HOW PRACTICE BREAKDOWNS DISCLOSE EXISTING STRUCTURES AND CONTRIBUTE TO PRACTICE INNOVATION

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DISSERATION

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The painting on the front side is made Kazimir Malevich between 1912 and 1913 and is called the Knife Grinder. Following McKiernan (2014), this painting represents the symbolic passing of traditional craftsmanship to a new industrial age as men and machine are fused into one giant system. If one looks carefully, there is a man in a peaked cap, bends over a pale blue, rotating, grinding wheel and his legs pump the wheel into action. The many repetitive shining and geometric shapes unravels and thereby discloses a complex dynamic scene of human action and energy.

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Wat moet iemand bezielen om zes jaar lang aan een proefschrift te werken?

Het zit allemaal in het woord be zielen want bezield moet je zeker zijn om lang bezig te zijn met een onderwerp waar omstanders zich niet in willen of kunnen verdiepen. Het is daarom een eenzame reis. Daarover straks meer. Eerst die bezieling. Meestal wordt dat woord geassocieerd met de passie en het enthousiasme die nodig zijn om een doel te realiseren. Hoewel het zeker zo zal zijn dat zonder een zeker enthousiasme weinig lukt, betekende bezieling voor mij iets anders. Wat mij de afgelopen zes jaren heeft bezielen, is een aanhoudende en plagende ontevredenheid die ik bij mijzelf bespeurde over de manier waarop ik mijn onderzoeksprobleem kon begrijpen, benaderen en verklaren. Daarover straks meer. Eers t die bezieling. Meestal wordt dat woord geassocieerd met de passie en het enthousiasme die nodig zijn om een doel te realiseren. Hoewel het zeker zo zal zijn dat zonder een zeker enthousiasme weinig lukt, betekende bezieling voor mij iets anders. Wat mij de afgelopen zes jaren heeft bezielen, is een aanhoudende en plagende ontevredenheid die ik bij mijzelf bespeurde over de manier waarop ik mijn onderzoeksprobleem kon begrijpen, benaderen en verklaren. Door die ontevredenheid bleef ik steeds opnieuw kijken naar het probleem, begon andere invalshoeken te bedenken door meer en gerichter te lezen en waar mogelijk discussies te voeren, om vervolgens met die nieuwe inzichten te bekijken hoe ze geordend kunnen worden en of ze passen bij mijn bestaande ideeën en onderzoeksmateriaal. Elke oplossing bleek slechts een tijdelijke te zijn maar vormde uiteindelijk toch een bouwsteen in de totstandkoming van het werk dat voor u ligt. Achteraf gezien is het een iteratief proces gebleken dat zelfs momenten van ‘practice breakdowns’ heeft gekend. Gelukkig weten we nu wat ‘practice breakdowns’ doen maar op het moment zelf dacht ik daar anders over. Door dit proces van vallen en opstaan heb ik mij het thema steeds eigener kunnen maken en hoe raar het ook mag klinken, begon ik die altijd aanwezige ontevredenheid zelfs als prettig te ervaren omdat het mij verder bracht. Ik denk dat vele collega’s dit onmiddellijk zullen herkennen. Ik heb dit hele traject daarom voor geen goud willen missen. Misschien past het ook wel bij mij: nooit gearriveerd maar altijd onderweg.

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Chapter 1

Introduction to the dissertation
1.1 Research problem

Business actors are embedded in concrete social structures, which according to Granovetter (1985) means that behavior is based on a balance between individual agency and influence from the existing social structure that an actor is part off. Therefore, in this dissertation we assume that the development and implementation of a new technology, a new product or a strategy, often emerges from the stable confines of existing business relationships and networks (Hakånsson & Waluszewski, 2002; Garud & Karnoe, 2001; Hoholm & Olsen, 2012; Van de Ven, Polley, Garud, & Venkataraman 1999, Löwik, van Rossem, Kraaijenbrink & Groen, 2012). The observation that new business opportunities often lead to the emergence of new structures suggests that business actors must be able to change existing practices in such a way that they create space for new practices (Abernathy & Clark, 1985; Nooteboom, 1999; Rip, 2010). However, a core question in the innovation literature is how actors deviate from existing structures and create new ones (e.g., Christensen, 2013 Garud & Karnoe, 2001; Garud, Tuertscher, & Van de Ven, 2013; van de Ven, et al., 1999). In this respect, it is argued that during the development of new ideas in existing structures, actors are faced with socio-material, temporal, and cultural complexities (e.g., Garud, et al, 2013; Hoholm & Olsen, 2012). For instance, Bartel and Garud (2009), describe how actors typically deploy narratives to recombine ideas, engage in real-time problem solving, and generate the translation of past memories into the future, including the use of cultural mechanisms to sustain innovation. In a similar vein, Deuten and Rip (2000) examined how a product creation process unfolds through the development of a narrative infrastructure across organizations and highlight the many detours taken during innovation processes but also the thrust provided by narratives in shaping innovation outcomes. These studies confirm that there is a complex relationship between existing structures and the processes implemented to create new ones. In essence, these studies show that structures and practice history matters in innovation processes and the development of new practices (Nooteboom, 1997).

