas, the resulting insights are combined into a theoretical framework that showcases the intertwined nature of socialization and relationships in a way that is applicable to the novel, widespread virtual work structures. This framework is then elaborated further through two case studies, focused on Swedish manufacturing companies. Findings from the conducted case studies both support and oppose the existence and influences of components within the theoretical framework. The first primary contribution of the thesis comes in the form of the resulting mapping of interrelated components, showcasing an initial but extensive illustration of how meaningful relationships are being affected in the virtual setting and why. The second primary contribution is derived from how both case studies indicate that strong relationships endure or even improve, while the remaining more casual relationships weaken and fade. Components identified in the developed framework seemingly act as barriers for interaction, causing this relationship development to occur, and consequently risk causing split identification within organizations.

Keywords: Remote Working, Communities of Practice, Well-being, Self-Determination Theory, Motivation

Date of presentation
2020-12-15

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Examiner
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Acknowledgements

It has been a great pleasure writing this thesis and studying its entailed phenomena. I want to extend a heartfelt thank you to the participating organizations and in particular the numerous individuals within them that enabled this academic journey to take place. Although you are kept anonymous in the thesis, you are seen.

I would further like to express my gratitude to my supervisor Frida Pemer for providing invaluable insights and being an immaculate sounding board for even my most abstract ideas. Thank you, Frida.

Table of contents

1. Introduction

The success of any organization is derived from the actions of individuals within it. Naturally, the motivation that drives these actions is something exceedingly complex and multifaceted. What has been empirically shown however is that fulfillment of three psychological needs plays a central role for the existence of well-being and subsequent motivation - a fundamental aspect of Self-Determination Theory (SDT) (see for example Deci & Ryan, 2000). When individuals' fulfillment of these psychological needs dwindles, so does individual engagement and organizational effectiveness (Gagné, 2013), crucial components of a successful organization.

The COVID-19 pandemic initiated what has become an unprecedentedly wide-spread transition into remote working, effectively changing the foundation of what many consider to be a regular workplace. In many cases, this has led to the previous physical workplace being transitioned into a virtual sphere for most, if not every day, of the week. Recent research suggests numerous benefits of these virtual work structures and the remote working they are defined by. In a survey with over 12,000 respondent employees, Dahik et al., (2020) found that both managers and employees reported increased productivity as compared to before the pandemic, especially regarding individual tasks. Remote working has also been found to increase flexibility, ability to perform independent work, and productivity (Lund et al., 2020). Yet the "most surprising" finding in the study by Dahik et al. (2020) was the "outsize impact that social connectivity has on productivity" (ibid, pp.2). Employees who reported dissatisfaction with social connectivity with their colleagues were two to three times less likely to have maintained or improved their productivity on collaborative tasks than those who were satisfied with their connections (ibid). This implied importance of social aspects also aligns with how one of the three main discerned psychological needs in SDT found to affect well-being and motivation is relatedness, described as meaningful social interactions and relationships (Deci & Ryan, 2000; Narayan & Cassidy, 2001).

Now replaced by their virtual equivalent, physical workplaces previously functioned as natural facilitators of sporadic, social interaction, where things such as face-to-face interaction catalyzed relationships and empathy (Lesser and Storck, 2001). The discussed virtualization of a workplace not only changes where work is performed but also the nature of work-related socialization, devoid of the social facilitation effects of physical workplaces. Logically, relationships which spring from and are maintained by this socialization would therefore also be affected. If relationships are at risk of deteriorating within these virtualized work structures, then so are their entailed well-being and subsequent motivation, and ultimately the success of the organization. From this reasoning, the importance of explicating how meaningful relationships within these organizational environments are affected becomes apparent.

1.1. The Strength of Research on Communities of Practice

In order to explicate how meaningful relationships are affected in these virtualized settings, research relating to Communities of Practice (CoP) becomes relevant. Looking to this research, we can see numerous studies touching upon the nature of interaction and social capital within organizations. This interaction is often described to occur through participation in activities of exchange, where parties partake in exchanges, often of a social or knowledge-based nature. Participation in these activities of exchange has been suggested to increase social capital by forming and strengthening relationships, as will be further clarified in the first synthesis of this thesis (*Chapter 2.4.*).

This CoP-related research is generally purposed to examine more tangible influencers on organizational performance than individual well-being through social aspects such as relatedness. For research within the main strains of CoP-related research, the focus is often centered on understanding social capital and exchange as a means to achieve intellectual capital (see for example Garfield, 2006; Ardichvili et al., 2003; Dixon, 2000; DeLong and Fahey, 2000). However, regardless of end purpose, the research within this field

provides a vast body of empirically strong findings that provide an understanding of the phenomenon of employee participation in activities of exchange. The usefulness of which is derived from how participation in activities of exchanges is fundamentally intertwined with social capital through relationships (Nahapiet & Ghoshal 1998).

1.2. Discerning Gaps

Consolidating the preceding reasoning, we can discern gaps that need to be bridged in order to explicate how meaningful relationships are affected in the described virtual workplace:

Firstly, the vast body of research related to CoP and social capital needs to be combined into a relevant and coherent framework; a framework primarily purposed to showcase and highlight the important concepts for the development of meaningful relationships, not development of intellectual capital (see *Chapter 2*).

Secondly, this initial framework must be connected to SDT to finalize its connection to meaningful relationships through the psychological need of relatedness, in turn connecting it to well-being and motivation (see *Chapter 3*).

Thirdly, although many of the utilized anteceding studies examine virtual scenarios, the wide-spread nature of the virtual scenarios at hand naturally makes the scenario different from those in prior studies. Among other reasons, because the transition oftentimes affects teams that were not necessarily prepared to have a virtualized work structure, and because it affects numerous departments of an organization, making the virtualization wide-spread. This calls for the necessity of an empirical study that can further elaborate the theoretical framework devised in *Chapter 2-3*. Case study of two companies have therefore been carried out (see *Chapter 5-6 for findings and analysis*).

1.3. Purpose & Research Questions

The purpose of this thesis is achieved by bridging these three gaps and thereby explicating how employees' meaningful relationships are affected in the discussed virtual work structures. The thesis aims to both examine the current situation of - as well as potential ways to improve meaningful relationships in these virtual contexts. By understanding meaningful relationships in this context, their inherent connection to relatedness will provide a and understanding of how SDT-defined well-being and subsequent motivation is affected.

1.3.1. Research Questions

RQ 1) How have employee well-being, derived from relatedness, been affected in the studied novel virtual work structures? RQ 2) How can meaningful relationships be improved in the studied novel virtual work structures?

1.4. Delimitation

The thesis will utilize insights from the main strains of research relating to CoP. Although chosen insights from these areas of research do not always concern scenarios in a virtual sphere, they do provide an extensive and empirically sound base of findings that allow for an understanding of the interrelated elements (affecting social capital and activities of exchange) which will be used to achieve the purpose of the thesis. As further discussed in *Chapter 2*, the nature of how the new virtual work structures entail a holistic transition of the physical office into a virtual sphere means components also present in a physical CoP remain relevant.

Choosing a main theoretical orientation is necessary given the vast number of potential sources to draw insights from. In our delimitation, we value the potential novelty and relevance of conclusions possible from usage of empirically proven but slightly less applicable research over conclusions possible from usage of less empirically proven but more directly applicable research. Hence, although insights from deviations

from the core concepts such as Virtual Communities of Practice (VCoP), and Virtual Communities are considered in the thesis, concepts further away from the defining features of a CoP-field is of lesser focus. This means the increased absence of insights aligning with concepts such as Virtual Workplaces and Collaborative Working Environments.

Considering the purpose of the thesis, it is also key to mention that the thesis does not explicitly examine the well-studied relationship between social capital and intellectual capital. Beyond limiting the scope of the thesis to increase precision, this delimitation is also motivated by the perceived relevance of relatedness in the studied context. This does not discredit the paramount role of knowledge sharing and intellectual capital in achieving organizational success, something that is evident from anteceding research in the field.

1.5. Theoretical Relevance

While there are existing academic papers that consolidate CoP-related components, the developed framework in this thesis has a novel orientation as it uses components to primarily understand meaningful relationships. The resulting framework and the discussion paired with it therefore further elaborates and explores the theoretical potential of the components used.

By bridging the gap of prior CoP-related insights to individual well-being through relatedness, a theoretical elaboration of the utilized concepts is performed. The empirical study that follows this also improves the theoretical elaboration further by both testing components within it while also uncovering unplanned related insights. By contextual application of the framework, the empirical study and analysis lastly combines the theoretical and empirical insights to discern the mechanisms affecting meaningful relationships in the studied organizations while also showing their ties to theoretical concepts. This will push the usability of the plethora of previous related insights towards a new theoretical area, more closely aligning with individual well-being and relatedness within organizations.

1.6. Practical Relevance

Transitions into virtual workplaces are increasing rapidly as a consequence of COVID-19. By contributing to an increased understanding of the novel context, the thesis aims to uncover insights that could be used to help individuals (through well-being, derived from meaningful relationships) as well as organizations (through motivation, derived from well-being of employees). This will be achieved through the bridging of the three gaps presented in *Chapter 1.2*.

The relevance of practical insights achieved through the thesis can also be extended beyond the scope of the current context caused by COVID-19. As indicated by recent studies, there is a clear will from both employees and managers to retain some level of the newly adopted remote work structure after the pandemic has subsided (Dahik et al., 2020; Kaufman et al., 2020). Thus, if we apply a longer timeframe, the insights from the study could also be used to form successful future virtual workplaces.

1.7. Research Outline

To arrive at a theoretical framework that is able to explicate well-being through meaningful relationships within these novel work structures, vital prior research contributions will first be reviewed in thematically separated chapters. Each chapter will begin with an examination of the theoretical base of the theme if applicable, followed by relevant anteceding findings. In *Chapter 2* findings relating to CoP are presented, eventually culminating into the knowledge needed for the first synthesis. This synthesis forms the base of the *Analytical Framework* in *Chapter 2.4*. *Chapter 3* is purposed to elaborate this deduced base of the *Analytical Framework* into a finished theoretical framework which ties findings related to CoP with individual well-being through Self-Determination Theory. This leads to the synthesis of the *Analytical Framework* in *Chapter 3.4*. Following this, the method and related aspects of the thesis are covered in *Chapter 4*. Findings based on the conducted case research is presented in *Chapter 5* and is then analyzed in *Chapter 6*, followed by concluding remarks and discussion on contributions, limitations and future research in *Chapter 7*.

2. Understanding Interrelated Social Capital in a Novel Community Context

Here findings related to CoP are reviewed (2.1-3) in order to build up the necessary knowledge for synthesis of the base of the *Analytical Framework* (2.4.).

2.1. Communities of Practice

Although the wide-spread application of highly virtual work structures caused by COVID-19 is a novel concept, interaction in virtual and non-virtual communities is not. A large strain of research utilizes the concept of communities of practice (CoP) to examine interactions, exchange, and relations inside of organizations. Virtual workplaces transitioning into a more prevalent part of the normal workday means that the studied novel work structures bear resemblance to a number of CoP-related fields of study, including its virtual equivalent: virtual communities of practice (VCoP). Given the aim of this thesis, we must consider that in the context of the novel work structures, interaction of a primarily social nature, that used to occur in the physical workplace, now often only has the chance of occurring remotely, in the virtual sphere. In this way, it becomes clear that insights from CoP, VCoP, and virtual communities in general can be utilized to gain a better understanding of communities in the studied novel scenario. By first defining core features of the CoP concept, its origin and later direction toward VCoP, and tying in literature regarding general virtual communities, we will clarify how prior research related to these concepts differs from the purpose of this thesis but more importantly – how insights explicitly or implicitly tied to social capital can be connected to the topic of the thesis and aid in achieving the presented purpose.

2.1.1. Defining Core Features

Communities of Practice (CoP) was coined as a concept by Lave and Wenger in 1991. In relation to this, a CoP was described to entail its members' participation in an activity system where they share understanding concerning what they are doing and what that means in their lives and for their communities. These communities often develop and exist through participants' joint interests and are described as a set of relations among persons, activity, and world, over time and in relation with other tangential and overlapping communities of practice (Lave & Wenger, 1991; Wenger, 1998). This core framing of the concept is also applicable to VCoP, as showcased through Lesser and Storck's (2001) argument that regardless of the mode of interaction, the notion of a CoP stems from how it emerges from a work-related or interest-related field (Lesser & Storck, 2001). VCoP has been said to equal a CoP that uses information and communication technologies as its primary source for collaboration (Dubé et al., 2005) or one that at least partially uses virtual interactions (Von Wartburg et al., 2006). They have also been said to be a "more effective organizational form for knowledge creation than traditional and formal ways of structuring interaction" (Von Wartburg et al. 2006).

Further defining the concept of CoP, they do not necessarily equal a well-defined, identifiable group, bound by socially visible boundaries (Lave & Wenger, 1991). This distinguishes CoP as a broader concept than other forms of groups such as teams, which are more often formed manually and purposed to achieve specific performance goals (Ardichvili, 2008). A successful CoP requires members' willingness to join and participate, as well as its ability to recruit and include members (Lave & Wenger, 1991, pp. 98). Further, while tied through shared understandings and participation in activities, the members of CoPs are also expected to "have different interests, make diverse contributions to activity, and hold varied viewpoints" (ibid). Research related to communities that share these presented characteristics without explicitly being named as CoP or VCoP (e.g., electronic communities of practice [McLure-Wasko & Faraj, 2005]) will be also be subject of review. Given its rather broad definition, attempting a definitive mapping of the concept can be exceedingly convoluted, as discussed as a concluding point by Li et al. (2009) in their paper covering the development of the concept. Therefore, selecting key focal points within CoP literature is important

for our purposes. Next, we examine directions of focus that are present in prior studies to understand the directions of anteceding research and in which ways these overlap with the novel work structure scenario studied in this thesis.

2.1.2. Using Past Knowledge to Propel Later Studies

To better understand the direction and priorities of prior research, it is also crucial to consider how CoP originates from concepts of "learning communities", where hierarchical roles were flattened out, leading to novices and experts co-participating (Li, et al. 2009). Combining this origin with the virtual workplace's prior, commonly complementary role of aiding the physical workplace, it follows that research within the field predominantly discusses CoP from a knowledge management lens with creation of intellectual capital through activities of exchange as a primary focus. CoP's ability to facilitate intellectual capital through knowledge exchange is well documented. Findings building up this claim include how exchanges in a CoP provide potential for an organization to overcome problems from slow-moving traditional hierarchy and also to share knowledge outside of the traditional structural boundaries, to develop long-term organizational memory (Lesser & Storck, 2001), and to effectively handle unstructured problems through the generation of tacit knowledge (ibid; Nonaka, 1994). Members' participation in activities of knowledge exchange is therefore often considered to be the driving force for a successful CoP and its ability to improve organizational performance, apparent in a large body of studies (Garfield, 2006; Ardichvili et al., 2003; Dixon, 2000; DeLong and Fahey, 2000; among others). Although knowledge exchange generally occupies the main spotlight in research related to CoP, many studies explicitly or implicitly look at social capital as a driver for said knowledge exchange (Lesser & Storck, 2001; Chiu et al., 2006; McLure & Faraj, 2005; Tsai & Ghoshal 1998; etc.). Illustrated in a generalized but commonly applicable manner, the direction of this large strain of literature-base of prior research can be seen in Figure 1.

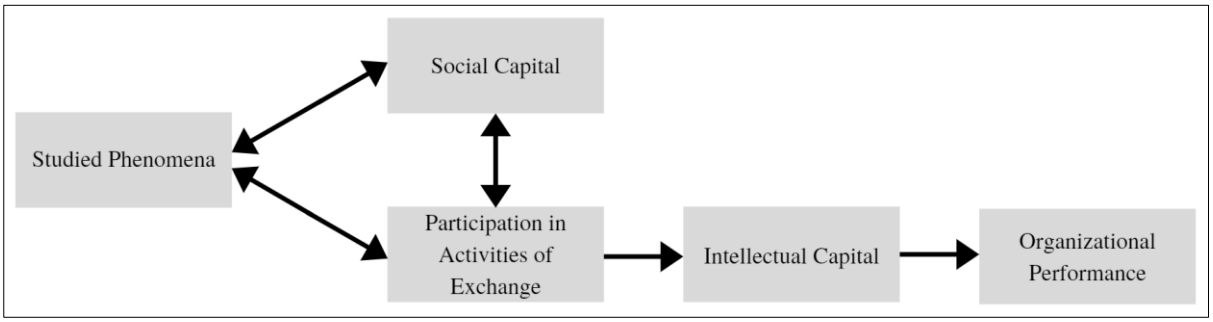


Figure 1: Generalized direction of anteceding research

The several well-acknowledged studies with findings related to social capital in CoPs can be used as a literature-based foundation for studies to build on in pursuit of novel insights. An example of this comes from Yao et al., (2015), forming their research model from prior findings on interlinked elements of social capital and knowledge sharing to propel their main purpose of investigating relationships between these elements and team-learning as well as e-loyalty. This thesis will tailor the first part of the final framework from anteceding research in a similar way, as shown in Figure 2, and describe in detail in the first synthesis (see *Chapter 2.4.*).

Activities of exchange and other similar variants of wording reoccur frequently within studies related to CoP. While the exact definition of these depend on the researchers' specification, it generally entails an interaction between members of the CoP resulting in an exchange of either a social or knowledge-based

nature. As shown, a prevalent focus within the field is knowledge-management, which brings with it the notion of these activities of exchange frequently having a direct or indirect impact on the facilitation of knowledge-sharing within the CoP. However, relationships, entailing friendship and respect (Nahapiet & Ghoshal, 1998) also form and are maintained through activities of exchange (ibid; Bourdieu, 1986). Furthermore, Nahapiet and Ghoshal describe how "often, new knowledge creation occurs through social interaction and coactivity" (Nahapiet & Ghoshal, 1998, pp. 248). Implied by these examples, and as showcased in detail within *Chapter 2.4*, there is an interrelatedness between the development of social capital and activities of exchange, even when the main purpose of these activities is the facilitation of intellectual capital. This means that while the purpose of exchange may vary, the factors facilitating its occurrence are suggested to remain similar. Therefore, insights from a review of studies examining activities of varied exchange can be utilized to drive an understanding of activities of exchange with a clear connection to achieving meaningful relationships through social capital, aligning with the purpose of this thesis.