In this dissertation, we direct attention to the importance of social structure - including history - in the development of new practices. This is relevant because actors have an ambiguous relationship with structures (Farjoun, 2010; Glasmeier, 1991). On the one hand, structure helps actors to compose everyday business practices including the realization of pre-defined goals, but also the imagination of future practices. Therefore, existing structures such as those developed in networks and business relationships are important for innovations to emerge, for without structure there would be chaos (Hakånsson & Lundgren, 1997; Raesfeld, Geurts, & Jansen 2012). However, on the other hand structures can be quite persistent in the sense that actors tend to take them for granted (Barley & Tolbert, 1997; Czarniawska, 2009; Ranson, Hinings, & Greenwood, 1980; Zucker, 1977). This is not only limited to organizational practices but also to those practices developed between organizations such as in business relationships and networks (Ford, Gadde, Håkansson, & Snehota, 2003; Ring & Van de Ven, 1992, 1994; Zollo, Reuer, & Singh, 2002). Sewell (1992) considers such taken-for-granted structures as deep structural schemas that are present in a relatively wide range of
institutional spheres, practices, and discourses. He notes that such structures tend to be unconscious, in the sense that “they or modes of procedure that actors normally apply without being aware that they are applying them” (Sewell, 1992:22). A similar remark is made by scholars interested in organizational path dependencies. For instance, Sydow, Schreyögg, & Koch (2009) observed that actors may have some scope for interpreting the structures underlying their business practice but they do not experience these structures as such. Hence, actors are involved in business practices and achieve goals although the aspects of the structures underlying these practices remain unarticulated in the course of everyday business interactions. While practice innovation typically require actors to deliberately engage in changing concrete structures, the unreflective appreciation of such structures is likely to constrain this and, consequently, also limit their ability to innovate practices.

Given the idea that practice innovation involves both structure and the processes of changing such structures, this dissertation is driven by the desire to understand why actors depart from existing structures and engage in the process of developing new ones. More specifically, the aim of this dissertation is to improve our understanding of the moments and triggers that enable actors to gain insights in the structures that they otherwise take for granted and also how they engage in concrete actions to change aspects of these structures, a process that we labeled practice innovation.

The research question guiding our efforts is:

**What prompts actors to depart from existing structures underlying their business practices to engage in the process of practice innovation by changing these structures?**

Empirically, we focus on organizations that collaborate and are engaged in anticipating a new future. This is because joint new business activities increasingly takes place in inter-organizational relationships, such as buyer-seller relationships, strategic alliances, or innovation networks (Faems, Janssens, Madhok, & Van Looy, 2008; Powell, Koput, & Smith-Doerr, 1996; Webster, 1992; Löwik et al., 2012; Pullen, Weerd-Nederhof, Groen & Fischer, 2012; Groen, Wakkee, & De Weerd-Nederhof, 2008). This dissertation draws on two empirical case studies. The first study concerns the development of a new product jointly by US and Dutch leather producers which pursue a new business relationship activity in the aerospace industry. This study draws on so-called participant-observation research (Bradbury & Lichtenstein, 2000; Czarniawska, 2004) stretching over eight months of fulltime involvement. We particularly focused on the problems that occurred in this relationship during the product development efforts of actors to produce leather samples that would meet the relevant aviation industry standards. Established in 1985, this typical buyer-seller relationship builds on a long-standing business relationship. This case provides the opportunity to examine how actors in ongoing business relationship practices cope with temporal, social, and material problems that arise during the new relationship activity.
The second research project is based on a multiple case study (Miles & Huberman, 1994). This research project lasted for three and a half years at six collaborating nonprofit farming associations. These nonprofits are located in the Dutch region called “de Achterhoek”. Each association is struggling with both the interpretation and implementation of expected drastic regulatory changes in the EU and national subsidy regimes that, at some point in time, will affect their long-standing practices. These changes will become effective in 2015, and future subsidies will only be granted to those organizations that are able to operate on a large scale, adopt professional and entrepreneurial practices in a sense that they do not rely entirely on subsidies. This study reflects Barley and Tolbert’s (1997:104) idea of a case with a “system-disturbing potential” characterized by changes in technology, new regulations, new laws, or major economic shifts driving change. This dissertation consists of a compilation of four papers which are based on these two case studies. Each paper represents one the four empirical chapters in the present work.

1.2 Theoretical research approach

In studying structure and process in relation to an object of study, sociologists such as Parsons (1977) note that investigators can never achieve a full correspondence between the conceptual schemes produced by the observer and the object under study. Parsons (1977) remarks that “It is always in the nature of the case in some sense abstract, in that it formulates and calls to attention certain structures and processes pertaining to the object but omits consideration of many others or plays them down” (p.104). This is what Whitehead (1925) so illuminatingly termed ‘the fallacy of misplaced concreteness’. Aware of this limitation, business network scholars have recently advocated taking advantage of using multiple theoretical concepts and thereby benefiting from the freedom and the opportunity to evaluate the different perspective-horizons applied to a concrete empirical object (Olsen, 2013). In this dissertation, we applied a social system (Chapter 2), a time-based (Chapter 3), a socio-material (Chapter 4), and a practice-based perspective (Chapter 5). Each perspective has its own specific view on structure and process, their compositional features, ontological foundations, the triggers of change, and the role of human agency. Taken together, these concepts enable us to grasp empirically the various aspects of structure and processes of change on the basis of situated actors being engaged in long-standing practices whilst anticipating their future. The first three theoretical concepts are applied and separately analyzed on the basis of the first case study. The arguments for the decision to use these three theoretical concepts, as well as the use of practice-based approach in the final empirical chapter, are provided below.
To guide our research, we developed a general conceptual model (Figure 1-1). For clarity, we simplified the model. There is a structure and a process dimension which is mediated by a trigger. However, as argued earlier, existing structures and the processes that lead to a change in these structures must happen within these structures. Once accomplished, these new structures again become taken for granted over time but the latter is left outside the scope of this dissertation.