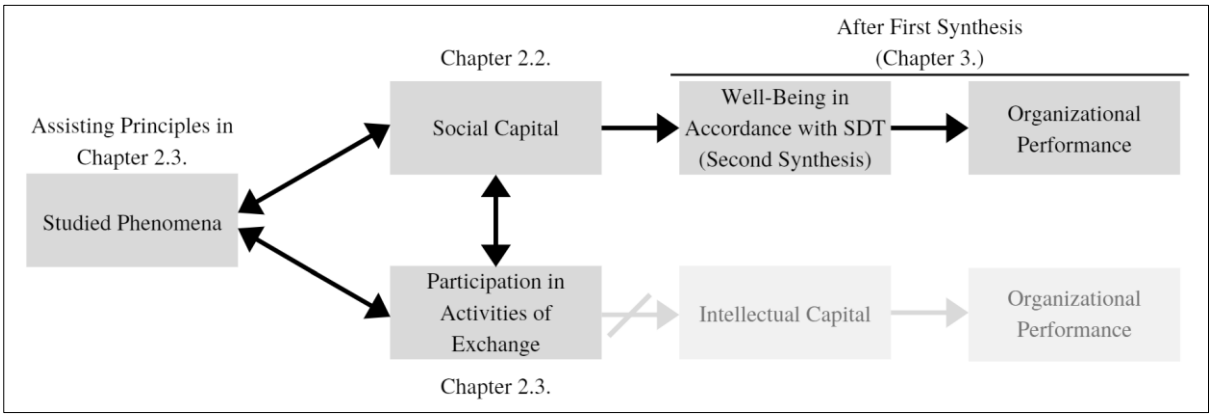


Figure 2: Role of anteceding insights in this thesis

In order to develop the necessary knowledge for the first part of the synthesis, purposed with mapping out insights from CoP-related research that affect social capital, the following chapter will examine social capital in more detail. For flow and uniformity, at times in the thesis we use the term "communities" as a blanket term for the several concepts and definitions outlined above.

2.2. Understanding Social Capital and its Dimensions

Social capital has been labelled as an umbrella concept, covering both the development of social capital as well as its outcomes (Adler and Kwon 2002; Nahapiet and Ghoshal 1998). As described in the previous chapter, the main spotlight of this thesis regarding outcomes is directed towards effects on well-being through relationships and not on how social capital facilitates intellectual capital. In a fairly outcome-centric description, Bourdieu (1986) defined social capital as the aggregate of actual or potential resources linked to possession of a durable network of, more or less, institutionalized relationships of mutual acquaintance and recognition i.e., membership in a group. In this thesis, we regard this definition of social capital as true but utilize a notable delimitation. For the sake of targeting the studied novel work structure and mitigating CoP's weakness of being overly broad (Li et al., 2009) we limit "resources" in Bourdieu's description to solely relate to well-being through social capital.

Regarding how social capital is developed, our view aligns more neatly with prior studies. We utilize the strengths of prior findings regarding how relationships, through social capital, can be developed in a CoP. In this developmental aspect, our view aligns with Etzioni's (1996) definition of social capital being seen as an intangible force that binds individuals together as members of a community with shared interests, shared assumptions about social relations, and a sense of common good (Etzioni 1996).

In order to intricately examine social capital within a CoP, we use a framework by Nahapiet and Ghoshal (1998) as a basis. Development of the framework occurred through Nahapiet and Ghoshal's exploration of social capital literature with a purpose of bringing insights into a business context. The results were three analytically separate (but practically highly interrelated) dimensions of social capital - structural, relational, and cognitive – enabling a clear understanding of social capital on a more detailed level. Lesser and Storck (2001), agreed that these dimensions apply aptly to communities of practice. In this thesis, the three dimensions of social capital will work to clarify the detailed and often complex nature of social capital as well as group-related findings from past research.

2.2.1. Structural Dimension of Social Capital

The structural dimension concerns the properties of the social system and the network of relations as a whole, including whether network ties exist or not between actors (Nahapiet & Ghoshal, 1998). Literature related to the structural dimension includes many facets such as network configuration which addresses features like hierarchy and density, factors that impact the accessibility level of the network (Ibarra, 1992; Krackhardt et al., 2003). The literature also touches on morphology which refers to the notion of networks being created for one purpose of exchange that morph into other purposes of use (Coleman, 1988). Keeping our focus on how social capital relates to levels of individual well-being for members in a community, we do not focus on the more complex innerworkings of the structural dimension so much as its fundamental aspects and their relation to other components of the *Analytical Framework*.

Lesser and Storck (2001) found that organizations use numerous activities that influence structural social capital, such as kick-off meetings, organized brown bag lunches, and information technology (e.g., email and repositories). They also found that face-to-face interaction was important, not only for building connections between members within a community, but also for developing connections between novices and experienced individuals that would otherwise be unlikely to occur. In addition, besides facilitating connections between novices and experienced individuals, they found that newly created relations in communities can help new practitioners learn technical and cultural aspects of organizational memory (ibid).

2.2.2. Cognitive Dimension of Social Capital

The *cognitive dimension* concerns shared representations, interpretations, and systems of meaning which are described as particularly important for shared language and codes (Nahapiet & Ghoshal, 1998). Meaningful communication, an essential part of exchange, requires at least some sharing of context between the parties (Boisot, 1995; Boland & Tenkasi, 1995; Campbell, 1969 as cited in Nahapiet & Ghoshal, 1998).

Connected to the cognitive dimension, Lesser and Storck (2001) found that development of taxonomies within common repositories, managed through human moderation, increased shared context in organizations. In line with this, they found that identification of the author for knowledge assets is important. The cognitive dimension also ties into members' ability to receive and make use of knowledge shared by other members in a community. The ability to do this has been shown to depend on a number of factors, including familiarity with technology and professional demands of specific jobs (Ardichvili et al., 2003; Wenger et al., 2002).

In a study by Chiu et al (2006) where the cognitive dimension was expressed as shared vision, results showed that a shared vision negatively affects quantity of knowledge sharing, while it does increase knowledge quality. This contradicted the hypothesized positive influence of shared vision on quantity of knowledge sharing (Chiu et al., 2006). However, looking to past research, there is a risk of having shared vision stretch into strong norms and mutual identification, causing a sense of tunnel vision within the community. This showcases a need for diversity and is further addressed under *Chapter 2.3.3.4*. Furthermore, this notion connects to the definition of CoP, as examined in *Chapter 2.1.,* specifically how members are expected to have different interests, make diverse contributions to activity, and hold varied viewpoints in order to facilitate a CoP with strong levels of participation (Lave & Wenger, 1991). This implies that if shared vision (a representation of the cognitive dimension) comes at the cost of a lack of diversity of opinion or varied viewpoints, participation in activities of exchange could be hindered.

2.2.3. Relational Dimension of Social Capital

While the structural dimension captures the patterns of linkage, and the cognitive dimension a shared system of meaning, the relational dimension concerns the relationships individuals develop with each other through a history of interactions, causing such things as respect and friendship (Nahapiet & Ghoshal, 1998). It can be considered as the maintenance or reinforcement of existing connections through interpersonal relationships (Lesser & Storck, 2001). Lesser and Storck (ibid) also studied and concluded that communities play an important role in influencing the relational dimension within an organization. Nahapiet and Ghosal (1998) explained that beyond how the linkage between members in a CoP exist, the relationships built between them are the foundation for social capital.

When Tsai and Ghoshal (1998) tested the three dimensions' influence on resource exchange and combination in organizations, their findings imply that the relational dimension was the only one to show a direct positive influence on resource exchange with a p-value less than 0.001. While the other dimensions had a less significant influence on resource exchange, they were shown to have a strongly positive and significant (p-value < 0,001) influence on the relational dimension. This study provides evidence that the relational dimension strongly influences activities of exchange, notably mediated through the structural and cognitive dimension. The relational dimension can be further understood through aspects that define the characteristics or nature of a relationship. Examining these aspects, we opt to utilize the same ones used by Nahapiet and Ghoshal (1998) as a theoretical base.

2.2.3.1. Obligations

The first aspect of the relational dimension examined is *obligations*, referring to a mutual sense of reciprocity, such as the willingness to return a favor (Nahapiet & Ghoshal, 1998). Studying activities of knowledge exchange within organizational communities, Lesser and Storck (2001) found that shared repositories function as shared spaces that created both a sense of mutual obligation as well as trust, another aspect of the relational dimension (see *Chapter 2.2.3.2.*). Related to this finding, the researchers suggested that learning events are not necessarily the key to building relationships with aspects of obligations. Rather, the same researchers suggest that interactions focused around work activities, such as repository management, play an important role in their creation (Lesser & Storck, 2001). This highlights the importance of having interaction tied to a genuine interest or work-related topic, the same values shown to exist at the core of successful CoP (Lave & Wenger, 1991; Lesser & Storck, 2001; Chiu et al., 2006).

2.2.3.2. Trust

The aspect of trust covers the predictability of another person's actions in a certain scenario, indicating confidence in the other party's good intent, competence, reliability, and openness (Nahapiet & Ghoshal, 1998). Trust can facilitate a safe environment where individuals feel comfortable sharing challenges, leading to improved capability of innovation (Lesser & Storck, 2001). Aligning with this, trust has been found to improve the quality of exchanged knowledge (Chiu et al., 2006). Furthermore, interpersonal trust, through quality of relationships, is of great importance for successful exchange, especially during contexts of high ambiguity and uncertainty (Boisot, 1995). This highlights a potentially increased necessity of trust during volatile times, such as the sudden transition towards wide-spread digitalization initiated by COVID-19.

Achieving trust has also been shown to enable easier social exchange, which in turn leads to more trust (Putnam, 1993; Tschannen-Moran & Hoy, 2001). However, somewhat contradictory to this, findings by Chiu et al., (2006) suggest that while trust increases quality of exchange, it does not increase quantity of exchange activities. This interesting dichotomy can potentially be explained through the sense of shared vision, which links to both the cognitive dimension of social capital and the identification aspect of the relational dimension (*Chapter 2.3.3.4.*).

2.2.3.3. Norms

The third aspect, *norms*, is described as the setting of common standards of behavior that individuals are willing to abide by (Nahapiet & Ghoshal, 1998). Trust built over time can create generalized norms of cooperation which further the willingness to engage in social exchange (Kramer et al., 1996). In their study on social capital and activities of exchange within organizations, Lesser and Storck (2001) found that communities need to develop a common set of norms and standards that provide context for the exchange in order to achieve effective activities of exchange. Structured storytelling through oral stories and multimedia technologies was found as a mechanism that firms have used to pass along community memory and knowledge of the organization, which also passes along the underlying norms of the firm (Lesser & Storck, 2001). Through abiding to organizational norms, conformist considerations have also been shown to enable participation in knowledge exchange activities (Vaast, 2004, McLure & Faraj, 2005).

2.2.3.4. Identification

Lastly, the aspect of identification refers to the process whereby individuals see themselves as united with another person or set of individuals (Nahapiet & Ghoshal, 1998). Kramer et al. (1996) found that identifying with a group enhances concern for collective processes and outcomes, and thereby increases the likelihood that the individual will recognize opportunities to interact. Similarly, Lewicki and Bunker (1996) found that group identification increases frequency of cooperation. Studies on organizational participation in knowledge sharing have also found that members of a VCoP actively contribute when they feel strong commitment to the community (McLure-Wasko & Faraj, 2005; Chiu et al., 2006). In addition, groups with

distinctly contradictory identities have been found to have significant barriers to exchange (Child & Rodrigues, 1996; Simon & Davies, 1996). However, strong norms and mutual identification, which exert powerful positive influence on group performance, can also limit openness to information and alternative ways of doing things. This can result in forms of collective blindness that sometimes have disastrous consequences (Janis, 1982; Perrow, 1984).

2.3. Conditions for Participation in Activities of Exchange

While dimensions of social capital provide an understanding of how relationships connect and are characterized in communities, another crucial aspect of CoPs is members' participation in activities of exchange. Beyond being a critical factor for the success of a VCoP (Ardichvili, 2008), material and/or symbolic exchange maintains and reinforces relationships (Bourdieu, 1986). Similarly, Nahapiet and Ghoshal (1998) describe how social capital is not only created and sustained through exchange but that exchange also facilitates social capital. This discussion establishes social capital as a driver for participation in activities of exchange, but there are drivers from outside of the realm of social capital as well. To examine multiple drivers in a coherent way, three conditions for participation in activities of exchange will be utilized - access for exchange, anticipation of value, and the motivation to engage (Moran & Ghoshal, 1996; Nahapiet & Ghoshal, 1998). Reviewed findings in this chapter will be categorized through these conditions.

Within each condition-based category, derived assisting principles are presented. These drive participation in activities of exchange from outside the direct realm of social capital. These are grouped to the most appropriate condition for exchange, but we also showcase how they can influence dimensions of social capital. For the sake of clarity, the principles are analytically assumed to have a one-way influence on dimensions and conditions. However, practically, the influence is likely to go both ways.

2.3.1. Access for Exchange

The first of these conditions is that opportunity for combination or exchange exists (Nahapiet & Ghoshal, 1998). It was described as a fundamental requirement that it is "possible to draw upon and engage in the existing and differing knowledge and knowing activities of various parties or knowing communities" (ibid, pp. 249). Put more plainly - in order for individuals in an organizational community to develop willingness to exchange resources, they first need the opportunity to interact with each other (Lesser & Storck, 2001). Relating to access of participation the notion of critical mass is an interesting concept. For an individual to use a medium, it is paramount that a sizeable number of his or her communication partners are already using it (Zhang & Hiltz, 2003). Conversely, too many participants can lead to inactivity or social loafing (Jones & Rafaeli, 1999). It is worth noting that while the referenced research takes place when a vast majority of virtual interaction occurred through text only, not face-to-face meetings commonly seen today, the concepts remain the same. The technology-advancement was also taken into consideration by Jones and Rafaeli (1999), stating that what is known about critical mass is dependent on the class of technology. Addressing technological communication, it is important to consider individuals' varying ability and comfortability to participate via computer-mediated means (Ardichvili et al., 2003). Findings have suggested that communication technology and the usability of it affects members' engagement in the community (Preece, 2000; Ardichvili, 2008). In scenarios where individuals are reluctant to participate in activities in online communities, allowing opportunity for incremental interaction is suggested to help them find their way in (Andrew, D, 2002). This shows the first derived assisting principle: *Bridging technological gaps leads to increased access for participation*.

Including participants with a diverse set of opinions and interests in interaction connects to a crucial quality of a successful CoP (Lave & Wenger, 1991). In addition, Certain individuals getting excluded may also lead to a split in groups, where contradictory identities may form, something that have been shown to constitute barriers for exchange (Child & Rodrigues, 1996; Simon & Davies, 1996). On the note of inclusion, past research has found that executives that are perceived as accessible and approachable create a context for

effective knowledge sharing (Delong et al., 2000), suggesting the importance of the role of openness in access for exchange. Further, perceived openness in communication, involving both colleagues and management, leads to greater organizational identification and a feeling of "oneness" within an organization (Ashforth and Mael, 1989; Smidts et al., 2001), connecting to the identification aspect of the relational dimension of social capital. Derived from this line of reasoning, we see the overarching trend of our second assisting principle: *Transparent openness and inclusion in a CoP leads to increased active participation and identification*

2.3.2. Anticipation of Value

The second condition entails involved parties feeling that interaction, exchange, and combination will create value, even if they remain uncertain of what will be produced or how. In their review of the concept and its connection to social knowledge, Nahapiet and Ghoshal (1998) highlights how the condition's resulting anticipation of, or receptivity to, taking part in the activity has been shown as an important factor affecting the success of strategic alliances.

Lesser and Storck (2001) found that lunches hosted by service specialists facilitated participation by attracting individuals who had a keen interest in the topic. This highlights the role of genuine interests for members in a CoP, and the effect they can have on creating clear anticipation of value. Strengthening this claim, the "hook" that attracted new participants to an online community was found to be usage of content that focuses on the audience's primary interests (Andrew, D, 2002). Tied together, these insights form the third assisting principle: *Value through genuine interests leads to increased anticipation of value*.

On the track of perceived value creation, Vestal (2006) pointed out the need to clearly communicate a compelling, clear business value proposition to all parties involved in activities of exchange. Feeling a lack of clarity on regarding the most effective ways of sharing knowledge has also been found as a barrier for employees to participate in knowledge sharing activities (Ardichvili et al., 2003). In line with this implied need for clarity, prior research has shown that the existence of clear communication opportunities and open channels for communication lead to active participation, involvement in discussions and decision-making, as well as increased trust (McCauley and Kuhnert, 1992; Smidts et al., 2001), providing a connection to the trust aspect of social capital. The fourth assisting principle is therefore: *Clarity and openness in activity structure leads to increased active participation through anticipation of value as well as trust*.

Findings on anticipation of value also suggests its connection to the identification aspect of the relational dimension of social capital. Studying quantity and quality of knowledge sharing in online communities within organizations, Chiu et al (2006) found that community outcome expectations were shown to significantly and positively associate with members' quantity and quality of knowledge sharing, while personal outcome expectations showed no significant influence on quantity or quality of knowledge sharing. Connecting this to priorly presented findings on identification, it logically follows that this finding relates to individuals' sense of identification with a certain community. As found by Kramer et al. (1996), identifying with a group will enhance concern for collective processes and outcomes, and by Child and Rodrigues (1996) as well as Simon and Davies (1996), groups with distinctly contradictory identities will have significant barriers to exchange. This strengthens the notion of identification playing a crucial role in the facilitation of activities of exchange, this time through an increase in anticipation of value.

2.3.3. Motivation to Engage

The third condition highlights the importance of individuals' motivation to engage in activities of exchange. Even where opportunities exist and individuals anticipate that value may be created through their participation, the individuals must feel that their participation will be worth their time (Nahapiet & Ghoshal, 1998). Nahapiet and Ghoshal (1998) reference Moran and Ghoshal's (1996) view of how this motivation can arise from the expectation of receiving some of the new value created by their engagement; however, later research found that members of a community can actively contribute to activities of knowledge

exchange without expecting clear and tangible benefits. Contributors can instead be motivated by factors ranging from desire to boost professional reputation or image (McLure & Faraj, 2000, 2005; Ardichvili et al., 2003), self-esteem (McLure & Faraj, 2000), or even altruistic motives (McLure & Faraj, 2000, 2005; Ardichvili et al., 2003). Other studies have shown motivation arising from a commitment towards the community (Vaast, 2004; McLure & Faraj, 2005) or even from a moral obligation caused by viewing one's knowledge as a public good that belongs to the organization (Ardichvili et al., 2003), connecting to the obligation aspect of social capital.

A potential reason that differing arguments have emerged relating to motivation for participation of exchange can be explained through the work of Jian and Jeffres (2006). The condition's initial definition falls aptly into Jian and Jeffres' (ibid) utilitarian dimension of employee willingness to exchange information through contribution to electronic databases. This dimension assumes actors' rationality and self-interest in utility-maximizing behavior. Later research is more easily captured in a normative framework (participation due to cultural values and norms) as well as a collaborative dimension framework (participation due to trust, reciprocity, and mutual accountability) (ibid). The collaborative dimension framework in particular clearly ties into the relational dimension of social capital, again signifying the relational dimension's strong role for achieving participation in activities of exchange.

Another angle of motivation for participation comes from a sense of excitement or playfulness. Studying causes for intention to continue participation in activities of exchange in communities, Chiu et al., (2011) found that satisfaction related to said exchange is the most significant influencer. Furthermore, their findings suggest that playfulness is the strongest predictor of knowledge contributors' satisfaction (Chiu et al., 2011). Similarly, Wenger et al., (2002) found that successful communities of practice offer familiar comforts but also have enough interesting and varied events to keep new ideas and new people cycling into the community. These insights form the fifth assisting principle: *Exciting and playful activities increase motivation and fosters continuous participation*.

Finally, an important notion regarding motivation is the difference between intrinsic and extrinsic motivation. Examining willingness to participate and contribute to exchange of knowledge, intrinsic motivation has been found to be a powerful enabler, while extrinsic motivation a less powerful one, sometimes even detrimental (Osterloh and Frey, 2000). The sense of motivation as either intrinsic or extrinsic is a covered in more detail in *Chapter 3.3*.

2.3.4. Additional Assisting Principles

A facilitator role has been found crucial for things such as enabling collaboration, structuring rules of engagement, moderating discussions and processing memberships (Barnett et al., 2012). The role of facilitator can organically form within a group but it is common that the leader or originator of the group takes the role of facilitator (ibid). Relating to the facilitator's potential to create a safe environment for participants to engage, Ardichvili et al. (2003) found that participants feel less hesitant to post information on VCoP forums if they believe the organizational control mechanisms are present that will prevent others from misusing the posted information. As shown by McKnight et al. (1998), belief that the organization's structure and procedures will ensure trustworthy behavior of individual members, and protect the members from negative consequences of administrative and procedural mistakes, will create trust towards the institution in which participation plays out. Furthermore, Morrison and Milliken (2000) indicate silence in an organization can be an outcome of manager's attitudes and beliefs. Managers' fear of negative feedback, implicit beliefs regarding human nature such as inherent laziness, among other characteristics contribute to silence in organizations (ibid). From these findings we distil the sixth assisting principle: *A Competent facilitator enables collaboration (activity of exchange) as well as transparent openness and inclusion (the 2nd assisting principle).*

Another critical aspect to consider is the richness of information during interaction. Even though communication technology has come a long way, there is no denying real-life interaction provides a richer

communication channel than virtual interaction currently can. Nuances such as real eye contact and subtle behaviors give a more tangible interaction. Although generally based off of comparisons between non-verbal communication methods through computer-mediated communication and physical face-to-face communication, a relevant point can nevertheless be drawn from social information processing theory. Derived from the theory, richness of a communication-method affects users' ability to achieve impressions and relational definition (Walther, 2011). This implies that a richer communication method, such as face-to-face compared to virtual meetings, can lead to higher levels of impression and relational definition, factors with notable resemblance to relationship development. This matches findings from a number of papers, suggesting that face-to-face meetings are important to get closer relationships between members in a VCoP (Bourhis & Dubé, 2010; Ardichvili, 2008; Monteiro et al., 2008; Koh et al., 2007). In line with this reasoning, Lesser and Storck's (2001) results showed that physical face-to-face interaction is important for the relational dimension of social capital. It not only made it easier for individuals to identify others with similar interests, but also enables individuals to develop a sense of empathy around common trials and tribulations (ibid). This argumentation provides us with the seventh assisting principle: *Information richness in interaction influences relational dimension of social capital*.

A physical workplace facilitates sporadic, frequent, and casual interaction to a higher degree than virtual ones. Having a location where individuals regularly meet creates opportunity for peripheral participation in community activities (Wenger, 1998). These frequent, casual interactions also have a natural connection to psychological effects that could benefit relations in an organization. Frequently seeing someone, even if interaction or depth of connection is limited, can lead to enhanced perceptions of another individual, as noted through the mere exposure effect (Zajonc, 1968). In addition, Chiu et al., (2006) suggested a number of mechanisms that fosters casual relationships in a VCoP, among which were personal message boards and blogs. The benefits of these casual interactions give us the final, eighth assisting principle: *Sporadic, frequent, and casual interaction catalyze relationship-building within a CoP*.

2.4 Synthesizing Base of Analytical Framework

After the three anteceding chapters of relevant knowledge, we can weave together the base of the *Analytical Framework*. As seen in Figure 3, the initial components for the base of the framework consist of the *dimensions* of social capital as well as the *conditions* for participation in activities of exchange, examined in *Chapters 2.2.* and *2.3.*, respectively. To achieve clarity regarding the interrelatedness of different elements of the final framework, we begin the synthesis by first connecting these two components.

Firstly, we examine the notion of how prior findings have indicated that social capital facilitates successful participation in activities of exchange. The findings on activities of exchange, used to develop the knowledge behind the framework often connect implicitly or explicitly to knowledge sharing. However, when these activities are able to produce quality knowledge sharing and exchange, they can often be seen to do so because of the inherent connection they have with the relationships of the interacting individuals. An example of which comes from how social relations have been found to enable individuals to increase the depth, breadth, and efficiency of mutual knowledge exchange (Lane & Lubatkin, 1998). In line with this argument, Nahapiet and Ghoshal (1998) described how, fundamentally, intellectual capital is a social artefact; knowledge and meaning are always embedded in a social context which is both created and sustained through ongoing relationships. Figure 3 visualizes this through the top block of *social capital* and the connecting arrow down towards the block of *participation in activities of exchange*.

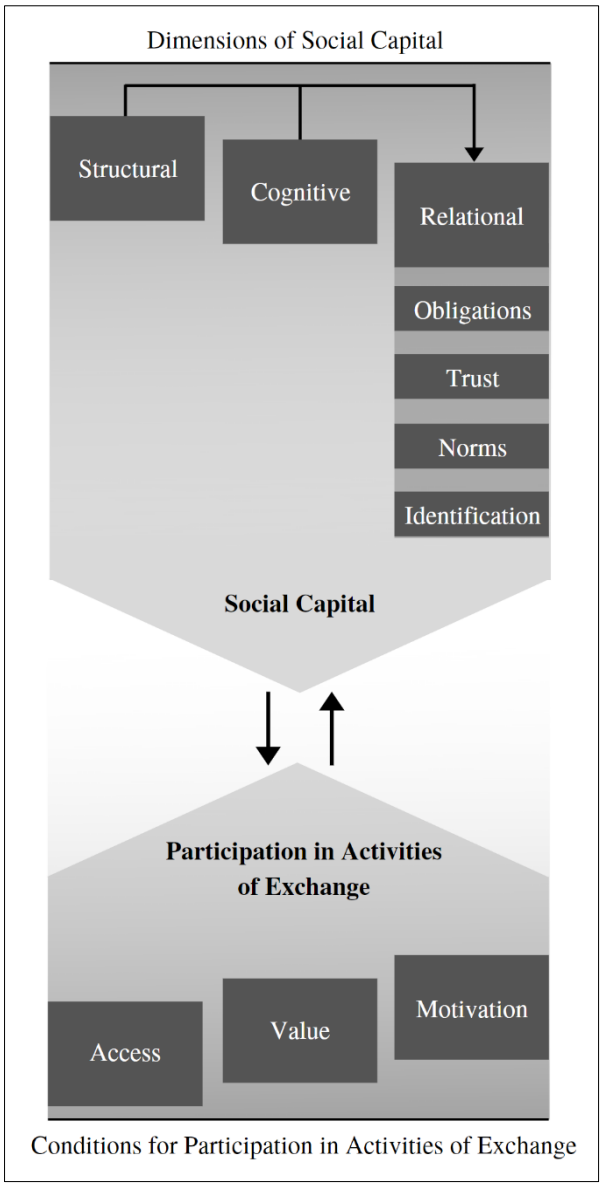


Figure 3: Interrelation of social capital and active participation in activities of exchange

Additionally, combining insights from Bourdieu, (1986) and Nahapiet and Ghoshal (1998), we see how social capital is not only created and sustained through exchange but that exchange also facilitates social capital. This circle of positive reinforcement is visualized by the double arrow between the block of *social capital* and the one of *participation in activities of exchange*.

These insights indicate that anteceding findings regarding activities that increase knowledge sharing and ultimately intellectual capital, are able to do so in large part because they also affect the

relationships of CoP members. This strengthens the notion that insights regarding how to facilitate activities of various exchange also are applicable when aiming to form activities of social exchange that can facilitate meaningful relationships, connecting to the purpose of this thesis. Notably, while the outcome-centric definition of social capital in this study is delimited to the creation of the social capital that creates well-being, the study still explicates facilitation of social capital in the studied novel scenario through meaningful relationships. Given the vast body of anteceding literature's findings regarding social capital's effect on intellectual capital in CoP, this thesis' findings on social capital will most likely implicitly function as a way to also achieve intellectual capital in a CoP.

Assisting principles
Principles tied to access
1. Bridging technological gaps leads to increased active participation
2. Transparent openness and inclusion in a CoP leads to increased active participation and identification
Principles tied to value
3. Clarity and openness in activity structure leads to increased active participation through anticipation of value as well as trust.
4. Clarity of activities and their purpose leads to increased anticipation of value
Principles tied to motivation
5. Exciting and playful activities increase motivation and fosters continuous participation
Additional principles
6. A Competent facilitator enables collaboration (activity of exchange) as well as transparent openness and trust (the 2nd assisting principle)
7. Information richness in interaction influences relational dimension of social capital
8. Sporadic, frequent, and casual interaction catalyze relationship-building within a CoP

Table 1: Assisting principles

Having established and visualized the inter-connectedness of social capital and activities of exchange, we can now tie in the previously derived assisting principles (Table 1) to the initial part of the framework, resulting in the base of the *Analytical Framework*, shown in Figure 4. It showcases the interconnectedness of social capital, active participation in activities of exchange, and assisting principles. This part of the framework will function as tool to analyze the findings from the conducted interviews and effectively discern which of these expected relations remain the same, are altered, or absent in the studied novel work structures. Although we now see how CoP-related research can construct a framework for how social capital is facilitated in a community, it can only take us this far. In order to achieve the purpose of the thesis, we must therefore do an initial elaboration of this base of the *Analytical Framework*. In order to bridge the gap between development of social capital in a CoP and achieving well-being through meaningful relationship we will utilize a different field of research, as described in the next chapter.

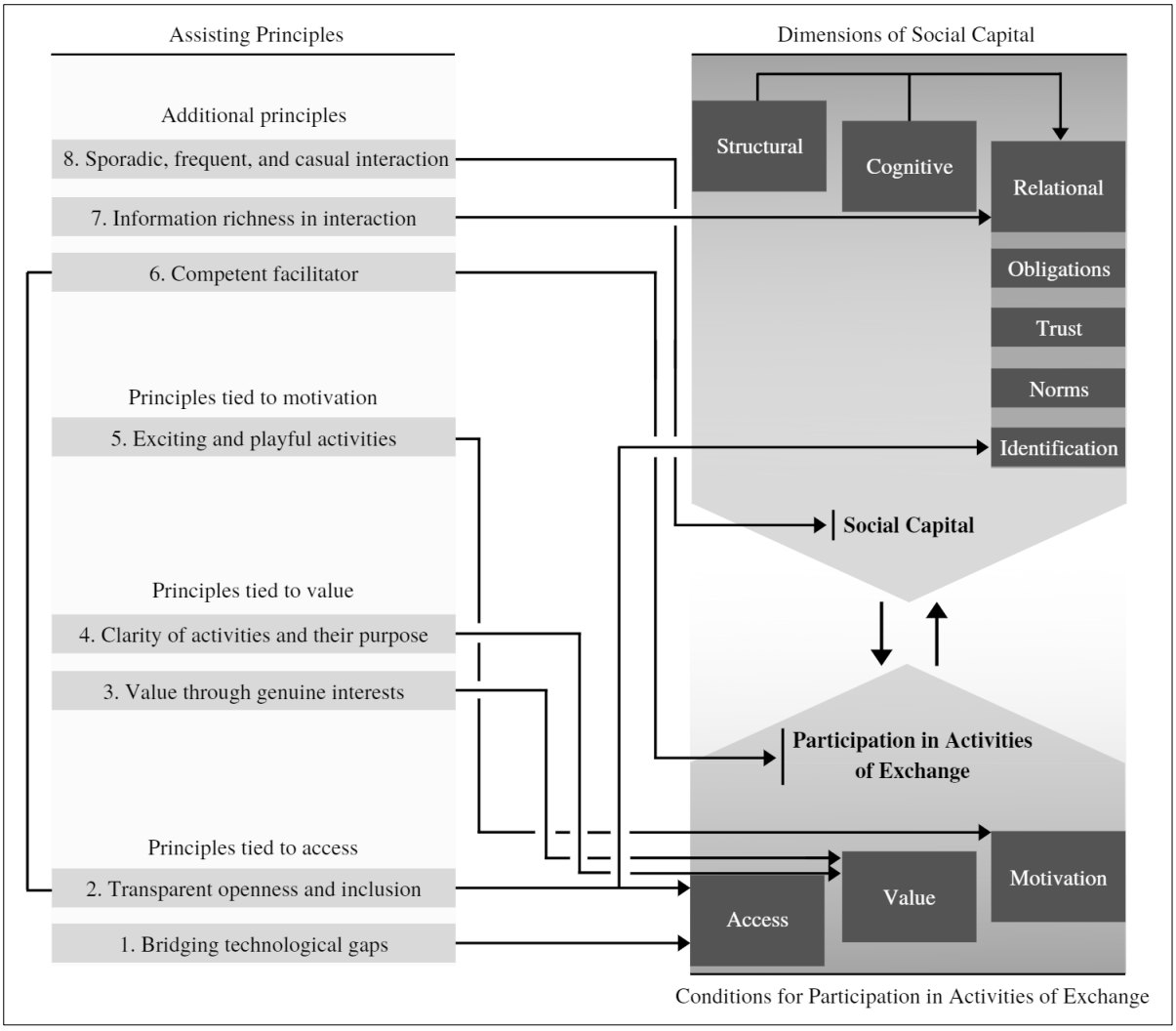


Figure 4: Base of the Analytical Framework

3. Bridging the Gap to Individual Well-Being

To bridge the gap, this chapter is dedicated to elaborating the base of the *Analytical Framework* through insights from research relating to psychology, wellness, and motivation. This will be done in four steps, reviewing *Self-Determination Theory* (*3.1.*), examining the component of relatedness in special detail (*3.2.*), reviewing insights on intrinsic motivation (*3.3.*), and synthesizing the finished *Analytical Framework* (*3.4.*).

3.1 Human Needs and Self-Determination Theory

It is well-recognized that in social and motivational psychology, relatedness is a relatively uncontroversial need, given what is now known about the positive effects of optimism, attachment security, and social inclusion (Baumeister & Leary, 1995). Social relationships within the family and wider community have also been shown to play an important role in the development of human capital (Coleman, 1988). Furthermore, human need for social aspects is fundamentally cemented into psychological research. On the widely accepted and used hierarchy of needs, belonging appears on the third tier as "belongingness and love" (Maslow, 1943). This need is second only to the base needs, entailing the physiological and safety needs. In later revisions of the hierarchy, we see the need for "affiliation" in a similar hierarchical position (Griskevicius, 2010). Both optimism and satisfaction with life stem in large degree from having meaningful relations (Narayan & Cassidy, 2001).

With inherent ties to the hierarchy of human needs, self-determination theory (SDT) provides an empirically based framework of human motivation, optimal function, and wellness (Gagné, 2013). A core aspect of SDT is how it captures three essential psychological needs of individuals that, when satisfied, enhance self-motivation and mental health (Deci and Ryan, 2000). These essential needs are autonomy, competence, and relatedness. Van den Broeck et al., (2016) describe these as non-compensatory entities, meaning the level of satisfaction for one need cannot compensate for a lower satisfaction of another need. Autonomy refers to an individual's desire to feel a sense of freedom, self-direction, and control over their behaviors (Legault, 2017), also described as being the owner of their own choices (Sheldon et al., 2003). The need for autonomy is satisfied when individuals volitionally endorse certain behavior (Deci & Ryan, 1985). The need for competence refers to an individual's inherent desire to feel capable of mastering their own environment, in terms managing tasks and challenges (Harter, 1978; White, 1963). Finally, relatedness refers to having meaningful social interactions and relationships, capturing the degree to which an individual feels connected to other people (Baumeister & Leary, 1995, Gagné & Deci, 2005), or as it was put by Ryan and Deci (2000), the desire to love and care, and to be loved and cared for.

Well-being in SDT is viewed as a positive mental state of wellness (Deci & Ryan, 2000), separated from subjective well-being (SWB) (Ryan & Huta, 2009). SWB is a broad concept that includes experiencing pleasant emotions, low levels of negative moods, and high life satisfaction (Diener, 2009). Similarly, it can also be viewed as happiness, or the presence of positive effect and the absence of negative effect (Kahneman et al., 1999). In SDT, SWB is seen as a symptom of well-being because it is typically derived from the fulfillment of SDT's three basic psychological needs (Ryan & Huta, 2009). Therefore, a lack of SWB's components such as happiness and pleasant emotions can signal a depletion of SDT's psychological needs. SDT views the notion of well-being as better described in terms of thriving or fully functioning, going beyond the experience of SWB (Ryan et al., 2008). In this way, it views well-being as not just being happy or satisfied but interlinked with the ability to mobilize and harness psychological and physical energy to pursue valued activities. This then leads to optimal function, wellness, (Gagné, 2013) and self-motivation (Deci & Ryan, 2000) for the related activities, translating to effective and happy employees in an organization.

3.2. The Importance of Relatedness

Literature surrounding SDT has a tendency of focusing on autonomy and competence more than relatedness (Vallerand, 2000). As put by Deci and Ryan (1991), relatedness has been given the role of distal support in understanding creation of intrinsic motivation. They describe a secure relational base as a necessary backdrop for intrinsic motivation (ibid). Partly defying the prominent role given to autonomy and competence, Vallerand (2000) argues that relatedness may play a crucial function for motivation in certain activities. Solidifying this argument, Vallerand draws on insights from three studies within business and sports, in contexts where social aspects are more prevalent. Furthermore, though value transmission is recognized to be enabled by the needs of both competence and relatedness in Ryan and Deci's SDT (1991), Vallerand (2000) states that "relatedness is the key player in the value transmission process" (ibid, p.317). Value transmission in this context refers to the process where beliefs and values held by certain individuals and groups eventually become internalized by other individuals (Vallerand, 2000). This aligns with presented insights from a CoP context as well. Namely how social capital entails the forming of norms or identification that catalyzes certain behavior (Lesser & Storck, 2001; Vaast, 2004, McLure & Faraj, 2005; among others). Though relatedness often is given a more supportive role with less explicit focus, Ryan and Deci did state that "many empirically based theories assume a desire or tendency for relatedness even if they do not explicitly formulate it as a need" (Ryan & Deci, 2000, pp. 231). There is an interesting similarity between social capital in a CoP context and anteceding studies on relatedness, in that they both seem to predominantly give a supportive, or mediating role, where the main focus instead has been directed towards other factors.