![Figure 1-1: conceptual research model](image)

Chapter 2 describes an explorative study to the relationship between structure and process within which we adopt a social system perspective (Groen, 2005, Groen et al., 2008; Parsons, 1951). Such an approach is useful to help understand how social systems are composed of four functions, with each having its own capital dimension. These capital dimensions reflect the AGIL dimensions: adaptive function (economic capital), goal attainment (strategic capital), integration function (social capital), and latent pattern maintenance (cultural capital) (Groen, 2005; Parsons, 1951). We refer to strategic capital as a dimension that relates to the attainment of the strategic goals of a social system, a cultural dimension that consists of the maintainence and development of new patterns in a social system, an economic dimension that deals with the ability to adapt and utilize scarce resources, such as time and money, and finally, an integrative dimension which reflects the social infrastructure that enables actors to exchange and develop the capitals of the social system they belong to. Taken together, these capital dimensions constitute a social system in which interaction patterns of behavior are maintained and changed through the exchange of capitals by the actors belonging to a social system. A business relationship can be considered as two interacting social systems at the level of the partner organizations in which interaction patterns are maintained by the actors involved in the business relationship. Following Parsons (1977), the maintenance of the capitals of a social system always involves a combination of both structure and process. As commonly accepted in sociological literature, Parsons (1951) too apportioned a high weighting to the role of tensions in and between social
systems as a source of change. Such tensions follow from strains in the value expectations of actors and underpin re-equilibrium processes. Therefore, in this work tensions can be considered as an important trigger causing a shift from structure to process. From a social system perspective, innovation implies that actors are repeatedly confronted with tensions that arise in these capital dimensions of a given social system due to innovation efforts and to which they need to respond (Groen et al., 2008). The aim of this study is to understand how actors in a business relationship cope with the structural differences in the strategic, cultural, economic, and social capital in the social system of their partner organizations when engaging in a new relationship activity. Structure is understood in terms of actors who consider the structural differences in the values related to these capitals of each other’s partner organization as valuable partner specific resources. Process can be understood as actors creating value on which they agree in their collaboration while being exposed to the tensions and the efforts of partners to negotiate the values underlying the capital dimensions of the social system they belong to.

A social system perspective is especially useful to help understand the structural characteristics of a social system in terms of solidity of the norms and expectations shared by actors belonging to a particular social system (Parsons, 1951). Furthermore, from a social system perspective, tensions are important for triggering re-equilibrium processes in which actors re-negotiate existing norms, values and expectations. However, social systems are considered self-adapting structures in the sense that there is always a tendency towards stability by default (Laszlo & Clark, 1972). This implies that change processes are inherently a property of the social system, rather than a property of the actors belonging to that system. Nevertheless, Parsons rendered an importance to the notion of human effort in the structure of social action (Parsons, 1968). As Parsons argues, any reference state of a social system “would not come into existence if something would not done about it by the actor” (Parsons, 1968:45). Yet following Emirbayer & Mische (1989), he did not devote much systematic attention to disaggregating his notion of effort and as a result, human agency remained a “black box” (1989: 966) yet still a central aspect of re-equilibrium processes.

To understand the role of human agency, in Chapter 3 we examine the case of the joint activity in a business relationship from the perspective of human actors who are temporally engaged in the social processes underlying both structure and process. By temporally engaged is implied that human agency is shaped by the relationship between the past, present, and future (Emirbayer & Mische, 1989). Furthermore, it is argued that any process perspective should take the role of temporality seriously, and identify tensions and contradictions as ‘drivers of change’ (Langley, Smallman, Tsoukas, & Van de Ven, 2013). Especially the Industrial Marketing & Purchasing (IMP) literature increasingly focuses on the processes of change in business relationships and networks (Bizzi & Langley, 2012; Halinen, 1998; Halinen, Medlin & Törnroos (2012). In this stream of literature, the focus is on time, varying perceptions and so-called critical events in driving business relationship and network change (Halinen & Törnroos, 1995; Halinen, Törnroos & Elo, 2012; Tidström & Hagberg-Andersson, 2012; Medlin, 2004). Critical events are considered as specific events that even can break a
relationship structure (Halinen, Salmi, & Havila, 1999) because of their impact on the perceptions of the actors involved in a relationship (Halinen, et al., 2012; Halinen, Törnroos & Elo, 2013; Corsaro & Snehota, 2012). The purpose of this chapter is to understand (a) how time perceptions of involved actors about the past, present, and future of a business relationship change when things run into difficulties during business relationship development activities; and (b), how time perceptions can be reconstructed through temporal work. Temporal work happens when business actors are confronted with a breakdown of their current understandings about the past, present, and future (Kaplan & Orlikowski’s, 2013). In this chapter, we conceptualize the difference between structure and process as two distinctive interaction modes, namely exchange and adaptive interaction (Medlin, 2004). According to Medlin (2004), interaction always deals with time since actors draw on their past, present, and future when interacting. Exchange interaction is based on routine and experience whereas adaptive interaction is oriented towards change to enable future interaction. It follows that we examine how critical events cause a shift between exchange and adaptive interaction, and require actors to depart from previous perceptions about the past, present, and future of their relationship, and reconstruct new ones in order to move on.

The purpose of Chapter 4 is to approach and analyze the case from a social-material perspective. Unlike the previous chapter in which we put forward the human mind as central locus of change (Reckwitz, 2002), in this chapter we examine how human actors are inextricably bound up with the social and material relationships in both structure and process dimensions. We followed the arguments of Orlikowski (2007) and Orlikowski & Scott (2008) that any organizational practice cannot be understood without including the role of materials such as computer systems, production facilities, technology and equipment because these enable or constrain the interactions necessary to compose a practice (e.g., Bondarouk & Riemsdijk, 2007; Orlikowski, 2000). Before we introduce the approach taken in this chapter, we first explain how social and material dimensions can be understood. Orlikowski and Scott (2009) identified three ontologically different typologies of how social and material dimensions can relate to each other. The first type views the relationship between social and material dimensions as discrete independent units that are causally related to each other. In this type, human actors and material objects remain self-contained entities. The second type considers social and material dimensions as independent entities but that shape each other through ongoing interaction. The third type is different from the other two because here human actor and material dimensions are considered as inherently fused. Or as Orlikowski and Scott (2008:455) puts it: “agencies that have so thoroughly saturated each other that previously taken-for-granted boundaries are dissolved”. Approaches of this kind typically draw on a relational ontology (Barad, 2003; Emirbayer, 1997), which presupposes that human actors and material objects “have no inherent properties but acquire form, attributes, and capabilities through their interpenetration” (Orlikowski & Scott, 2008:455). A type three approach comes closest to our idea of structure in which actors are considered to take material objects for granted since these are already unreflectively used for some purpose. Yet because of this entanglement between human actor and material objects, it becomes difficult to
understand how actors actually engage in the process of changing these socio-material entanglements.