Momentarily revisiting the notion of human needs on which SDT is based, relatedness aligns well with the third tier on Maslow's hierarchy of needs, the need for belongingness and love. Competence and autonomy align closer to esteem needs, in the fourth tier, further away from base needs (Maslow, 1943). Looking at more contemporary revisions of Maslow's hierarchy that dissect the related concepts further, we again see relatedness aligning with "affiliation", further down in the base of the pyramid of needs, whereas competence and autonomy aligns with "Status/Esteem", further up (Griskevicius, 2010). Although SDT do not assume any hierarchical relation among the three needs (Sheldon et al., 2003), this observation does speak for the importance of relatedness as a fundamental human need.

3.3. Intrinsic and Extrinsic Motivation

A central aspect of SDT is the conception that motivation can have either an autonomous or controlled orientation. Autonomous motivation is perceived as intrinsic, coming from within the individual. Controlled motivation means the motivation is perceived as extrinsic, coming from outside of the individual through instrumental means. Performance-contingent rewards such as time pressures, threat of punishment, and certain types of competition are examples of extrinsic motivators, found to often undermine intrinsic motivation (Sheldon, et al., 2003). Generally, when all three needs of SDT are satisfied to a high level, autonomous motivation occurs and when the needs are satisfied to lower degree, controlled motivation will occur instead (Ryan & Deci, 2000). Individuals in an organization reaching a state of autonomous motivation is beneficial for organizational effectiveness, individual engagement, and well-being (Gagné, 2013). As presented in *Chapter 2.3.3.*, intrinsic motivation has been found as a powerful enabler of willingness to participate and contribute to exchange of knowledge (Osterloh & Frey, 2000). Extrinsic motivation was found to be less powerful in this context, and sometimes detrimental (ibid).

Behavior derived from external motivational can become autonomous motivation, however. This can be explained by the concept of locus of causality, defined as an individual's beliefs about the extent to which their actions are determined by external forces (control orientation) or by the self (autonomy orientation). It has been found that means of control associated with extrinsic motivation can create behavior that is perceived as intrinsic, and therefore cause autonomous motivation (Sheldon et al., 2003). One way this

occurs is if methods used strongly resonate with the individual's values and beliefs (Deci et al., 2017). This bears a relevant resemblance to the core of a successful CoP, being formed and maintain through genuine interests (Lave & Wenger, 1991; Lesser & Storck, 2001; Chiu et al., 2006), as well as the fourth derived assisting principle - Value-generation through genuine interests leads to increased anticipation of value. Therefore, this principle could also cause improved autonomy orientation of behavior, even if it was facilitated by external motivation means. The validity of this suggested connection is further strengthened by how the core definition of intrinsic motivation has been described as "the desire to engage in an activity because one enjoys, or is interested in, the activity" (Sheldon et al., 2003, p. 359). Furthermore, the notion that intrinsic motivation is derived from enjoyment of the activity, aligns with the fifth assisting principle of Exciting and playful activities increase motivation and fosters continuous participation.

Given that CoP-contextual social capital is regarded as a catalyzer of relationships through activities of exchange, the importance of activities relating to genuine interests prompts the question of the potential strength of activities of a primarily social nature, which are examined in this study. These could draw on a number of non-work-related interests, more easily facilitating intrinsic engagement and participation.

3.4. Final Synthesis

To connect the insights from individual well-being through SDT with the base of the *Analytical Framework*, we begin an examination of the connection between relatedness and social capital in a community context. A community can entail more than just a sphere in which work and interaction strictly tied to profession is performed. Anteceding findings suggest that emotional attachment to a virtual community (De Souza & Preece, 2004) and a sense of belonging (Jin et al., 2007; Seddon et al., 2008) facilitate motivation for participation. Virtual communities have been defined as an environment where participants obtain value from social interactions, enabling them to maintain existing ties and build new ones (Yao et al., 2015). Individuals who interact in a virtual community have been described to not just seek knowledge and means of solving problems; they also treat it as a place to meet other people, to seek support, friendship and a sense of belongingness (Chiu et al., 2006). As visible from these examples, there is a potential for social benefits in a community, beyond viewing social capital as a driver for knowledge exchange.

3.4.1. Connecting through the Relational Dimension

Considering the insights contributing to the base of the *Analytical Framework*, we see that the dimensions of social capital entail information about the relationships that exist in a community. While the structural dimension shows patterns of linkage, and the cognitive dimension gives a common context, the relational dimension is where the nature or quality of a relationship lies (Nahapiet & Ghoshal, 1998). Connecting this to the definition of relatedness from SDT as the perception of having meaningful relationships and feeling connected to other people (Baumeister & Leary, 1995, Gagné & Deci, 2005), we suggest that the relational dimension is the primary reflector of relatedness within a community. Looking at subcomponents of the relational dimension, we see more evidence suggesting this. Perhaps the most prominent example of which comes from examining identification in relation to the origin concepts that relatedness connects to the needs for "belongingness" (Maslow, 1943) or "affiliation" (Griskevicius, 2010). From the aspects of relational social capital, we find that identification is defined as individuals seeing themselves as united with another person or set of individuals (Nahapiet & Ghoshal, 1998), bearing resemblance to these needs.

Furthermore, relatedness according to Ryan and Deci (2000), is defined as the desire to love and care, and to be loved and cared for. The sense of caring and being cared for connects well with the relational aspect of trust, being defined in part as indicating confidence in the other party's good intent (Nahapiet & Ghoshal, 1998). Trust has also been found to facilitate a safe environment, where individuals feel comfortable to share their struggles (Lesser & Storck, 2001). Even norms and obligations can be seen as connected to relatedness, although perhaps not as clearly as identification and trust. Defined as the setting of common standards of behavior that individuals are willing to abide by (Nahapiet & Ghoshal, 1998), abiding to norms

does entail a sense of community commitment or at least acceptance. As found by Vaast (2004) and McLure and Faraj (2005), this commitment towards a community has ties to motivation of participation in activities. Obligations, similarly, have been found to work as a motivator for participation when individuals perceive their knowledge as a good belonging to the organization (Ardichvili et al., 2003).

3.4.2. Finalized Analytical Framework

Through the explained connection between relatedness from SDT and the relational dimension of social capital, we now tether our understanding of well-being to the base of the *Analytical Framework* through fulfillment of *relatedness*. The nature of SDT's non-compensatory components means that in order to achieve well-being, the needs of autonomy and competence also need to be filled. Here it is important to note that this thesis is not proposing a comprehensive solution for well-being through all SDT-components. Rather, it aims to address the one component indicated to have the most risk of decreasing from the transition into the novel work structure. The visualized connection between organizational performance (through organizational effectiveness) well-being, relatedness, and the relational dimension of social capital, is visualized in Figure 5 as the addition on the right-hand side of the base of the *Analytical Framework*, constructed in *Chapter 2*. Derived from the last chapters argumentation, the most clear connection between aspects of relational social capital and relatedness are seen as Identification and Trust, marked by underlined text in figure 5. The sense of motivation existing as intrinsic or extrinsic is also an important insight, accompanied by the suggested possible effect on autonomy orientation posed by the 3rd and 5th assisting principle.

These connections result in the finished *Analytical Framework,* showcasing the deductive elaboration of the base of the *Analytical Framework*, bridging of the gap between CoP-derived theory and well-being through SDT.

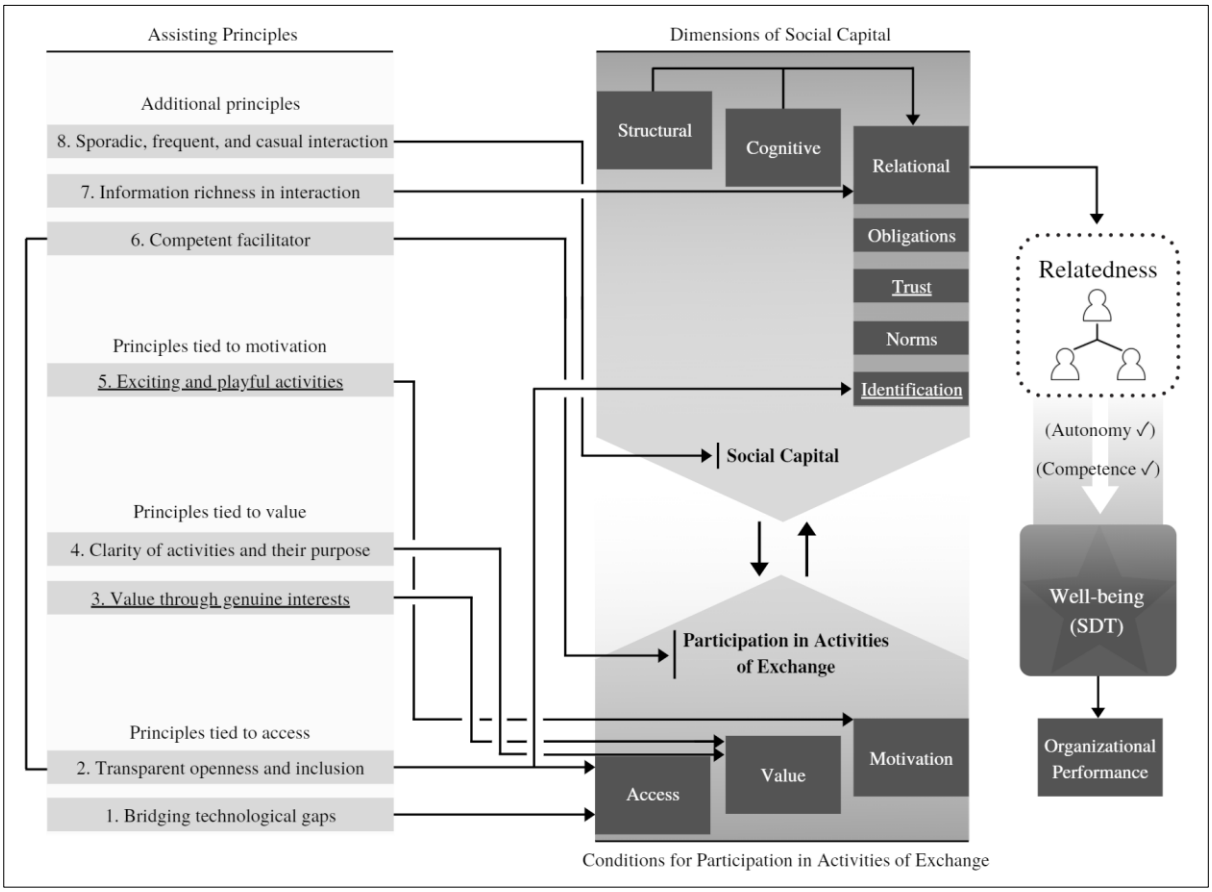


Figure 5: Analytical Framework

4. Method

This chapter describes the methodology of the thesis through five steps: Research Design (*4.1.*), Sample (*4.2.*), Data Collection (*4.3.*), Data analysis (*4.4.*), and Data Quality Assessment (*4.5.*).

4.1. Design of Research

This chapter presents a clarification of the research process and approach.

4.1.1 Ontological and Epistemological Considerations

Stemming from the purpose and research aim of the thesis, a constructivist and interpretivist stance is taken as we conduct our case research. The goal is to explore through the lived experiences of our respondents by considering the meanings they themselves ascribe to their reality (Welch et al., 2011), with the intention of understanding "the world of human experience" (Cohen & Manion, 1994, p.36). Relating to this stance, we employ the Gioia methodology in the sense that we assume the respondents are knowledgeable agents who can explain their thoughts, intentions, and actions, and we also recognize our own capabilities (Gioia et al., 2013). This interpretive perspective of understanding the phenomenon through the eyes of the actors living in it applies naturally due to the thesis' focus on social capital and relationships.

4.1.2. Theory Elaboration

Considering the whole process of the thesis, including the preceding theory phase, the overall goal of the thesis is of a theory-elaborating nature, entailing elaboration in two parts - both a priori and a posteriori.

4.1.2.1. Theoretical Process

The *Analytical Framework* is deductively derived using theory, and constitutes the a priori portion of the theory elaboration method. As put by Ketokivi and Choi (2014), there are many ways in which theories can be elaborated, one of which is by introducing new concepts. In doing this, "[theory elaboration] seeks situational groundedness using a similar logic as grounded theory, with the exception that it engages in more theoretical abstraction" (ibid, pp. 236). In line with this and considering grounded theory implies the process of theoretical abstraction from data that does not privilege any one theory (Holton, 2007), this aligns with how the *Analytical Framework* presents derived interrelations from varying constellations of communities (CoP, VCoP, "normal" communities), as well as connected generated implications to well-being through SDT. In the theoretical process, a form of theory elaboration has therefore taken place.

4.1.2.2. Purpose of Case Research

In the a posteriori component of elaboration, the *Analytical Framework* is abductively elaborated in a contextual testing through case research. As described by Ketokivi and Choi (2014), in case research, abductive reasoning involves modifying the logic of the general theory in order to reconcile it with contextual idiosyncrasies. In our case research, insights from the *Analytical Framework* are utilized to inductively explore in which ways the novel context aligns with, differs, and offers new phenomenon, as compared to said framework. Also, aligning with the purpose of our case research - "the contextual idiosyncrasies are interpreted as empirical elaborations of more general concepts and categories" (ibid, pp.236). This type of reasoning provides advantages of both deductive and inductive methods, and is suitable for interpretive case studies (Piekkari & Welch, 2018).

4.1.2.3. Fulfilling Duality Criterion

We argue that the clarity in deduction of the major overarching connections drawn between components in the *Analytical Framework* give a more solidified, less fleeting truth. This argumentation arises from clear ties between these connection and empirically tested and well-acknowledged studies covered in the theoretical process of the thesis. The utilization of these again aligns with Ketokivi and Choi (2014, pp.236) - "In establishing a sense of generality, theory elaboration relies on general theory as well".

The subcomponents or underlying reasons, through which these larger overarching themes relate, are believed to showcase a more fleeting truth, one which contextual application have a larger possibility of altering. This reasoning brings with it that the more "zoomed in" and intricate the subcomponent is, the more "fleeting" its truth is. Meaning the truth or relevance of sub-component's sub-components, is arguably more volatile than the sub-component itself. Exemplified - while the truth in that "clarity and openness in activity structure" primarily influences the "trust" aspect of relational social capital is more fleeting, the notion that the relational dimension, in which the aspect of trust resides, impacts participation in activities of exchange holds a less fleeting truth. By contextual application of the *Analytical Framework* the examination relating to both the intricate subcomponents and the antecedently tested larger themes will take place. In this way, we aim to obtain a broader theoretical appeal, but also relevant situational groundedness in the novel context the framework was designed for. The result of which would entail meeting the duality criterion as defined by Ketokivi and Choi (2014).

4.1.3. Case Research Characteristics

As previously described, the interrelated nature of social capital and well-being is quite complex, especially in the context of the studied novel work structures. The rich, detailed, and evocative data that this naturally creates makes a qualitative method suitable (Edmonsson & McManus, 2007; Flick 2014). Furthermore, Gioia et al. (2013, pp.16) argues that "the single most profound recognition in social and organizational study is that much of the world with which we deal is essentially socially constructed", and as described by Alvesson and Sköldberg (2009), qualitative methods are exceedingly useful when examining phenomena that are socially constructed. In the studied phenomenon of the thesis, social capital is at the center of attention, making the suitability of a qualitative approach especially clear.

More specifically, Gioia et al.'s (2013) systematic and abductive approach will be utilized in this thesis to achieve qualitative rigor when collecting and analyzing data. The methodology, also known as the "Gioia methodology", developed over many years (Rheinhardt et al., 2018) and is explicitly focused on achieving high standards of rigor, which oftentimes is lacking in qualitative approaches (Bryman, 1988; Popper, 2002 [1959]). Part of a qualitative rigor comes from its transparency, allowing the reader to independently judge the credibility of processes and conclusions (Rheinhardt et al., 2018). Therefore, we also strive to provide holistic descriptions of the choices made, and the circumstances with a possible effect on the methodological process. Utilizing the Gioia methodology we aim to create sense making, as opposed to a comparative case study. This means findings will be grouped in order to form a best possible generalized understanding of the findings' implications. In doing this, individuals' differences are not disregarded but rather considered on an aggregate level.

4.2. Sample

To provide clarity to the sampling method, this chapter will cover selection of industry and professions (*4.2.1.*), sampling of respondents (*4.2.2.*), and anonymity (*4.2.3*).

4.2.1. Selection of Industry and Professions

Considering the wide-spread nature of the transition into novel virtual work structures, there were numerous industries and professions that could be studied. In the selection process, we considered the previously described duality criterion (see Ketokivi & Choi, 2014) by striving to be situationally grounded, but at the same time able to reach findings in a relevant context for the purpose of the thesis. A number of selection criteria were used in the selection of studied firms: Firstly, choosing an industry where we could find employees with varying degrees of tech-savviness in varied group constellations. Furthermore, the firms considered had to be operational in Sweden, in order to unlock insider-advantages such as easier entry, a head start in topic knowledge, and understanding nuanced reactions of participants (Padgett, 2008; Kacen & Chaitin, 2006). Our third requirement was related to the studied novel work structure. The section of the company to be studied would need to have had a significant increase in remote working (that was

still in effect and had lasted between one and eight months prior to interviews). Additionally, the employees' tasks could not be dependent on physical location, meaning they align with the virtualized work structure of interest. This meant locating work structures where social interaction took place solely, with few exceptions, in the virtual sphere. Finally, the professional roles must have the ability of at least some interaction with employees from teams other than their own, allowing for the study of potential cross-divisional relationships as well.

In our search, we found that firms within manufacturing could fulfill these requirements aptly. After contact with the first manufacturing company, Company A, interviews were also conducted with Company B, a smaller sized manufacturing company, to further increase generalizability. Information regarding size of the companies is presented in Table 2 where size indicators have been approximated in order to ensure anonymity. Introducing another company helps separate individual specific from firm-general answers in a general sense (Lincoln & Guba, 1985), and the size differences allow potential size-related effects from either company to be mitigated by the other. Both companies operate in the middle region of Sweden and focus on B2B, providing components to a longer line of manufacturing as well as finished products.

Size indicators	*Company A*	*Company B*
Employee count	1500+	51-100
Approximate revenue 2019 (tsek)	4 000 000+	250 000+

Table 2: Company revenue and employee count

4.2.2. Sampling of Respondents

Contact with each of the companies was initiated through higher-level HR-managers. After discussing selection criteria and details regarding the process with the HR-contact in Company A, an initial intercompany-email was sent out to a number of executives and high-level HR-positions. Guaranteed anonymity was explicitly established in the initial email and maintained in every step of the process. The sampling rationale included the importance of achieving interviews with individuals with varied experiences and viewpoints on the studied scenario. The possible respondents contacted via the intercompany-email targeted the individuals with the most relevant insights regarding the thesis research questions. From the list, the first five respondents were selected.

Through the initial interviews with higher-level executives at Company A, discussing the purpose of the thesis and the stated selection criteria, professions relating to IT and sales were the targeted recommendations for following interviews that were conducted down to an individual employee-level. While these professions were the subject of detailed examination, a few insights (especially from higher-level managers) regarded other employees in other areas of the firm. Any insights regarding employees with roles outside of IT or sales also fulfilled the third and fourth criteria mentioned in *Chapter 4.2.1.*

The initial high-level managers and executives that were interviewed facilitated the start of chain sampling (Bryman & Bell, 2015) of the following managers, executives, and employees for interviews. Chain selection, or "snowball sampling", is a useful methodology in exploratory, qualitative, and descriptive research (Baltar & Brunet, 2012); however, it also enables potential natural biases in the sampling process. These risks and the mitigation of them is addressed in *Chapter 4.5.2.*

For Company B, an interview was initially conducted with the HR professional at the company to get overarching insights, functioning similarly to the initial interviews with higher-level managers and executives in Company A. In line with the reasoning derived from initial interviews in Company A, individuals with professions within IT and sales were targeted for further interviews in Company B as well, also allowing

for increased comparability between respondents from the two companies. The initial manager respondents were reached through direct contact, established through consultation with the initial HR-contact in the company. These managers then naturally directed the following interviews down into their teams (again with consideration of the aforementioned sampling rationale). The overview of interview respondents and their role is seen in Table 3.

Category	*Role*	*Company A*	*Company B*
Higher-level managers of executives	HR/Well-being	6	1
	Communication & technology	3	0
IT	Manager	1	1
	Employee	2	1
Sales	Manager	1	1
	Employee	1	3

Table 3: Firm Sample

4.2.3. Anonymity

Companies, employee names, and roles have been anonymized and generalized to ensure a safe environment where honest answers can be achieved (Bryman & Bell, 2015). In the thesis chapter *Findings*, fictional names have been given to respondents. Beyond facilitating honest answers, anonymity enabled a more representative selection of respondents by allowing managers to pick employees with varying degrees of social satisfaction for interviews in the snowball process without fear of being presented as a "bad manager" in the thesis. In one of the presented quotes in Chapter 5.2.4., the respondent wished to remain completely anonymous, and thus had their fictional name replaced with "anonymous".

4.3. Data Collection

This chapter discusses the methods used for data collection from the sampled respondents, specifically, it outlines the data collection process *(4.3.1.),* the use of semi-structured interviews *(4.3.2.),* and interview guide *(4.3.3.)*.

4.3.1. Data Collection Process

As outlined in *Chapter 4.2.2.*, we began the data collection process with contact from key high-level HR executives at each company. Our initial interview with Company A gave insights regarding how the novel context had affected the company from a high-level perspective. This allowed us to optimize the interview guide for the initial five semi-structured interviews with Company A, and gave indication of how to approach the initial contact with Company B. The first five respondents selected from Company A were considered as employees with their own opinion and experiences regarding the studied scenario. They were also considered for their manager role, providing information about the wide-spread trends and feelings of employees within their own teams. All interviews were conducted in a semi-structured manner, with an interview guide that was updated after subsequent interviews. Details about the structure of interviews and the interview guide are outlined in the following chapters (4.3.2-3).

4.3.2. Semi-Structured Interviews

Semi-structured interviews were used for data collection. The semi-structured approach was chosen because it is a well-established approach for qualitative research (DiCicco-Bloom & Crabtree, 2006). The semi-structured method allows the relevant topics to be covered, while also permitting flexibility based on the individual respondents. Following this method, the questions and focus areas of the interviews changed based on the interviewee. Adaption to the particular knowledge or insights of the respondent was possible, as well as readjusting focus further towards areas that had achieved less saturation from previous answers. For these reasons we see the method as a strong choice.

Due to the COVID-19 pandemic, interviews could not occur face-to-face, the preferred scenario. Instead, we sought to hold all interviews using video calling in Microsoft Teams, which occurred in all but one interview where the interviewer chose audio calling only. In this case, we left our video on. Prioritizing video calling over audio was based on the aim of building affinity and rapport with the interviewee, to ensure high quality data collection (Lee & Aslam, 2018). Affinity was also improved by the researcher's emphasis on establishing a feeling of respect, and by conveying genuine interest in both the topic and the personal lived experience of the interviewee.

Each interview was recorded and transcribed verbatim. The total interviews amounted to 21, at which point we saw sufficient insight saturation to draw the desired conclusions confidently. Coding of interviews are seen in Appendix 3.

4.3.3. Interview Guide

The use of an interview guide was employed (Bryman & Bell, 2015), where an early-stage literature review provided the base of the interview guide. We opted to make the guide prior to deep comprehension of the literature to avoid confirmation bias (Gioia et al., 2013). The guide was developed to cover sufficient topics to generate enough data for answering the research question in a thorough manner, while trying not to introduce an excess of unnecessary information. Following the abductive method, the interview guide was refined for future interviews based on the preceding ones, incorporating new concepts that emerged throughout the study and removing topics which appeared less relevant throughout the study (Lee & Aslam, 2018). The evolving interview guide allowed prompts for the researcher in the interviews but framing questions in a leading way was avoided to maintain accurate data collection (DiCicco-Bloom & Crabtree, 2006). In general, the interviewer attempted to incorporate the interview guide topics within the natural flow of conversation, a strength allowed for by the semi-structured interview method.

4.4. Data Analysis

In analyzing the data, we have applied the Gioia methodology (Gioia, 2013) in the sense of structuring and grouping insights from interviews. In accordance with the methodology, we firstly explain each emergent theme through the transparent reality of our data. We do this by providing data excerpts from verbatim transcription, striving to keep length (where relevant) and leave quotes uninterrupted (where reasonable). These excerpts are later grouped into codes, collectively showing the main trends from the interviews without adapting to fit any theory. After this, these codes are applied and analyzed in conjunction with the *Analytical Framework* and its interrelated components. Finally, the combined insights from the interviews and the *Analytical Framework* are used to analyze the complex reality of the studied scenarios and show how relationships are developing in the novel virtual context.

4.5. Data Quality Assessment

This chapter discusses an assessment of data quality for the thesis, covering reliability (*4.5.1.*) and validity (*4.5.2.*).

4.5.1. Reliability

Reliability is assessed in an external sense by whether it is replicable, and in an internal sense by the level of subjective influence of the researchers on the study (Bryman & Bell, 2015). In regard to external reliability, the aforementioned transparency as a part of qualitative rigor, along with clear descriptions of the research process are aimed to ease replicability. Although qualitative case studies naturally have a difficulty in achieving this (Bryman & Bell, 2015).

Internal reliability was partially achieved through the use of semi-structured interviews that allowed for the emerging insights from interviews to guide the discussion instead of the researcher's preconceived ideas. Our role as researchers brings with it a responsibility of acting in a manner that produces subjective

insights. We must therefore expose the underlying assumptions on which arguments and stances are built (Ray & Holland, 1999). Addressing these assumptions is important to obtain perspectival subjectivity, through which we become aware of how our interpretations are shaped, allowing for mitigation of these to the best of our ability, including avoidance of the selective use of data to support prior assumptions (Sandberg, 2005). In the study, we employed devil's advocate self-questioning techniques to attempt to limit researcher interpretation bias in the study (Gioia et al., 2013).

Furthermore, given the subject of the study pertains to the consequences of lockdown-practices in Sweden, the consequence of higher levels of social isolation becomes a naturally shared context between interviewer and interviewee. Such familiarity requires constant reflexive alertness to avoid projecting our own experience onto the respondents (Berger, 2015), making this sense of reflexivity an especially important notion that has been considered in the thesis process.

4.5.2. Validity

Validity addresses integrity of insights generated in the research (Bryman & Bell, 2015). Internal validity concerns the validity of interpretation of data that carries insights into stages of theoretical ideas, something qualitative research achieves quite naturally (ibid). However, the main risks of chain sampling, a considerable element of our sampling method, are selection bias and representativeness which limit the external validity of the sample (Baltar & Brunet, 2012). Mitigating selection bias, we strive to deter referents from referring based on convenience, rather than relevance of the referent. Practically done by clearly expressing the sampling rationale (see *Chapter 4.2.*) as well as dedicating a section of each interview (conducted with a referrer) to find referents together. As described by Magnani et al., (2005) the sample composition is influenced by the choice of initial seeds, which is the reason for our effort of establishing the right initial referents, as described in (*Chapter 4.2.*).

Selection bias arising from managers avoiding referring to groups and individuals where social capital has declined to avoid risking perception of being a bad manager was mitigated in three ways. First, through anonymity, as explained in *4.2.3. Anonymity*. Second, by expressively stating that the purpose of the study is to examine themes of both positive and negative developments of social capital in an exploratory way to gain insights, and not to point out flaws such as a lack of leadership. Third, by conducting initial seed-interviews with carefully selected respondents in top-management positions. The rationale here was that they likely would be more concerned about overall trends in the company, rather than any specific (anonymous) manager being perceived as good or bad. Meaning they would have a good ability to (and were requested to) refer to managers that have either succeeded or had more severe challenges in creating well-being in the digitalized organization.

Atkinson and Flint (2001) suggest that the problem of selection bias may be partially addressed, firstly through the generation of a large sample and secondly by the replication of results to strengthen any generalizations. The possibility of comparing the sample with official statistics and with similar demographic data can improve the representativeness of the sample (Witte et al., 2000). While the scope of the conducted study and the intricate level of examination of each respondent limits the possible samples sizes, we attempt to mitigate this to achieve the best representativeness possible. This was done mainly through an executive-positioned respondent that was able to reveal findings from a company-wide survey (1500+ employees) which helped cover some of the main themes of the research area. By having higher-level managers as respondents, we also achieved insights on other employees' experiences (although these were not considered as important as first-hand experiences). In these ways we aim to produce generalizable insights that can achieve good levels of transferability.

5. Findings

In this chapter we present empirical findings thematically divided into in 5 groupings, (5.1-5.). Derived from these, thirteen first-order codes are then presented (5.6.).

5.1. Meaningful Relationships Have Decreased, While Flexibility and Ability to Perform Remain Positive

An important finding is that uniformly, with very few exceptions, meaningful relationships were perceived as to have decreased by respondents from both firms. Furthermore, this scenario was reflected in company-wide survey results with over 1500 employees conducted by Company A.

> *"[In the study. Regarding] how you've perceived workload during corona, how you've experienced connections with you manager, like, what things you've been missing and how it's been working from home (…) it was shown that employees missed this… team-feeling; that you couldn't meet in the same way anymore, and there was a need to be able to find, like, can we still create activities together."* (Sarah)

Certain respondents also tied a the lack of meaningful relationships explicitly to motivation, unprompted by any related question.

> *"For me, inspiration, engagement… meaning for me, to have this specific job in this firm, is very tied to its tasks, but most importantly to the persons (…) this has changed a lot for me, and this has also led to that my motivation for work, is something I've had to think about a lot (…) belongingness has decreased in many of the formal groups I am part of (…) there is no depth in those conversations (…) I think this has gone down generally speaking. What I base this on is that many of those I've been in contact with, they're looking at other jobs."* (Sofia)

Simultaneously, a majority of respondents indicated an overall increase or unchanged ability to perform their work well for example stating, *"for most people, you have been able to continue with your job, even though you're sitting at home with the tools available. That's my feeling and my experience"* (Sandra). Also the implied flexibility of remote working was perceived as one of the more prominent benefits of the virtual work structure, *"there is a different kind of flexibility to [the novel work structure] that people appreciate"* (Meghan).

5.2. Relationships

Here we present insights regarding relationships and how they have been affected.

5.2.1. Strongest Relationships are Thriving and Generating Interaction

Relationships that were already strong were being maintained well according to several respondents. *"I perceive that we've been able to retain [good relationships within the team], but I think it comes down to how we were a well-established team already before"* (Meghan). Furthermore, these strong relationships were shown to generate virtual social interaction organically - without a manager in the role of facilitator stepping in.

> *"I set up a team-fika… because I felt like I needed to get everyone in there but [the group of employees with good relationships] had already moved in there… So they already had their team-fika (…) they fixed that on their own"* (Kevin)

It was also shown that, although more uncommon, when establishing of new relationships were possible, these led to returned initiation of social interaction, often expressly tied to feeling of likeableness.

> *"I've been trying to meet those that I don't know that well, that I thought I could learn things from. (…) And I've even picked people I'm a little scared of as well *laughs* (…) I've gotten some new friends, well, maybe not 'friends' but it's been really good, I could really recommend it. (…) One of these people got in touch yesterday, and I got really happy, and he asked if he could call me (…) and I noticed when he was going to*

communicate with [another manager], he was going to send an email instead. (…) so it is because we have another type of relation that we'd call each other" (Rebecca)

Continuously participating in social interaction were also shown to generate motivation to interact more over time. Regarding a timeslot dedicated for social conversation at the beginning of morning meetings, one respondent said:

> *"I can tell you that in the beginning, then we were done in 5 minutes (…) but as time has passed, this has increasingly become our… our social interaction. Now we book half an hour and then we talk for as long as we need."* (Sandra)

5.2.2. Acquaintance-Level Relationships are at Risk

Vice versa, less strong relationships were shown to be at risk of disappearing in the novel virtual structures. As put by one respondent, *"What I've noticed when I'm working from home is that I'm forgetting the names of people that I don't see that often, I mean everything has shrunk"* (Rebecca). The difference in maintenance depending on preexisting strength is described by another respondent, *"Maintaining [relationships] is something I for sure think people have done with those that… you've had a good relationship with since before."* (Amanda). The fading of acquaintance-level relationships is concretized by a third respondent,

> *"Those that, when you actually are in the physical office meet and have fika with; those that you go exercise with, those you always sit together with in the lunch room, although you don't work in the same division, those are really, really hard to maintain in this environment we are in now; it's basically impossible, you have to be really good friends to get in touch with someone"* (Sandra)

5.2.3. Wide-Spread and Shallow Relationships Increase but Do not Seem to Create Strong Relationships

It seems that while acquaintance-level relationships are fading, wide-spread, more shallow networks are still common, *"The small chats, the small conversations, have increased in occurrence; because they occur faster, and are more easy [in the novel context]"* (Sofia), *"[the novel context] has made us get a much bigger network (…) because it's been very easy to, like, invite everyone to this meeting"* (Sarah)

In tandem with the wide-spread and shallow relationships increasing, meaningful social connection seems to be fading, *"Working digitally, we know that we have… that we miss the social interaction"* (Anna). Some respondents also suggest that there is a trend of shyness being self-enforced in the scenario, *"Some are so much more shy, and somehow, this becomes even more apparent digitally. I think… for them it's even more hard to initiate contact via phone than in real life"* (Rebecca).

5.2.4. Inclusion Fosters a Sense of belonging and Ability to Interact

Including more employees to take part in social meetings in the one team was also shown to increase their sense of belonging to the group. Operating as a lower manager in a team, one respondent said the following: *"and now I've forced [the main manager] to set up morning meetings where everyone is included (…) and [the included employees] never felt more belonging (…) which they've also told us"*. Furthermore, a lack of inclusion was shown to discourage interaction, where employees instead relied on other persons for interacting. A respondent that wished to receive additional anonymity said,

> *"I have one boss that is not that including, so I feel that I'm not, like, getting that much information from other parts of the organization, so that's another reason to have meetings with other people."* (Anonymous)

Another important notion in increasing inclusion is the need for employees to have the technological proficiency to interact through the used platforms,

> *"People that normally might take a long time to learn [proficiency in using the digital communication applications], just have to learn it because otherwise they're not going to part of it, you know… (…) I have one older employee (…) he gets a little bit forgotten, I almost forgot to mention him even now"* (Kevin)

Connected to belonging, there were also indication of how it instilled a sense of trust in the group, an explicit statement of which was, *"the main thing, regardless of (…) well, anything, it is the sense of belonging. (…) if we don't have the sense of belonging, then we lose engagement, we lose trust, we lose… like… both happiness and ability."* (Anna).

5.2.4. Number of Interacting Employees Affect Ability to Interact

Firstly we see respondents say that it is important for all individuals in a group to join social meetings,

> *"If you want to make things like [social interaction] work, everyone has to be down. Because the moment (…) you notice there is someone, that has something 'better to do', not prioritizing, not able to make it, then it doesn't work and it's going to fizzle out."* (Sandra)

Furthermore, respondents indicate how an upper limit, exists as a consequence of the communication technology used, *"Then sometimes we're together in smaller groups, that makes it a little bit easier to talk, when we're not fifteen, but there's four of us then it's easier to say… well to talk."* (William)

5.2.5. Likeableness is an Important aspect of Relationships

Regardless of activity, likeableness was a reoccurring concept, leading to strong relationships. In relation to what made her team successful in achieving active participation in social meetings, Sandra stated,

> *"I think that all of us really like each other, everyone is genuinely concerned about each other's well-being; we have a really fun time together; we are comfortable speaking to each other (…) you talk about anything – we know each other well, or, many are good friends."* (Sandra)

When being asked what it was that made her relationship with another employee strong enough to facilitate mutual initiation of social interaction through videocalls, Rebecca responded, without hesitation or further comment, *"Because we have a stronger relation, and because I like him and he likes me"*.

5.3. Motivation for Social Interaction

Here we present insights regarding motivation for social interaction and how this have been affected in the novel context.

5.3.1. Differences in Individuals Affect Motivation to Interact

An initial insight comes from the fundamental and reoccurring notion of persons as different. Firstly, personality-traits such as extroverted or introverted tendencies were found to enable or constitute barriers for social interaction. One respondent stated, *"You could say generally that I'm maybe the most social in our group and that I feel good when meeting others, so I've searched for connection outside of [their primary group]."* (Rebecca). Another, showing stronger barriers for participation said that:

> *"For those that are very, like, extroverted (…) [openly accessible virtual fika-rooms] would fit very well. For another person, for example me, who is more introverted, (…) I would like to be able to scan who… is there someone I know here? Is there someone where I feel like oh, here I can connect with someone"* (Jennifer)

Personal factors arising from individuals' private scenario were identified as affecting motivation for taking part in social interaction, exemplified by Sandra, *"Depending on which personality you've got and what, like, your personal situation looks like, [check-in, social meeting] is an incredibly important social interaction."*.

5.3.2. Work-Tasks and Tangible Benefits Motivate Interaction but are not Great at Building Relationships

Several respondents reported that work-related meetings and interactions were had in similar frequency as previously. Connected to this, some respondents stated that there needs to be a benefit for participants is important for motivation to interact. "I think people need to see some kind of benefit… preferably from both sides (…) there needs to be some kind of purpose." (Rebecca). Virtually, work-related activities seemed to be more focused on tasks, and have less of an effect on relationship-building,

> *"You completely miss this spontaneous, like, coffee-talk, and interaction with different divisions that you don't have booked meetings with now. (…) It is very planned right now. (…) seeing how people are feeling, or… how people behave, [is] something that you miss completely now. Because now it's just 'into a meeting' and maybe a little talking in the beginning but then there is focus on the question."* (Jennifer)

5.3.3. Playfulness and Non-Work-Related Activities Motivate Interaction and Build Relationships Better

Another type of activity, that several respondents instead felt there were a significant lack of, was those with a more primarily social nature. Here some saw difficulties in achieving these activities, but also pointed out the potential benefits of them. Some implied that something was needed to motivate interaction but not necessarily tied to work, *"I'm sure it can be challenging if you don't have a clear… mission."* (Sandra), one respondent exemplified, *"different meetings where each meeting has a theme (…) such as a subject or a question or something that can create engagement"* (Sofia) as a way of creating engagement in social activity.