Our approach to understand the role of social and material relationships in both structure and process dimensions is inspired by the phenomenologists Heidegger (1962), and especially the interpretations of the concept of *practice breakdowns* by Dreyfus (1991). This approach allows us to see how the otherwise fused relationship between social and material dimensions disentangle when actors are confronted with a breakdown in their business relationship practice. We positioned this approach within the IMP literature, and more specifically the resource interaction approach (Baraldi, Gressetvold, & Harrison, 2012; Cantų, Corsaro, & Snehota, 2011; Hakånsson & Waluszewski, 2002). Within the resource interaction approach, resources can be conceived of as products, technology, systems, departments, human actors, and knowledge, but also as a complete business relationship (Baraldi et al., 2012). Håkansson & Waluszewski (2002) note that the changing qualities of resources always imply ‘work’ on behalf of human actors, suggesting that the resource interaction approach is focused on the relationships between both actor and material dimensions. Indeed, resources can be considered as *objects-in-use* and also as *subjects-of-concern* (Håkansson, Ford, Gadde, Snehota, & Waluszewski, 2009). The qualities of resources are not ‘fleeting’ but are ingrained by the interactions with other resources, also suggested by the term ‘heaviness’ (Håkansson & Waluszewski, 2002). Therefore, it is argued that any change of a single resource will affect other resources and as such, create friction in resource structures (Håkansson & Waluszewski, 2002; Håkansson & Waluszewski, 2011). Friction also works on the human mind because it causes intensive interactions amongst actors to innovate, to adjust resource interfaces, or alter relationship practices (Olsen, 2013). Despite its importance for resource development, how friction works on the minds of human actors and lead to the identification of new qualities of resource remains poorly understood. Heidegger’s approach is also inherently socio-material. Yet for Heidegger (1962), there is no need for actors to be consciously aware of resources as long as they function in a usual way. This kind of taken-for-grantedness is indicated by the term *absorbed coping* (Dreyfus, 1991. It is only when actors are confronted with so-called *practice breakdowns* that they start to reflect on resources. Practice breakdowns occur when resources malfunction, are missing, are broken, or obstruct interaction (Chia & Holt, 2006; Sandberg & Tsoukas, 2011). Then, the underlying resource structure including the relationship with other resources is temporarily disclosed to actors. This framework allows us to see the shift between structure and process from the perspective that resources are *objects-in-use* (in structural dimension), and *subjects-of-concern* (in process dimension), and that there are various levels of practice breakdowns that mediate this relationship. On the basis of the case at hand, we examine when actors depart from their ways of dealing with resources as *objects-in-use* and encounter them *subjects-of-concern* that enable them them to reflect on resources, and re-assign a variety of social, technical, or economic values of resources and develop new combinations in order to continue their business relationship.

The analytical focus of this chapter is on socio-material dimensions in the structure vs. process relationship. Following this focus, we are able to examine the role of materiality to
help understand that business relationship development is not only the result of varying time perceptions as we proposed in the previous chapter, but also results from a breakdown in the resource structures underlying a business relationship. Consequently, including both temporal and socio-material aspects of structure and process seems to be important to understanding how business changes come about. The role of different degrees of practice breakdowns appear to useful in shedding a light on the extent to which the structures underlying practices are disclosed to human actors. Yet in order to satisfy the overall aim of this dissertation, there is a need to study how temporal and socio-material dimensions come into play in both the structural and process dimensions simultaneously. After all, how actors are structurally and temporally embedded in social processes remains a core question for scholarship interested in human agency (Emirbayer & Mische, 1998; Flaherty & Fine, 2001).

Therefore, in Chapter 5 we describe how socio-material and time aspects relate to each other in both structural and process dimensions and how a shift between the two occurs through varying degrees of practice breakdowns. In so doing, we adopt a practice perspective (Schatzki, 2002; Schatzki, Knorr-Cetina, & Von Savigny, 2001). According to Swidler (2001:75) “practice theory moves the level of sociological attention ‘down’ from conscious ideas and values to the physical and the habitual”. So, rather than seeing time perceptions as constructs of the mind of an individual actor as discussed in chapter 3, a practice perspective presupposes that the mind is an integral part and element of practices. Or as Reckwitz (2002:255) notes, “structure is thus nothing that exists solely in the ‘head’ or in patterns of behavior: One can find it in the routine nature of action”. This chapter is anchored in the so-called strategy-as-practice (S-as-P) approach. This approach is mainly concerned with the question of what actors do with objects during strategy formulation and implementation (Jarzabowski, 2005; Whittington, 1996, 2006). For Whittington (2006:619), practices “are the shared routines of behavior, like traditions, norms and procedures for thinking, acting and using ‘things’ in a broad context” (see also Reckwitz, 2002). Within this stream, there is an increasing interest in the role of emergence, agency, and socio-materiality in strategy making (see Vaara & Whittington, 2012). So-called life-world approaches to strategy making are especially geared to understanding how practices are constituted (Chia & Holt, 2006; Chia & MacKay, 2007; Sandberg & Dall’Alba, 2009). These approaches to strategy practices are also inspired by the work of Martin Heidegger (1962). Adopting a Heideggerian perspective to strategy making, Chia & Holt (2006) made the distinction between a dwelling mode and a building mode of existence. A dwelling mode resorts to structure because in this mode, actors take their practice including its socio-material relationship for granted and, consequently, do not constantly reflect on it when performing a practice. Besides the entanglement of social and material relationships, time is also a feature of a practice. Time is embodied in practices in term of practice history and practice memory hold by actors, as well a in the teleological end points that actors pursue in real-time (Schatzki, 2006). A building mode of existence in turn presupposes that actors become thoughtful and purposefull in their actions once confronted with a breakdown in the execution of a practice. In the process dimensions, socio-material relationships are brought into view by actors as well as the past, present, and future of their practice. Adaptation can thus be considered as a deliberate process in which actors re-
construct the past, present and future including changes in the socio-material relationship of their practice. Because time appears critical, we extended the building mode of existentce as proposed by Chia & Holt, 2006) with Kaplan & Orlikowski’s (2013) concept of temporal work (see description of chapter 3) yet now extended from a socio-material perspective for which we already offered arguments in the description of the perspective used in Chapter 4.

In this chapter, we examine variations in the socio-material and temporal relationships of the practices of six collaborating agricultural associations. To analyze these variations, we draw on a multiple case study (Miles & Huberman, 2004). Whereas a single-case study can richly describe the existence of a phenomenon (Eisenhardt and Graebner, 2007), a multiple-case study typically provides a stronger base for theory building (Siggelkow, 2007; Yin, 1994). The six associations that we studied are all to some or lesser degree struggling with the implementation of drastic changes in the subsidy regime for landscape activities that will become effective in 2015. We focus on the differences between the practices of the six associations in terms of practice history, standards of excellence, technology in use, practice goals, and social embedding in relation to the degree that actors of these six association experience the approach of the new subsidy regime as a practice breakdown leading to a reconstruction of the past, present, and future of their practice. In Table 1-1 we summarize for each chapter the various theoretical perspectives and how structures triggers and processes are defined.

<table>
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<td>5</td>
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Table 1-1 Summary of the research approach taken in each chapter
1.3 Research paradigm and methods applied

Underlying any organizational study, there is either an implicit or explicit philosophy of science that informs us about the nature of the phenomena (ontology), the nature of knowledge about a phenomena (epistemology), and the mode of inquiry (methodology) to study phenomena (e.g., Gioia & Pitre, 1990; Van de Ven, 2007). Philosophies of science vary in the way they see the world as objective or subjective (Burrell & Morgan, 1979). Burrell and Morgan (1979) distinguish four different paradigms, namely radical humanist, radical structuralist, interpretivist, and functionalist. These four paradigms are organized along two dimensions: (1) radical change or regulation; and (2) subjective and objective orientations. Following Gioia & Pitre (1990), a functionalist paradigm is characterized by an objectivist view of the organizational world, and is oriented towards stability and maintenance of existing structures. The interpretivists’ paradigm is concerned with the patterns that produce regularity as well as those that produce change and takes a subjective view of the nature of reality and knowledge. In turn, a radical humanist paradigm is oriented towards radical and changing constructed realities, and achieves this by also taking a subjective stance. Finally, a radical structuralist paradigm takes an objective position and is oriented towards a radical change of structural realities (Gioia & Pitre, 1990:585-586). Given our central interest in both structure and process - and thus - in regularity and change, we positioned the chapters in a zone between a functionalist and the interpretivist paradigm. This so-called “Interpretivist-functionalist Transition Zone” (Gioia & Pitre, 1990:592) bridges the idea that one can think of social structures as objective but that are also subject to re-structuring and thus change as a result of human action (e.g., Barley, 1986; Ehrenhard, 2009; Giddens, 1979; Ranson, Hinings, & Greenwood, 1980). By taking advantage of this blurred transition line, it is possible to focus on the connections between established structures and human action, and thus represent structure versus process. Moreover, structures are not separated from action but rather are the medium and outcome of human action (Giddens, 1979;1984, Sewell, 1992). Because of its central focus on regularity, a functionalist paradigm allows us to understand structure in objective terms. An interpretivists’ paradigm shifts the focus to the accomplishments, interpretations, and meanings of actors in their structured contexts and thereby attempts to generate insights in those events that change structures (Feldman, 2004; Van Maanen, 1982). In each of the four empirical chapters, we attempt to help an understanding of structure and the processes of changing structures. In Chapter 2, we explicitly draw on a functionalistic research paradigm and methods since there is an initial need to understand structure in pre-defined categories which are then imposed on the phenomena studied, in this case a new activity in an existing business relationship. Chapter 3 leans towards an interpretivists’ paradigm since we focus on how structure and process are developed by the human actors involved in their temporal contexts (see also Van de Ven & Poole, 2005). In Chapter 4, we combine both a functionalists’ and an interpretivists’ approach to understand socio-material structures and processes in more objective terms but also as an achievement of the situated actors involved in changing these structures. Chapter 5 draws on practice theory (Schatzki,
2002; Schatzki et al., 2001). Practice theorists are particularly interested in how practices are sustained and transformed over time (Schatzki, 2002), implying that practice theorists are interested in understanding both regularity and change. Yet, practice scholars maintain that structure can only be found in the routine nature of action (Giddens, 1979; Reckwitz, 2002). Furthermore, the smallest unit of analysis is the practice itself, rather than the actors, objects or processes (Chia & MacKay, 2007). This implies that practice theory adheres to an interpretivist paradigm because the various aspects that make up the structure of a practice emerge inter-subjectively; that is, through human action. Therefore, from an ontological point of view, structure can never have an independent existence apart from any practice. Yet, to capture the structure underlying a given practice, scholars have proposed to understand a practice in objective terms. Following Sandberg and Tsoukas (2011:346), the structure of a practice can best be understood by focusing on: (a) what people do with things in practice, including the activities they are involved in to achieve particular purposes; (b), how the activities are performed through the use of various tools; (c) exploring the standards of excellence that actors are committed to in terms of what is regarded as effective, normal or abnormal, and acceptable or unacceptable in any given practice (see also Schatzki, 2002); and (d) exploring the resources required for a practice and zooming in on the relationships between various practices to understand how those resources are acquired from and/or depend on other practices. Although not functioning independent from practice, this framework allows researchers to grasp the compositional features of a structure underlying a practice in objective terms and as the same time as a background to understand the logic of the actions of situated actors involved in a practice. Therefore, we positioned a practice approach in the blurred transition zone between a functionalistic and an interpretivists paradigm. This is different from a radical change paradigm such as actor-network-theory (Latour, 1986; Law, 1994), whose primary interest is in revealing the compositions of actor-networks that are only considered as provisional stabilizations ‘in the making’.