Gamification or the use of playful elements to achieve motivation were also brought up as a way to facilitate additional motivation for social interaction.

> *"If we're looking at the social part (…) we always used to have these card games (…) and that gave something… that's something I've thought about, it would be fun to have something… Virtual card games or something (…) something more than just sitting and staring at each other"* (Mark)

A notion other respondents agreed with,

> *"I think it sounds like a good idea to use some sort of gamification. I know a lot of other teams have added things like this, (…) I absolutely think it could be something that could lift up a digital AW or a digital fika, whatever you have."* (Sandra)

While others were not as fond of the idea, *"I think it attracts certain types of people, but will not be a fit for everyone"* (Rebecca).

How incentives purely through work-related benefits, where no social interaction occurs, can be detrimental to relationships was put into a concrete scenario by one of the respondents. Firstly, on the topic of increasing relationships between employees in a digital workplace, William explains how it's important to *"talk about something that doesn't have to do with work [examples of work-related topics], things like that are very important as well but if you're going to… develop connections… digitally, I think [social topics regarding hobbies] are important"*. After this explanation, William continues to explain a scenario where social interaction was not present,

> *"I've been a part of a constellation with people from different professional areas in the company, where we don't really know each other… and we talk about work, and I guess it works good, but we haven't… gotten to know each other *laughs* really, even though we basically work together all day… So here there would be a need for doing something like [any kind of more purely social activity] (…)*

Beyond not having strong relationships, he states how it leads to an unfavorable team environment,

> *(…) it is a bit awkward *laughs* (…) there have been a few tough discussions where… it would have been better to have a better relationship with each other (…) I think it would have been good to do a few of those [social] activities… I think that would have been good (…)*

Which finally leads to divided camps that split up the team,

> *(…) and then this leads to how we get grouped in this team, where we're not on good terms… there are some of us that know each other since before… so we'd talk after, or maybe before (…) so there's a big difference and I also think it actually has to do with… how… partly it has to do with the group but how it's structured and how the team… leader (…) structure it (…) and I think it would at least have been a bit better if we knew each other."* (William)

Mentioning the role of the leader at the end, which functions as a suitable transition into the next group of findings.

5.4. Managers have Possibilities of Forming Most Aspects of Social Activities

In the cases studied, a moderator-role was always given to the manager of each team, implicitly through assumption of responsibility or explicitly. In this role of moderator, catalyzed by decentralized organizational structures, respondents also showcased how the managers hold the potential to form any aspect of the social activities. Examples coming from, *"to create a good dialogue within the teams…, there's of course a manager responsibility here."* (Anna), and, *"I think managers mainly need to lead by example with [social behavior]"* (Sofia). Since the moderator in the studied scenarios have the power to implement and alter activities quite freely, they can be seen as the possible enablers of all prior findings that tie to the characteristics of activities (that are not organically formed and held without the facilitator).

The possibilities and responsibilities of managers were recognized by higher-level management, *"The better we can support [first-level managers] to continue to be good managers, because that's really where it all happens, in this completely new situation, the better (…) we can keep performing as an organization"* (Jan)

5.5. Implications on Attributes Typically Associated with Physical Interaction

Here we present insights regarding spontaneous interaction and information richness, including how they have been affected by the novel context as well as how they impact interaction and relationships.

5.5.1. Decreased Spontaneous Possibilities Leads to Fewer Opportunities for Interaction and Lowered Belonging

Spontaneous interaction was found as severely limited in the novel context as compared to a physical workplace. Firstly, respondents indicate that its absence is affecting the ability to participate in social interaction as well as form relationships,

> *"where am I supposed to find new connections? I might not know that there is a new employee within the areas where I usually interact. But had I been in the office I might have seen or met this new employee in the corridor and been able to go in an introduce myself, and we could have connected with each other there and then."* (Sofia)

Even when activity is not clearly happening, the spontaneous environment facilitates a sense of belonging,

> *"When you log out from the meeting, you're, like, alone. Previously when you walked out of a meeting, you were still together with your colleagues in, well, a different way."* (Lena)

5.5.2. Decreased Richness of Information is Affecting Relationships Negatively

A lack of information richness, previously provided in the physical interaction, as well as the resulting impact on social interaction as well as relationships was clearly reported by several respondents. As examples, *"The physical meetings, according to what I've seen, are a strength when building trust for the work I'm going to be a part of and support"* (Sofia), *"It's a lot better to be able to be at the office, meet eye to eye [for social interaction]"* (Jan), and *"I think it's the human aspect [that hinders new connections to form], the thing we can't really achieve, for example now"* (Meghan).

Richness of information was also implicitly mentioned to facilitate dialogue in social meetings, *"We tell [employees] to turn on the camera, see each other as well as you can, because it's this that makes a difference many times (…) and then it can create an entry towards a dialogue"* (Anna). Respondents also indicated if some employees would start using their camera, more would follow, *"Even if no one else has their camera on, put on your own camera… because it creates a ripple effect"* (Emma)

5.6. List of Codes

Based on the presented findings, the thirteen inductively identified codes are here presented. These are ordered with consideration to thematical grouping as well as the order in which they appear in the analysis.

Code number	**Code name**
1	Meaningful Relationships Have Decreased, While Flexibility and Ability to Perform Remain Positive
2	Strongest Relationships are Thriving and Generate Interaction
3	Acquaintance-Level Relationships are at Risk
4	Wide-Spread and Shallow Relationships Increase but Do Not Seem to Create Strong Relationships
5	Inclusion Fosters a Sense of belonging and Ability to Interact
6	Number of Interacting Employees Affect Ability to Interact
7	Likeableness is an Important Aspect of Relationships
8	Differences in Individuals Affect Motivation to Interact
9	Work-Tasks and Tangible Benefits Motivate Interaction but are not Great at Building Relationships
10	Playfulness and Non-Work-Related Activities Motivate Interaction and Build Relationships Better
11	Managers have Possibilities of Forming Most Aspects of Social Activities
12	Decreased Spontaneous Interaction Leads to Fewer Opportunities for Participation and Lowered Belonging
13	Decreased Richness of Information is Affecting Relationships Negatively

Table 1: List of codes

6. Analysis

To understand the studied scenario and discern the underlying mechanisms at work, we will apply the codes through the lens of the *Analytical Framework*. Throughout the analysis, we will also address potential amendments to the framework based on the findings.

During discussion of how components of the framework are impacted by findings, it is done with consideration of the underlying theoretical findings that built up the impacted component. In scenarios where certain aspects of this impact are of specific relevance, it is explicitly written in the analysis. "AP" will be used as an abbreviation of assisting principles.

6.1. Analyzing Impact on Well-being, Motivation, and Organizational Effectiveness

The interviews indicate that relatedness (reflected by meaningful relationships) is the main psychological need from SDT that is missing in the novel context. Respondents also expressed decreased well-being as a consequence, some explicitly stating a lack of motivation (*Chapter 5.1.*). While expressing this, terms from relational social capital were frequently used, signifying its connection to meaningful relationships and relatedness. As previously presented, a perceived decrease in well-being is expected to occur when any specific psychological need has become less fulfilled (Ryan & Deci, 2000), along with decreased individual engagement and organizational effectiveness (Gagné, 2013). The findings suggest that the current nature of relationships, entailing their maintenance and development, is leading to risks for decreased well-being, motivation, and organizational effectiveness.

We also saw that, in line with the initial theoretical framework, answers from respondents suggested that in the novel context, social exchange was the most prominent cause of strengthened relationships, which then again led to social exchange (*Chapter 5.2.*). Next, the nature of relationships in the studied scenarios will be analyzed through studying which impacts the findings have had on the interrelated components of the framework.

6.2. Principles Tied to Access

Analysis based on insights regarding value and motivation is presented here.

6.2.1. Inclusion – Development and Consequences

When members are included, it fosters a sense of identification and furthered access to participate. Lack of transparency or open inclusion was also stated to steer employees away from interacting within the group. Furthermore, technological proficiency was also shown as key for access to participating but also as a way to be included in the team (*Chapter 5.2.4.*). These insights support the interrelations of the 1st and 2nd AP, with the addition of the 1st AP's influencing effect on the 2nd AP. Furthermore, findings entail a more detailed depiction of the 8th AP, as compared to its previous connection to social capital. Sporadic, frequent and casual interaction was seen to enable an increased access for social exchange, through which it allowed relationships to strengthen. Furthermore, it was also found as an important driver for creation of new structural capital through forming of new connections. Finally, it allowed for an improvement of relational social capital even when individuals were not clearly interacting, resonating with the mere-exposure effect (Zajonc, 1968), and leading to enhanced perception of an individual even where interaction and depth of connection is limited. This same effect was found for continued participation in activities of social exchange. This reasoning provides the more detailed influence-directions of the 8th AP in Figure 6.

6.2.2. Critical Mass

Critical mass was not an AP in the original framework due to its strong tie to older communication technology and heavier focus on knowledge contribution. However, its importance for facilitating

participation in activities of social exchange was shown through the interviews. Through their answers, respondents showcased the existence of a lower limit, saying it is paramount for everyone in the team to participate in order to have a successful activity (5.2.4.), aligning with the statements from Zhang and Hiltz (2003).

The notion of an upper limit of critical mass was also shown by how participation in larger groups had a harder time conversing, mainly due to limits of the used technology. Although this does not entail loafing in the sense of not contributing tangible value (Jones & Rafaeli, 1999), it does limit the potential to participate in the activity, limiting its success. In analyzing these findings, we see the need Critical Mass being installed as a new 9th AP, influencing access for participation both through its lower limit and upper limit.

6.3. Principles Tied to Value and Motivation

Analysis based on insights regarding value and motivation is presented here.

6.3.1. Motivation through Playfulness or Tangibility

Interpreting the answers of respondents, we see that separate from relationships and access, activities of social exchange themselves have two main ways to incentivize participation. On one hand through tangible value perception (5.3.2.), giving clear, often work-related benefits. Then there is the sense of playful motivation (5.3.3.), fun activities such as virtual card games and themed meetings with no connection to work. As compared to the activities of tangible value perception, these activities especially were shown to function as a means to overcome barriers to participation in social exchange, although they did not inherently give tangible benefits tied to the professions of respondents. As compared to activities arising from tangible work-related value, these playful and social exchanges were indicated to bridge gaps for acquaintance-level relationships and mitigate risk of developing distinctly contradictory identities. The split group resulting from an absence of activities of social exchange, constituted significant barriers to further exchange, in line with findings from previous research (Child & Rodrigues, 1996; Simon & Davies, 1996).

These insights firstly provide a clarification of the nature of the 3rd AP's tie to value and motivation; its name is adjusted to *"Perceived tangible work-related benefits"*, still with the same suggested direction of influence toward the condition for anticipation of value. However, as shown from insights, perception of tangible value can indirectly lead to motivation to participate through a derived utilitarian (Jian & Jeffres, 2006) motivation. This is shown through the influence-arrow between Value and Motivation in Figure 6. The findings also reinforce the suggested influence of the 5th AP on motivation to participate through the joy of participation, less clearly tied to tangible reward.

Social exchange through activities with elements of playful motivation were sparsely found in the companies. The main source of this was generally virtual fika or, on rare occasion, through one-to-one initiation of contact. However, as mentioned, employees with pre-established strong relationships organically created more activities for social exchange.

Frequency of activities of exchange, purposed with achieving tangible work-related outcomes, remained high in the novel work structures. As the impact of clarity of activities and their purpose (4th AP) affects both of these types of incentives, the implication-arrow of this is redrawn to instead show influence on increased anticipation of both the 3rd and 5th AP.

For both the 3rd and 5th AP, the suggested potential to affect intrinsic motivation (see *Chapter 3.3.*) remains intact. To achieve autonomy orientation, the activities should therefore still be aimed to strongly resonate with the participants values and beliefs (Deci et al., 2017), aligning with CoP's core definition of being formed and maintained through genuine interests (Lave & Wenger, 1991). This also speaks for the importance of considering differences of individuals, which is covered next.

6.3.2. Personal Factors

While not part of the initial *Analytical Framework*, participation in activities of social exchange was shown by respondents to depend on personal factors as well. Personality traits, including extroversion and introversion were indicated to have a key role, but also the individual's own social context mattered, influencing the degree of social exchange needed at work to achieve well-being. Personal factors were also shown to impact willingness to participate in certain types of activities, e.g., virtual chat rooms with more open access (when paired with employees to whom they had weaker relationship), or gamification card games. Because personality or private life-factors are not directly impacted through activities in the workplace, personal factors are not included as an AP. However, given its relevance, it is instead added as a filter between Motivation and Participation in Activities of Exchange. Although not present as an AP, it must be considered when structuring and facilitating activities of social exchange, especially in order to achieve autonomy orientation. This highlights the important role of the facilitator.

6.4. Analysis of Remaining Components

Having grouped the initial principles, this chapter covers the alteration of social capital-components as well as the remaining APs of Information Richness in Interaction and Competent Facilitator.

6.4.1. Altering Components of Social Capital

As seen from the interviews, likeableness is a component of a relationship that is key to understanding its strength as well as its facilitated motivation for participation in activities of social exchange. Furthermore, the described sense of being concerned about each other's well-being and liking each other is not explicitly captured in other aspects of the framework. Therefore, its relevance justifies it being added to the relational dimension of social capital in the framework.

Simultaneously, the aspect of obligations was not notably present in the received answers. This is perhaps explained by obligations referring to a mutual sense of reciprocity, such as the willingness to return a favor (Nahapiet & Ghoshal, 1998), applying more aptly to a scenario where the context of exchange has a more tangible value than what's present during social exchange. Another view of the concept is how it can appear through perceiving one's own knowledge as belonging to the organization (Ardichvili et al., 2003), which again is less applicable in an exchange scenario with less tangible value. We therefore suggest the aspect of obligation is not as crucial of a part for the relational dimension in the studied interrelated phenomenon as the remaining ones. Effectively, this means "Likeableness" is added to the relational dimension, while "Obligations" is removed.

Furthermore, the cognitive dimension was also absent in the answers received from the respondents. This might be explained by a similar reasoning, as for the absence of obligations. The Cognitive dimension concerns shared understandings, including language and codes (Nahapiet & Ghoshal, 1998), and is described as essential for exchange to take place (Boisot, 1995; Boland & Tenkasi, 1995). However, in a primarily social activity of exchange, the interactions can reasonably be assumed to more devoid of advanced terminology and other, more work-related, potential barriers. Striving to produce a clear and precise final framework, the remaining meaning of having a shared context is, by analysis of respondents' opinions, is not substantial enough to validate its place in the key dimensions of social capital. It is therefore taken out of the updated framework.

6.4.2. Information Richness in Interaction

Information richness in interaction was shown to be a notable cause of decreased quality of relationships. In part, this is unobtainable through the current means of communication technology, described by respondents as meeting eye-to-eye or achieving the physical human aspect. However, it is important to note that efforts in increasing information richness in the virtual sphere had also yielded good results in activities of social exchange. Notably, richness of information through use of camera during video interaction was

stated to open up for dialogue, something that has the potential of facilitating development of relationships. Efforts in increasing it were catalyzed by norms forming in groups, through a ripple effect. These findings also suggest the truth in the influence direction of the 7th AP, being directed to the relational dimension of social capital.

6.4.3. Competent Facilitator

As shown by the findings, the role of the facilitator/moderator of activities of social exchange holds the potential to form any assisting principle. Beyond the previous influence on the 2nd AP, the 6th AP therefore now entails catalyzation of all remaining APs. In addition, they play a key role in identifying and modifying activities of social exchange to fit the various unique constellations of persons, the newly identified barrier of participation, affecting motivation (see *Chapter 6.3.2.*).

6.5. Visualization of Updated Framework

Here the updated framework is presented along with notes on which chapters derived the confirmation of influences or added changes. Where additions have been made, the following symbol is used: N

A version without notes is available in Appendix 1.

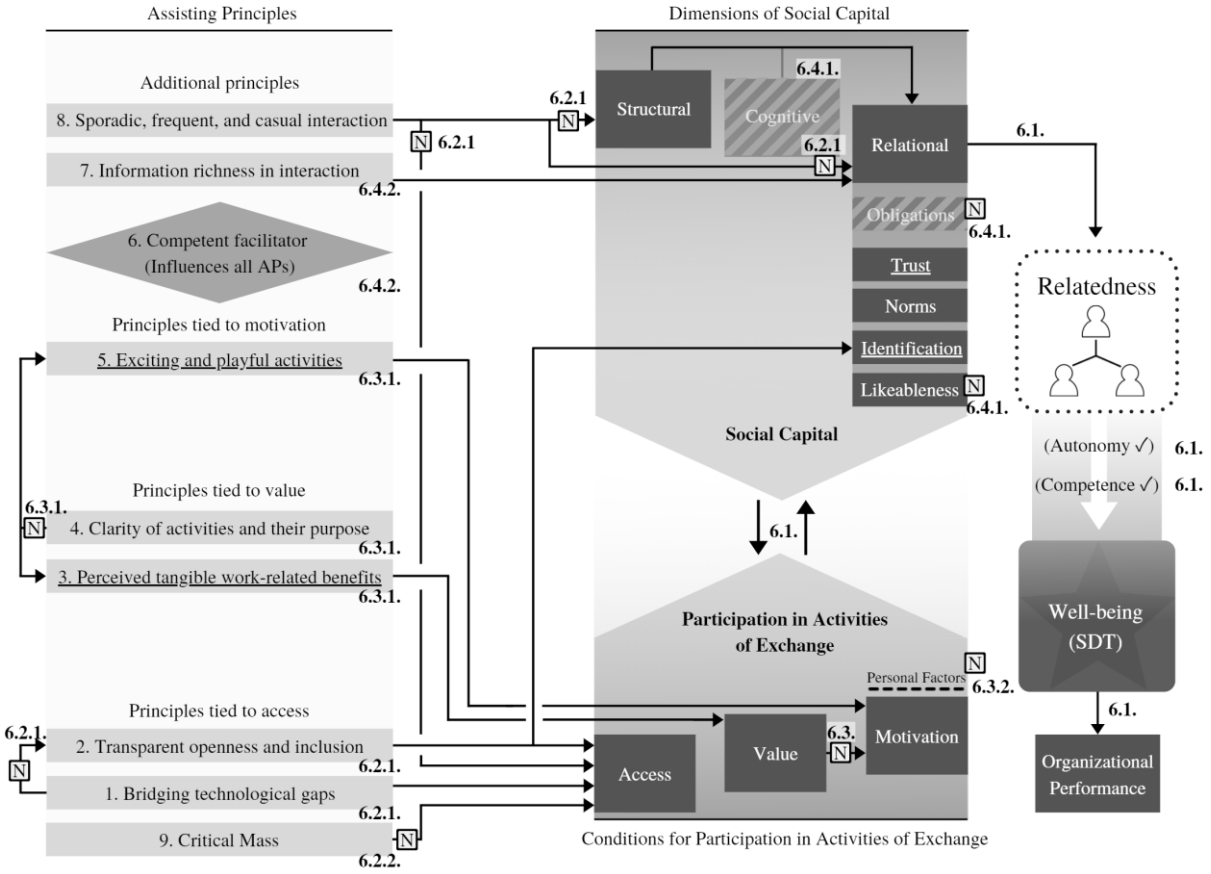


Figure 6: Updated framework with notes

6.6. Explicating Case Scenario to Assess Inherent Risks

As identified in *Chapter 6.1.*, the state of the nature of relationships are indicated to be causing lacking relatedness, leading to a decrease in well-being and organizational effectiveness. Looking at the nature of these relationships, we see that: relations that are pre-established and already strong are being maintained well, and often even improving (*Chapter 5.2.1.*), the often cross-divisional, acquaintance-level relationships are fading (*Chapter 5.2.2.*) and the wide-spread shallow relationships seem to be common (*Chapter 5.2.3.*). Therefore, this described nature of relationships is suggested to be connected to the lacking sense of relatedness and will be further analyzed.