The methods of inquiry that we deployed in this dissertation are consistent with both paradigms. The first study draws on a participant-observation research (Bruyn, 1966; Czarniawska, 2004; Van Maanen, 1982). Because of a long term involvement, in-depth data could be collected about the participating organizations and the relationship practices itself from an embedded point of view. At both sites, we interviewed staff members such as the chairman, R&D managers, operation managers, sales managers and people from the back office. In addition, we organized workshops with key actors involved in this business relationship. This was necessary to fully understand the relationship practice including the systemic characteristics of each partner organization. By benefiting from full access in real-time, we were able to take into account the perspectives of each party during the new relationship activity including the responses of actors in the face of tensions as they happened once actors started to conduct their joint activities in the commercial aviation industry. The data that we collected was rich enough for re-analyzing it from the perspectives used in Chapter 3 and 4. However, to assure credibility (Bryman & Bell, 2011), in the summer of 2013 we interviewed and discussed our findings with the key actors from both partners who were involved in the new relationship activity in 2006.
The second part of the research draws on a multiple case study. For each nonprofit association studied, we relied on observations during board meetings, frequently conducting structured interviews using open questions, had frequent informal conversations, studied archive materials, and attended workshops. The key interviewees chosen were the board members of the nonprofits, the work coordinators, members of the umbrella organization, and field experts to help us comprehend the historical role and practices of agricultural nonprofit associations in relation to the upcoming regulatory changes. We also observed work coordinators and board members of the nonprofits during collective meetings and finally, we conducted observations at each nonprofit association to understand their daily activities. The various data collection and analysis techniques used for both studies are described in more detail in the empirical chapters of this dissertation.

1.3.1 Outlook on the theoretical contributions

We attempt to make several contributions to various streams of literature. First, contributions will be made to the literature devoted to technology development in business relationships and networks (Håkansson et al., 2009; Håkansson & Snehota, 1995b; Håkansson & Waluszewski, 2002), and related to this stream, scholarship interested in relationship and network development from a processual point of view (Bizzi & Langley, 2012; Halinen et al., 2012; Tidström & Hagberg-Andersson, 2012). Chapters 3 and 4 are especially rooted in both approaches.

Furthermore, we aim to make contributions to Strategy-as-Practice (S-as-P) scholarship (Jarzabkowski, 2005; Whittington, 1996, 2006). We especially aim to contribute to the call from scholars to take social practice, emergence, and agency more seriously in S-as-P research (Seidl & Whittington, 2014; Vaara & Whittington, 2012).

Another contribution can be made to the literature concerned with path creation (Garud & Karnøe, 2001; Garud, Kumaraswamy & Karnoe, 2010). Path creation literature addresses how new paths and innovations come into existence through actors’ ability to mindfully deviate from existing structures. We aim to bring back the importance of the taken-for-granted characteristics of structures as an unavoidable aspect of path creation.

A final contribution, will made to the literature devoted to human agency in relation to the persistency of structures.

1.3.2 Contributions to practice

A key argument of this dissertation is that many practitioners have an ambiguous relationship to structures. One on hand, structures are needed to enable everyday business. On the other, they can impede innovation because practitioners take such structures for granted. Given this ambivalence, we attempt to propose a viewpoint for practitioners to take advantage of the reflective moments encountered once breakdowns occur, rather than merely avoiding them. So, instead of emphasizing anticipation, planning, control, and coordination, this
research will advance the idea that practitioners will perform better when they respond adequately if tensions are experienced or breakdowns occur. Moreover, we attempt to advance arguments that mindfulness, an increasingly popular term, can never be the primary modus operandi of practitioners but only a deficit mode that bounded to an emergent situation. We also discuss the implications of our research for process-consultants who advise on innovation projects in business relationships and networks.

1.3.3 Outline of the dissertation

The remainder of this dissertation is organized as follows. To understand the relationship between structure and process, we present a social system approach in Chapter 2, a temporal perspective in Chapter 3, followed by a socio-material perspective in Chapter 4 and an integrative practice-based approach that includes both socio-material and temporal aspects in Chapter 5. Chapter 6 first summarizes the results of the empirical studies followed by addressing the central research question in the synthesis section. Next, we offer the contributions of this research to the literature as well as its practical implications. Finally, we discuss the limitations of this study and offer suggestions for future research.
Chapter 2

Towards a Multidimensional View on Collaborative Processes
A Case Study of an International Alliance Formation

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2.1 Abstract

Many alliances fail for a variety of reasons. In this chapter, we apply a social system perspective borrowed from Parsons (1951, 1964) on alliance formation and explain how structural differences between partners affect alliances in the post-formation stage. We applied this approach in a case study of a new alliance activity in an existing alliance between two partners based in the USA and in the Netherlands. We found that despite prior experience and trust development, structural differences between the partners affected the new activity in the alliance negatively. We describe how representatives of both partners coped with differences, and how they made necessary changes and adaptations to the alliance during the post-formation stage and moved the alliance to a new equilibrium. We discuss the managerial and theoretical implications.

2.2 Introduction

In today’s business markets, strategic alliances are increasingly being considered as important means for organizations to achieve their strategic goals. In comparison to other business relationships, a strategic alliance is defined as a medium- to long-term, contractually arranged relationship between two or more independent organizations that acknowledge their mutual interdependence to jointly create an outcome (Gulati, 1995). Many alliances, however, do not live up to expectations or fail outright (Bleeke & Ernst, 1991; Gulati, Sytch & Mehrotra, 2008). Managing alliances involves coordination issues and complexity by definition, leading to high risk and uncertainty (e.g., Faems et al., 2008; Gulati, 1995b; Park & Ungson, 2001), especially in the case of non-equity alliances (Gulati, 1995a; Zollo et al., 2002). The most important reason is that there is not one formal organization that governs the alliance, rather the partners need to coordinate the alliance together from their own organizations.

Zollo et al., (2002) have argued that such alliances can be governed by informal inter-organizational routines that are developed and refined over time. However, in order to build and maintain such routines, it is necessary for the partners to adapt constantly to changing circumstances. Doz (1996) and Arino and de la Torre (1998) have examined the underlying collaborative dynamics and argued that inertia and adaptability influence the learning process in collaborations. Others have highlighted collaborative process dynamics and their evolution in strategic alliances, joint ventures and other types of inter-organizational relationships (Koza & Lewin, 1998; Parkhe, 1993; Ring & Van de Ven, 1994).

Paradoxically, however, alliances are considered potentially valuable if the parent firms possess complementary resources (Das & Teng, 2000; Shah & Swaminathan, 2008), but, as
we argue, in combining these complementary resources in the post-formation process, the partner firms may encounter all kind of difficulties. Complementary resources can be technological knowledge differences between partners (e.g., Nooteboom, 2000) that, once effectively combined, may yield the application of new successful combinations. Another example involves situations in which the partners can span different markets while using a similar technology, such as the alliance between KLM and Northwest Airlines. Because of these differences, partners and their members need to interact and allocate partner-specific resources to the alliance. Thus, when preparing strategy, it seems justified and logical that partner-specific complementary resources will potentially lead to new strategic opportunities and competitive advantage once combined effectively. But, as we have argued, during implementation, the partners may face difficulties in bridging the complementary resources and find a modus operandi to shape a successful collaborative process.

The aim of this chapter is to explore the relationship between partner-specific complementary resources as a rationale for entering the alliance, and the influence on the collaborative process in the alliance post-formation stage (Kale & Singh, 2009). Post-formation processes and dynamics are understood as the use of coordination mechanisms, trust development and relational capital, and conflict resolution and escalation (Kale & Singh, 2009). The consequences for post-formation alliance management are indicated by the fact that they require different managerial attention, especially because of the divided authority structure and psychological, cognitive, and cultural distance between the partners (Schreiner, Kale & Corsten, 2009). Therefore, we are primarily concerned with the following research question: How do complementary partner-specific resources influence alliance post-formation processes?

Because of its understanding and acknowledgement of heterogeneous partner-specific resources, a resource-based view perspective (e.g., Barney, 1991; Wernerfelt, 1984) would arguably be useful to examine or theorize about the influence of complementary resources in collaborative processes in strategic alliances (Das & Teng, 2000) and, more specifically, the social resources available (Eisenhardt & Schoonhoven, 1996). However, we consider examining alliances from a resource-based view (RBV) perspective as problematic. Aside from the widely acknowledged critiques provided by Priem & Butler (2001), our own arguments are specifically related to alliance concerns. The first one is the difficulty in explaining which particular resources contribute to alliance performance and sustainable competitive advantage. The difficulties of the disentanglement of heterogeneous resource bundles in the RBV are recently discussed by Kraaijenbrink, Spender & Groen (2010). Although the notion of resource heterogeneity appeals to the idea that no partner resembles the other, it also implies that the antecedents or qualifications of such resources are difficult to disentangle and to apply to partner or alliance performance.

The other problem with a RBV perspective is that this view is considered atomistic in nature (Dyer & Singh, 1998), which implies that the RBV does not count for the indivisibility of resources established between partners and in networks. Despite resource complementarities, alliances are typically examples of indivisible systems that could work
once the resources bases become interrelated. In addition, they are or become a part of the wider network in which actors are continuously interacting with each other while shaping each other’s resource bases either directly or indirectly (Håkansson & Snehota, 1995a). As a result, when examining alliance processes we must alter focus towards the way partners relate internal resources to external activities and vice versa (Håkansson & Snehota, 2006), and, by doing this, we should be more specific about the structures and resources that influence the collaborative processes in alliances.

To understand resource complementariness between partners and its influence on collaborative processes, we apply a social system perspective based on Parsons (1951). By applying Parson’s AGIL scheme (which will be elaborated below), we are potentially better prepared to analyze the structural and systematic differences of social systems, here considered as strategic alliances and their constitutive network, than with the previously discussed RBV perspective.

We had the opportunity to apply our perspective in a case that involves a nonequity-based alliance. We benefited from a participant observation case study (Reason, 1994), which allowed us to witness events in real time, including closer insights into interpersonal behavior and motives from the people who were directly and indirectly involved in the relationship and the collaborative process. The context is an existing supplier–customer business relationship between an American and Dutch partner that entered a nonequity-based alliance to perform activities in the commercial aviation interior industry in 2006. In the case study, the relationship between the partners’ structural differences and how these differences influenced the actions of both partners in the collaborative process were explained. Some major tensions between the partners emerged almost directly after alliance formation. We saw that despite the goodwill trust (Das & Teng, 2001) that had developed during their long-term relationship, the amount of competence trust in each other declined enormously. After some informal actions by some organizational members together with managerial intervention, this relationship was able to recover.