In order to understand how to increase relatedness, we must therefore explicate the reason for the mentioned nature of the relationships. As found in the analysis (*Chapter 6.1.*), a key driver of meaningful relationships is participation in activities of social exchange. Thus, the following is a visualization of how relationships are suggested to form as a consequence of identified barriers regarding access as well as incentives (vertical tiers are not chronological, but rather a flow of logic):

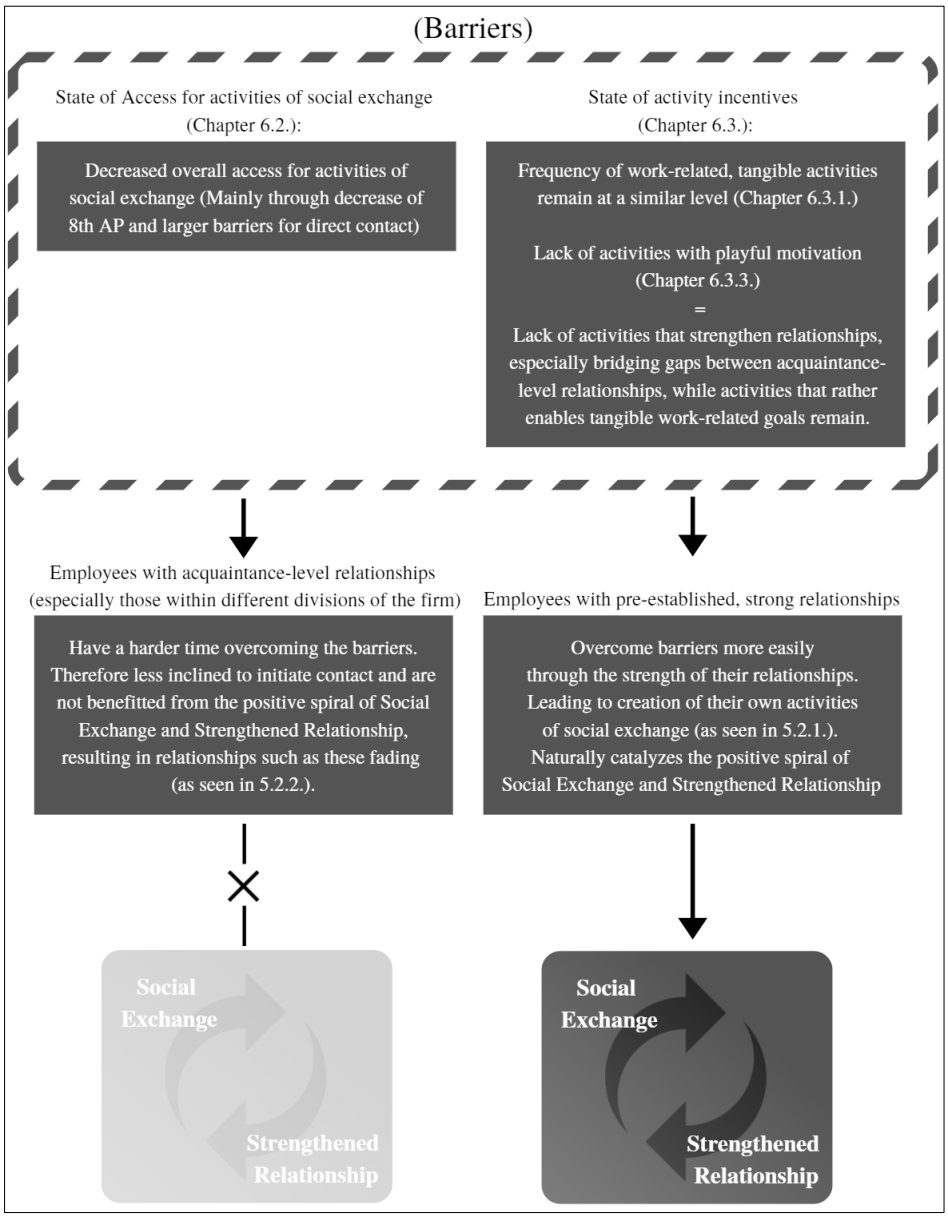


Figure 7: Nature of maintenance and development of relationships

Thus, relationships that are strong would increasingly gain strength while acquaintance-level relationships fade out and become progressively weaker. Considering the positive spiral of social exchange leading to strengthened relationships leading again to social exchange, the progressive strengthening and weakening of relationships would be expected to be somewhat exponential. Following the same logic, this effect would work similarly for extroverted vs introverted employees, a scenario that was also indicated in *Chapter 5.2.3*. Over time this would lead to the distribution visualized in figure 8. Relationships developing in this way clarifies a potential cause for why split identification was identified within groups that lacked social interaction, as exemplified in *Chapter 5.3.3*.

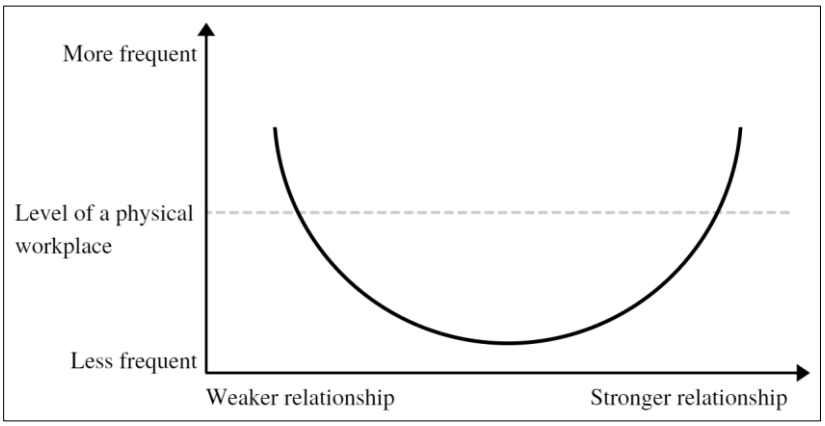


Figure 8: Distribution of relationship types

To address this scenario, managers in the role of facilitators play a key role. Here, an assessment of the assisting principles should be considered in order to map out which efforts could improve participation in activities of social exchange. Also notable is that findings clearly suggest that the difference of individuals mean there is no "one-size-fits-all"-solution for incentivizing participation. A notion that signifies the importance of facilitators' observance of differences of employees. It also shows the important role of upper management to empower and trust the facilitators (first-level managers in the studied cases) since, in the words of one respondent, *"that's really where it all happens"* (Jan).

7. Conclusion

In this chapter, concluding remarks and discussion regarding fulfillment of purpose *(7.1.),* theoretical *(7.2.)* and practical *(7.3.)* contributions*,* as well as limitations and future research *(7.4)* are presented.

7.1. Achieving Purpose of the Thesis by Answering Research Questions

Through the studied cases, we have seen strong indications that meaningful relationships, translated as relatedness, is lacking in the studied virtual workplaces with an indicated effect on well-being and motivation (see RQ 1). In the studied cases, we have also explicated how the nature of meaningful relationships and social exchange is affected in the novel virtual workplaces, including identified ways of catalyzing occurrence of meaningful relationships (see RQ 2). In answering these questions we have formed a framework that shows how motivation through well-being in virtual workplaces is achieved by development of meaningful relationships – the purpose of the thesis.

7.2. Theoretical Contribution

The final revised framework is achieved through an elaboration of prior research through a priori deduction, resulting in an initial bridging of the first two theoretical knowledge gaps discerned in *Chapter 1.2*. Firstly, insights relating to CoP-research have been consolidated and realigned to explicate social interaction and the development of meaningful relationships in organizations. Secondly, by tying this framework to SDT through the connection between meaningful relationships and relatedness, the insights are also connected to well-being and motivation.

The resulting framework has then been elaborated further by contextualization through a posteriori case research. Findings from the conducted case studies both support and oppose the existence and influences of components within the framework, providing further contextually applicable empirical evidence for certain parts of the *Analytical Framework*, as shown in the elaborated analytical framework (see *Figure 6* and *Appendix 1*). Additional factors affecting social capital and well-being in the novel virtual work structure were also found, such as personal factors and likeableness. Thus, the finalized *Analytical Framework* provides an initial mapping of relevant components for meaningful relationships in the novel virtual work structures, while also being anchored in empirically strong insights from both CoP- and SDT-related research. In this way, a theoretical contribution to the bridging of the three discerned knowledge gaps presented in *Chapter 1.2.* has been made. Through this process, the thesis pushes the usability of anteceding findings to new areas of research, while also adding on to said findings through the performed case studies and accompanying analysis.

7.3. Practical Contribution

Through the contextually revised framework, a practically applicable mapping of the interrelatedness of activities of social exchange, assisting principles, and employee motivation and well-being (through meaningful relationships) is achieved. The analysis of the nature of relationships in the context of the novel virtual work structures provides several practical implications for firms. Beyond further explicating the overall nature of exchange and meaningful relationships, all nine of the assisting principles also contribute to the catalyzation of participation in activities of exchange and development of meaningful relationships. Thus, they present nine potential areas for companies to focus on in order to facilitate meaningful relationships. Additionally, respondents showed that most activities of social exchange and the parties participating are quite unique, which would make recognizing situational differences paramount for the facilitator. This further signifies the importance of a competent facilitator that in turn is enabled and backed by higher level management in an organization. It also again highlights the purpose of the framework as a tool to highlight areas of importance more so than providing a factsheet for achieving meaningful relationships. This entails the importance of consideration of each individual scenario before acting.

Finally, the indicated shift of relationships toward either weak or strong (where acquaintance-level ones are fading weaker) presents a stark and important insight. As exemplified through the discerned barriers in the studied cases (see *Figure 7*), natural hinders of virtualization can seemingly affect assisting principles and in turn cause this division of relationships to occur. Losing the acquaintance-level relationships could risk a split identification within an organization or specific teams, which was also observed during the interview process. By for example realizing natural limits of information richness and sporadic interaction in a virtualized setting, companies can work to mitigate the split identification that risk occurring.

Naturally, due to the many organizations adopting a virtual transition of their work structures because of the COVID-19 pandemic, the number of organizations that could benefit from the insights emerging from this thesis is quite high. As mentioned in *Chapter 1.6.,* the will from both employees and managers to retain at least some level of remote work after the pandemic has subsided will make the findings from this thesis valuable in a longer timeframe as well.

7.4. Limitations & Future Research

One of the primary limitations of the thesis comes from the extensive and complex framework developed, combined with the novel area of the resulting insights. Although this is required for the performed analysis, it also brings with it areas of overlapping theory that does not have explicit previous empirical testing. Despite its extensive approach, the thesis should be considered as an initial effort towards combining prior research and explicating a novel scenario rather than an exhaustive truth.

Furthermore, the use of theory to understand relationships and individual psychology is bound to provide a simplified view of either scenario. We recognize that individual motivation and well-being in the workplace is an exceedingly individual concept, as are genuine, meaningful relationships between employees. It is possible, and likely, that some individuals' motivation, and their personal relationships with coworkers, are further explained by factors that are not covered by the theory or derived components within this thesis. The risk of missing crucial unexpected factors was partially mitigated by use of a theory elaboration approach where a voluntary naivety of theory was adopted, as advocated for by the Gioia methodology (Gioia et al., 2013). The thesis is also subject to risk of inaccuracy due to trusting the knowledge and experiences of the respondents, a voluntary decision in order to catalyze novel insights, and also in line with Gioia methodology (ibid). Further supporting this is the large portion of interviews coming from higher-level positions which are likely more professional, and hence quite trustable (Pache & Santos, 2013). Yet the inherent risk of this approach, for example caused by respondents potentially having low levels of self-awareness, critical thinking, or professional logic (ibid), should be recognized.

Although focusing the interviews on managers allowed for additional insight into the widespread opinions of employees as well as efforts and challenges of the studied companies, the comparably smaller representation of hierarchically lower positioned employees presents a further limitation. The pros of interviewing managers and executives were weighed against those of interviewing employees closer to the floor, resulting in an approximately 50/50 split between the two. Despite this decision, having a larger sample of employees closer to the floor could potentially unveil new relevant insights. On the same strain of reasoning: although humans share fundamental psychology, socializing and relationships are subject to the scenario in which it occurs. Therefore, we contribute our insights and theoretical elaboration as early exploratory research, with natural limitations caused by the chosen companies, respondents and context. Although strong indications for the accuracy of the finalized framework and the entailed analysis (see in particular *Figure 8* and *Appendix 1*) were found, we strongly encourage further research to test, build on and utilize the insights of this thesis. It would be beneficial to further test the components in a similar scenario, transitioning them into new scenarios, or extracting certain components to test new phenomena.

8. References

Adler, P. S., & Kwon, S. W. (2002). Social capital: Prospects for a new concept. *Academy of management review*, 27 (1), 17-40.

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

Appelbaum, S.H., Gandell, J., Yortis, H., Proper, S. & Jobin, F. (2000). Anatomy of a merger: Behavior of organizational factors and processes throughout the pre-during-post-stages (part I). *Management decision,* 38, 649-661.

Ardichvili, A., Page, V., & Wentling, T. (2003). Motivation and barriers to participation in virtual knowledge-sharing communities of practice. *Journal of knowledge management,* 7 (1), 64-77.

Ardichvili, A. (2008). Learning and knowledge sharing in virtual communities of practice: Motivators, barriers, and enablers. *Advances in developing human resources*, 10 (4), 541-554.

Ashforth, B. E., & Mael, F. (1989), Social identity and the organization. *Academy of management review*, *14* (1), 20-39.

Barnett, S., Jones, S. C., Bennett, S., Iverson, D., & Bonney, A. (2012). General practice training and virtual communities of practice-a review of the literature. *BMC family practice*, *13* (1), 87.

Baumeister, R. F., and Leary, M. R. (1995), The need to belong: desire for interpersonal attachments as a fundamental human motivation. *Psychological bulletin*, *117* (3), 497-529.

Baltar, F., & Brunet, I. (2012). Social research 2.0: Virtual snowball sampling method using Facebook. *Internet research*, 22 (1), 57-74.

Berger, R. (2015). Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative research*, *15* (2), 219-234.

Boisot, M. (1995). Information space: A framework for learning in organizations, institutions and culture. London: Routledge.

Boland Jr, R. J., & Tenkasi, R. V. (1995). Perspective making and perspective taking in communities of knowing. *Organization science*, *6* (4), 350-372.

Bourdieu, P. (1986). The forms of capital. In J. G. Richardson (Ed.), *Handbook of theory and research for the sociology of education*, 241-258. New York: Greenwood.

Bourhis, A., & Dubé, L. (2010). 'Structuring Spontaneity': Investigating the impact of management practices nn the success of virtual communities of practice. *Journal of Information Science*, *36* (2), 175-193.

Bryman, A. (1988). *Quantity and quality in social research*. London: Unwin Hyman.

Bryman, A. & Bell, E. (2015). *Business research methods*. (4. ed.) Oxford: Oxford University Press.

Campbell, D. T. (1969). Ethnocentrism of disciplines and the fish-scale model of omniscience. In M. Sherif & C. Sherif (Ed.), *Interdisciplinary relationships in the social sciences*, 328-348. Chicago: Aldine.

Child, J., & Rodrigues, S. (1996). The role of social identity in the international transfer of knowledge through joint ventures. In S. R. Clegg & G. Palmer (Ed.), *The politics of management knowledge*, 46-68. London: Sage.

Chiu, C. M., Hsu, M. H., & Wang, E. T. (2006). Understanding knowledge sharing in virtual communities: An integration of social capital and social cognitive theories. *Decision support systems, 42* (3), 1872-1888.

Chiu, C. M., Wang, E. T., Shih, F. J., & Fan, Y. W. (2011). Understanding knowledge sharing in virtual communities. *Online Information Review*, 35 (1), 134-153.

Cohen, L., & Manion, L. (1994). *Research methods in education*. (4. ed.) London: Routledge.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American journal of sociology*, *94*, 95-120.

Dahik et al. (2020). What 12,000 Employees Have to Say About the Future of Remote Work. BCG. Report published online at: https://www.bcg.com/publications/2020/valuable-productivity-gains-covid-19?utm_medium=Email&utm_source=esp&utm_campaign=covid-nr&utm_description=featured_insights&utm_topic=none&utm_geo=global&utm_content=202009&utm_usertoken=CRM_09ced1dd1ded4e6cdc4b39e04acb46c22f83b05f

Lund, S., Madgavkar, A., Manyika, K., Smit, S. (2020). What's next for remote work: An analysis of 2,000 tasks, 800 jobs, and nine countries. McKinsey Global Institute. Report published online at: https://www.mckinsey.com/featured-insights/future-of-work/whats-next-for-remote-work-an-analysis-of-2000-tasks-800-jobs-and-nine-countries#

De Souza, C. S., & Preece, J. (2004). A framework for analyzing and understanding online communities, *Interacting with computers, 16* (3), 579-610.

Deci, E. L., & Ryan, R. M. (1991). A motivational approach to self: Integration in personality.-In R. Dienstbier (Ed.), *Nebraskasym- posium on motivation: Perspectives on motivation* (Vol. 38), 237-288. Lincoln: University of Nebraska Press.

Deci, E. L., & Ryan, R. M. (1985). Cognitive evaluation theory. In *Intrinsic motivation and self-determination in human behavior*, 43-85. Springer, Boston, MA.

Deci, E.L., & Ryan, R . M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior, *Psychological inquiry*, *11* (4), 227-268.

DeLong, D. W., & Fahey, L. (2000). Diagnosing cultural barriers to knowledge management. *Academy of management perspectives*, *14* (4), 113-27.

Diener, E. (2009). Subjective well-being. The science of well-being. *Social indicators research series, USA, Springer*, 37, 11-58.

Dixon, N. (2000). Common knowledge: How companies thrive by sharing what they know. Boston: Harvard Business School Press.

Dubé, L., Bourhis, A., & Jacob, R. (2005). The impact of structuring characteristics on the launching of virtual communities of practice. *Journal of organizational change management,* 18, 145-166.

Fukuyama, F. (1995.) Trust: Social virtues and the creation of prosperity. London: Hamish Hamilton.

Gagné, M., & Deci, E. L. (2005). Self-determination theory and work motivation. *Journal of organizational behavior,* 26 (4), 331-362.

Gagné, M. (2013), Self-determination theory, in Kessler, E (ed.), *Encyclopedia of Management Theory*, 687-690, Thousand Oaks: SAGE Publications.

Garfield, S. (2006). Ten reasons why people don't share their knowledge. *Knowledge Management Review,* 9 (2), 10-11.

Goshal, S., & Moran, P. (1996). Bad for practice: A critique of the transaction cost theory. *Academy of management review*, 21 (1), 13-47.

Gioia, D. A., Corley, K. G., & Hamilton, A. L. (2013). Seeking qualitative rigor in inductive research: Notes on the Gioia methodology. *Organizational research methods*, 16 (1), 15-31.

Harter, S. (1978), Effectance motivation reconsidered: Toward a developmental model, *Human Development*, 21 (1), 34-64.

Holland, R. (1999), Reflexivity, *Human Relations*, 52 (4), 463–84.

Holton, J. A. (2007). The coding process and its challenges. *The Sage handbook of grounded theory,* 3, 265-289.

HSBC Global Research: Sweden's relaxed response – The impact of not locking down the country. 15 April 2020. https://www.research.hsbc.com/C/1/1/320/gjvcpRH

Ibarra, H. (1992). Structural alignments, individual strategies, and managerial action: Elements toward a network theory of getting things done. *Networks and organizations: Structure, form and action*, 165-188.

Janis, I. L. (1982). *Groupthink: Psychological studies of policy decisions and fiascoes*. (2. ed.), Boston: Houghton Mifflin.

Jian, G., & Jeffres, L. W. (2006). Understanding employees' willingness to contribute to shared electronic databases: A three-dimensional framework. *Communication research*, 33 (4), 242-261.

Jin, X. L., Cheung, C. M., Lee, M. K., & Chen, H. P. (2007, July). Factors affecting users' intention to continue using virtual community. In *The 9th IEEE International Conference on E-commerce Technology and the 4th IEEE International Conference on Enterprise Computing E-commerce and E-services (CEC-EEE 2007),* (pp. 239-246). IEEE.

Jones, Q., & Rafaeli, S. (1999, November). User population and user contributions to virtual publics: A systems model. In *Proceedings of the international ACM SIGGROUP conference on Supporting group work* (pp. 239-248).

Kacen, L., & Chaitin, J. (2006). 'The Times They are a Changing': Undertaking Qualitative Research in Ambiguous, Conflictual, and Changing Contexts. *The Qualitative Report*, 11 (2), 209-228.

Kahneman, D., Diener, E., & Schwarz, N. (Ed.). (1999). *Well-being: Foundations of hedonic psychology*. New York: Russell Sage Foundation.

Kaufman et al. (2020). Remote Work Works—Where Do We Go from Here? BCG. Report published online at: https://www.bcg.com/publications/2020/remote-work-works-so-where-do-we-go-from-here

Kenrick, D. T., Griskevicius, V., Neuberg, S. L., & Schaller, M. (2010). Renovating the pyramid of needs: Contemporary extensions built upon ancient foundations. *Perspectives on psychological science*, *5* (3), 292-314.

Ketokivi, M., & Choi, T. (2014). Renaissance of case research as a scientific method. *Journal of Operations Management,* 32 (5), 232-240.

Knez, M., & Camerer, C. (1994). Creating expectational assets in the laboratory: Coordination in 'weakest-link'games. *Strategic management journal*, *15* (S1), 101-119.

Koh, J., Kim, Y. G., Butler, B., & Bock, G. W. (2007). Encouraging participation in virtual communities. *Communications of the ACM*, 50 (2), 68-73.

Krackhardt, D., Nohria, N., & Eccles, B. (2003). The strength of strong ties. *Networks in the knowledge economy,* 82.

Kramer, R. M., Brewer, M. B., & Hanna, B. A. (1996). Collective trust and collective action: The decision to trust as a social decision. In R. M. Kramer & T. R. Tyler (Ed.), *Trust in organizations. Frontiers of theory and research*, 357-389, Thousand Oaks, CA: Sage.

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

Legault, L. (2017), Self-Determination Theory, In: Zeigler-Hill V., Shackelford T. (Ed.) *Encyclopedia of Personality and Individual Differences*, Springer, Cham.

Lesser, E. L., & Storck, J. (2001). Communities of practice and organizational performance, *IBM systems journal*, 40 (4), 831-841.

Lewicki, R. J., & Bunker, B. B. (1996). Developing and maintaining trust in work relationships. In R. M. Kramer & T. M. Tyler (Ed.), *Trust in organizations: Frontiers of theory and research*, 114-139. Thousand Oaks, California: Sage.

Li, L. C., Grimshaw, J. M., Nielsen, C., Judd, M., Coyte, P. C., & Graham, I. D. (2009). Evolution of Wenger's concept of community of practice. *Implementation science*, *4* (1), 11

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic Inquiry*. Thousand Oaks, California: Sage.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50, 370–396.

McCauley, O. P., & Kuhnert, K. W. (1992), A theoretical review and empirical investigation of employee trust in management, *Public Administration Quarterly*, 16, 265-84.

McKnight, D. H., Cummings, L. L., & Chervany, N. (1998). Initial trust formation in new organizational relationships. *Academy of Management Review*, 23 (3), 473-90.

McLure-Wasko, M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. *MIS Quarterly*, 29 (1), 35-57.

Morrison, E., & Milliken, F. (2000), Organisational silence: A barrier to change and development in pluralistic world, *Academy of Management Review*, 25 (4), 706-25.

Nahapiet, J., & Ghoshal, S. (1998). Social capital, intellectual capital, and the organizational advantage. *Academy of management review*, 23 (2), 242-266.

Narayan, D., & Cassidy, M. F. (2001). A dimensional approach to measuring social capital: Development and validation of a social capital inventory. *Current sociology*, 49 (2), 59-102.

Niiniluoto, I., (1999). Defending abduction. *Philosophy of science,* 66, 436-451.

Osterloh, M., & Frey, B. S. (2000). Motivation, knowledge transfer, and organizational forms. *Organization Science*, 11 (5), 538-550.

Lane, P. J., Lubatkin, M. (1998). Relative absorptive capability and interorganizational learning, *Strategic Management Journal*, 19 (5), 461-477.

Pache, A. C., & Santos, F. (2013). Embedded in hybrid contexts: How individuals in organiza-tions respond to competing institutional logics. In Lounsbury, M., & Boxenbaum, E. (Eds.), Institutional logics in action, part B (pp. 3-35). Bingley, UK: Emerald.

Perrow, C. (1984). *Normal Accidents*. New York: Basic Books.

Piekkari, R., & Welch, C. (2018). The case study in management research: Beyond the positivist legacy of Eisenhardt and Yin. *The Sage handbook of qualitative business and management research methods*, 345-359.

Popper, K. (2002 [1959]). *The logic of scientific discovery*. London: Routledge.

Preece, J. (2000). *Online communities: Designing usability, supporting sociability.* Chichester: Wiley.

Putnam, R. (1993). The prosperous community: Social capital and public life. *The american prospect*, 13 (4), 35-42.

Rheinhardt, A., Kreiner, G. E., Gioia, D. A., & Corley, K. G. (2018). Conducting and publishing rigorous qualitative research. In Cassel, C., Cunliffe, A. L. & Grandy, G. (Ed.), *The Sage handbook of qualitative business and management research methods*: Volume 1 (pp. 515-531). Thousand Oaks, California: Sage.

Ring, P. S., & Van de Ven, A. H. (1992). Structuring cooperative relationships between organizations. *Strategic Management Journal*, 13, 483-498.

Ring, P. S., & Van de Ven, A. H. (1994). Developmental processes of cooperative interorganizational relationships. *Academy of Management Review*, 19, 90-118

Ryan, R. M., & Huta, V. (2009). Wellness as healthy functioning or wellness as happiness: The importance of eudaimonic thinking (response to the Kashdan et al. and Waterman discussion). *The Journal of Positive Psychology*, 4 (3), 202-204.

Ryan, R. M., Huta, V., & Deci, E. L. (2008). Living well: A self-determination theory perspective on eudaimonia. *Journal of Happiness Studies*, 9 (1), 139-170.

Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American psychologist*, *55* (1), 68.

Sandberg, J. (2005). How do we justify knowledge produced within interpretive approaches? *Organizational research methods*, 8 (1), 41-68.

Seddon, K., Skinner, N. C., & Postlethwaite, K., C. (2008). Creating a model to examine motivation for sustained engagement in online communities, *Educational and Information Technology*, 13 (1), 17-34.

Sheldon, K. M., Turban, D. B., Brown, K. G., Barrick, M. R., & Judge, T. A. (2003). Applying self-determination theory to organizational research. *Research in personnel and human resources management*, 22, 357-394.

Simon, L., & Davies, G. (1996). A contextual approach to management learning. *Organization Studies*, 17, 269-289.

Smidts, A., Pruyn, A. T. H., & Van Riel, C. B. (2001). The impact of employee communication and perceived external prestige on organizational identification. *Academy of Management journal*, *44* (5), 1051-1062.

Towards a pluralist future for international business research. Journal of International Business Studies, 42 (5), 740-762.

Tsai, W., & Ghoshal, S. (1998). Social capital and value creation: The role of intrafirm networks. *Academy of management Journal*, 41 (4), 464-476.

Tschannen-Moran, M., & Hoy, W. K. (2001). A multidisciplinary analysis of the nature, meaning, and measurement of trust. *Review of Educational Research*, 70 (4), 547-593.

Tyler, T. R., & Kramer, R. M. (1996.) Whither trust? In R. M. Kramer & T. R. Tyler (Ed.), Trust in organizations: Frontiers of theory and research, 1-15. Thousand Oaks, California: Sage.

Vaast, E. (2004). O brother, where are thou? From communities to networks of practice through intranet use. *Management Communication Quarterly*, 18, 5-44.

Vallerand, R. J. (2000). Deci and Ryan's self-determination theory: A view from the hierarchical model of intrinsic and extrinsic motivation. *Psychological inquiry*, 11 (4), 312-318.

Van den Broeck, A., Ferris, D. L., Chang, C-H., & Rosen, C. (2016), A review of self-determination theories basic psychological needs at work", *Journal of Management*, 42 (5), 1195 –1229.

Vestal, W. (2006). CoPs in progress: AQPC and Texas Medical Association. *KM Review*, 9 (1), 8-9.

Von Wartburg, I., Rost, K., & Teichert, T. (2006). The creation of social and intellectual capital in virtual communities of practice: shaping social structure in virtual communities of practice. *International Journal of Learning and Change*, 1 (3), 299-316.

Walther, J. B. (2011). Theories of computer-mediated communication and interpersonal relations. *The handbook of interpersonal communication*, 4, 443-479.

Welch, C., Piekkari, R., Plakoyiannaki, E., & Paavilainen-Mäntymäki, E. (2011). Theorising from case studies: Towards a pluralist future for international business research. *Journal of International Business Studies*, 42 (5), 740-762.

Wenger, E., McDermott, R. A., & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Boston: Harvard Business Press.

Wenger, Etienne. (1998). *Communities of Practice: Learning, Meaning, and Identity*. Cambridge: Cambridge University Press.

White, R. W. (1963). Ego and reality in psychoanalytic theory, *Psychological Issues*, 3 (11), 1-210.

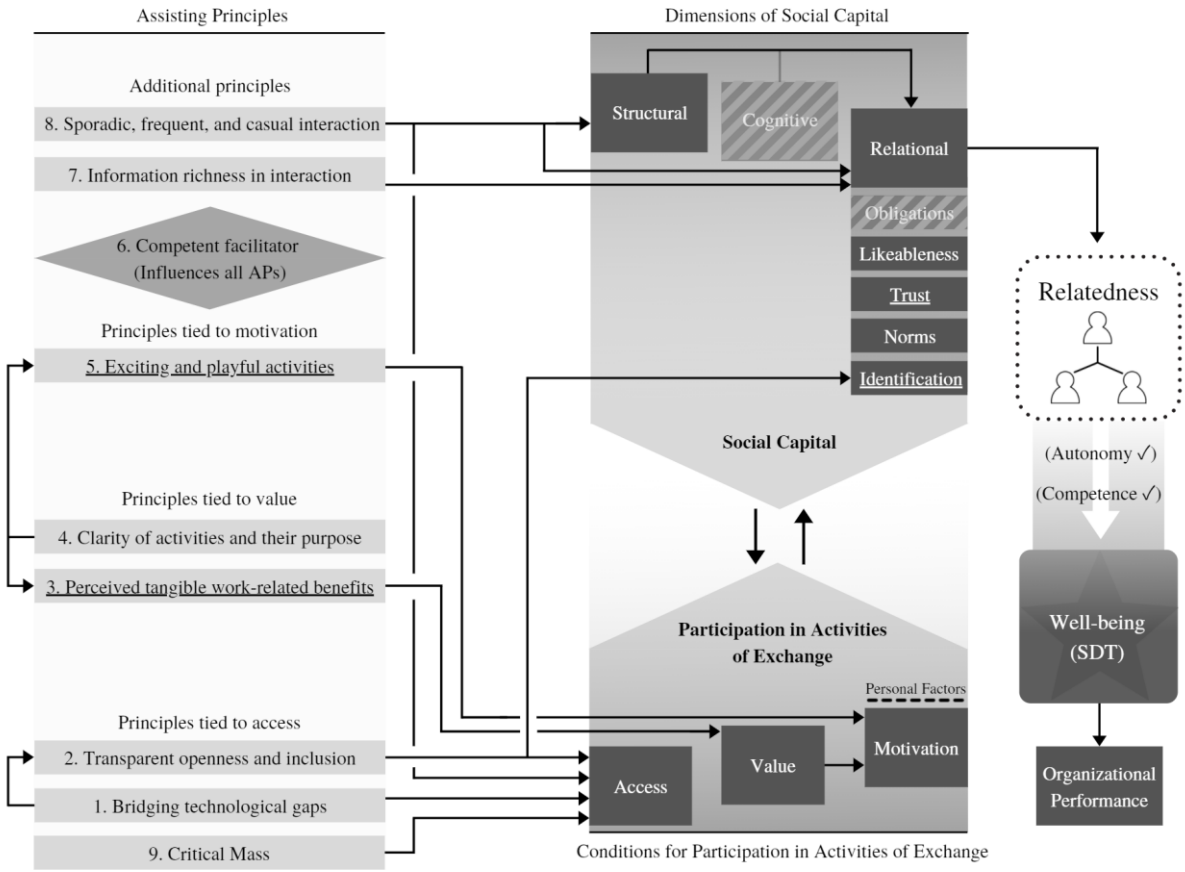
Yao, C. Y., Tsai, C. C., & Fang, Y. C. (2015). Understanding social capital, team learning, members' e-loyalty and knowledge sharing in virtual communities. *Total Quality Management & Business Excellence*, 26 (5-6), 619-631.

Zajonc, R. B. (1968). Attitudinal effects of mere exposure. *Journal of Personality and Social Psychology*, 9 (2, Pt. 2), 1–27.

Zhang, Y., & Hiltz, S. R. (2003). Factors that influence online relationship development in a knowledge sharing community. AMCIS 2003 proceedings, 53.

9. Appendixes

9.1. Appendix 1 – Final Framework



9.2. Appendix 2 – Example of Interview Guide Used

Briefing

- Presentation of thesis and presenter
- Presenting interview process (Anonymity, recording, duration, overall structure, we are examining phenomenon and are not trying to "frame" anyone)
- Presenting key terms:
    - Novel virtual work structures
    - Communities and teams

Setting the stage

- What is your role and position at the company?
- Which tasks and responsibilities does this entail?
- Which teams or group constellations are you a part of?

Degree of virtual development

- To which degree have your everyday tasks moved from being performed at the office to now being performed from home?
- To which degree have your social interactions with colleagues (perhaps in the mentioned communities) been moved from a physical workplace setting, into a virtual one?
    - How did the physical workspace look before? Did this affect how co-workers interacted?
- Is there a person responsible for implementation of digital efforts that create social interaction?
- Who has the ability to implement digital efforts that create social interaction?

Future of the virtual workspace at the company

- Are there aspects of the office that you miss? If yes – why do you miss these?
- Could the reason for why you miss these be filled through virtual activities? How?

Additional questions

- What means are being used to facilitate social interactions currently?
- Is there anything else you want to add?
- (Establish the following referent)

9.3. Appendix 3 – Coding of Interviews

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Code number	**Code name**	Sofia	Lena	Jan	Frida	Meghar	Anna	Jennifer	Sarah	Sandra	Amanda	Rebecca	Jacob	William	John	Christo	Emily	Emma	Kevin	Mark	Julie	Roger
	Meaningful Relationships Have Decreased, While																					
1	Flexibility and Ability to Perform Remain Positive	x	x	x	x		x	x	x	x	x		x	x	x	x	x	x	x		x	
	Strongest Relationships are Thriving and Generate																					
2	Interaction		x	x		x		x			x		x		x	x	x			x		
3	Acquaintance-Level Relationships are at Risk	x	x			x			x			x	x	x				x		x		
	Wide-Spread and Shallow Relationships Increase														x							
4	but Do not seem to Create Strong Relationships		x				x										x					
	Inclusion Fosters a Sense of belonging and Ability to				x			x				x		x						x		
5	Interact					x	x										x					
	Number of Interacting Employees Affect Ability to																					
6	Interact				x	x	x		x	x								x			x	
7	Likeableness is an Important aspect of Relationships	x					x				x		x	x					x			
	Differences in Individuals Affect Motivation to																					
8	Interact		x			x				x								x		x		
	Work-Tasks and Tangible Benefits Motivate				x												x					
9	Interaction but are not Great at Building	x						x	x			x	x									
	Playfulness and Non-Work-Related Activities																					
10	Motivate Interaction and Build Relationships Better	x		x		x	x			x	x		x	x				x			x	
	Managers have Possibilities of Forming Most																					
11	Aspects of Social Activities		x	x		x	x		x	x		x	x			x	x	x		x		
	Decreased Spontaneous Possibilities Leads to Fewer																					
12	Opportunities for Interaction and Lowered							x								x						
	Decreased Richness of Information is Affecting																					
13	Relationships	x	x	x						x			x		x			x	x	x	x	x
Interview length (minutes):		Providir	High-lev	Obtainii	Identify	Providir	Include	High-lev	High-lev	Manage	Employ	Manage	Employ	Employ	Manage	Employ	Employ	Manage	Manage	Employ	Employ	Providin
		60	60	60	60	60	60	30	30	60	30	30	60	60	60	60	60	60	60	30	30	30