The primary contribution of this chapter is to better understand the dynamics of collaborative processes. We also hope to contribute to the wider literature on alliance processes in the post-formation stage. This domain needs much more process-based research to produce insights into the dynamics of collaborative processes, usually not provided by variance-type research (Van de Ven, 2007). Noteworthy examples of process-based studies are provided by Arino & de la Torre (1998), de Rond & Bouchikhi (2004), and Doz (1996).

The remaining part of the chapter is structured as follows. In the next section, the focus is on Parson’s (1951) AGIL scheme and how it is related to the resource base of each partner and to the alliance. In the following section, we introduce both partners of our case study, including their rationale for entering the alliance, turning to the methods and techniques used in the research. The final section summarizes our findings and discusses implications for management practitioners and consultants.
2.3 Theory

The inspiration for this approach is based on Talcott Parsons’s social system theory (1951). The four dimensions of our framework are extracted from his AGIL scheme, which contains four functions of a social system: adaptive function, goal attainment, integration and pattern maintenance. The connections between these four functions are encapsulated in the following phrase that defines a social system (Parsons, 1951:5-6):

... a social system consists in a plurality of individual actors interacting with each other in a situation which has at least a physical or environmental aspect, actors who are motivated in terms of a tendency to the ‘optimization of gratification’ and whose relation to their situations, including each other, is defined and mediated in terms of culturally structured and shared symbols.

In this sociological view, social systems exist at different levels (i.e., society, industry, organization, department, team). If we apply this definition of a social system on the level of an alliance, then this plurality of actors constitutes bonds of interacting people between both partners. These actors are constrained or enabled by organization-specific physical boundaries and influenced by the environmental aspects which are imposed on them, but in turn, they also influence the environment by exerting power. Alliances can be sources of increasing market power and can potentially enhance the network position of each individual partner (Gulati, 1998).

Alliance managers may recognize the potentially strategic benefits of their alliance for the long term, but they also tend to strive for efficient short-term solutions during alliance activities in order to achieve maximum efficiency. Here we recognize a natural tension that alliance partners often encounter – the potential strategic benefits emerging from a long-term perspective juxtaposed with the short-term pressure to succeed. Such pressures may emerge endogenously through the impatience of, for instance, resource controllers (Van de Ven & Polley, 1992) or emerge from exogenous pressures such as market competition and uncertainties about the usefulness of the technology. Either way, managers must find ways to work together, established through mutually developed norms or values that mediate such tensions, leading to particular actions to deal with these strains.

All four of Parson’s functions work concurrently and influence each other during the ongoing processes of organizing the collaboration. They influence the outcomes of a social system in a structured, though not deterministic way.
2.3.1 The Adaptive Function

This function includes the ability of alliance managers to establish efficient governance structures under the assumption that resources, such as time and money, are scarce. It dominantly seeks to decrease transaction costs in the relationship (Williamson, 1975, 1985) by setting up efficient governance structures that contribute to speeding up alliance processes and the economic benefits of the alliance (Kogut, 1988). Considered in this way, alliance management attempts to minimize spillovers and continuously seeks for optimization (or sub-optimization) of business processes that facilitate alliance activities and governance structures. Managers and members with an overemphasized belief in optimizing the business processes that govern alliances may forget to invest in resources that secure the long-term benefits of the alliance. As Ring & Van de Ven (1994:93) have argued, efficiency is defined as a manager’s conception of “the most expeditious and least costly governance structure for undertaking a transaction, given production costs constraint.”

2.3.2 The Goal Attainment Function

The goal attainment function relates to the goals that are pursued by the organization, including the power and control necessary to establish a status (Pfeffer & Salancik, 1978; Podolny, 1993). In the context of strategic alliances, Gulati (1995a) argues that external opportunities and the interest in entering alliances are determined by a firm’s strategic intent and the social network structure that provides a context for action. A singular alliance formation somewhere in the network alters the social structure and leads to different opportunities for the alliance and for others in the network. This dynamic implies that resource dependencies and status continuously change, and the attainment of goals requires different resources than those responsible for prior positions. Invoking the goal attainment function, to include network position and network dynamics, in analyzing alliance formation and outcome may prevent managers from slipping “into a “dyadic atomization,” which is a type of reductionism in which an analyzed pair of firms is abstracted out of their embedded context” (Anderson, Håkansson, & Johanson, 1994:13).

2.3.3 The Integrative Function

It is through actors that organizations mobilize, mediate and integrate resources for their alliances that reside within both partners. Alliances thus depend on actors in the role of boundary spanners for direct communication with actors outside but also with actors within the organizations. It is important for alliances that people can rely on each other in a trustful and effective way (Kale, Singh & Perlmutter, 2000; McEvily & Marcus, 2005). Being effective is related to the ability of these actors to transfer information in the organization of the parent firms, similar to the notion of intelligence dissemination (Jaworski & Kohli, 1993).
2.3.4 The Pattern Maintenance Function

The final function refers to the skills to integrate alliance-specific routines within existing organizational systems and routines. The capability to do so likely goes beyond alliance management capability, which is primarily concerned with communication, coordination and bonding (Schreiner et al., 2009). It is this function that is responsible for the effectiveness of the integration and mobilization of appropriate organizational resources and their adjustments as the alliance evolves. It is challenging to do this effectively because it requires the capabilities to preserve private organizational activities while making necessary adjustments for the alliance. Norms and values, translated into tokens of mediation, support these capabilities. An important factor that enables effective mediation involves the beliefs and cognitions of the members of each partner and how these change over time. Beliefs and cognitions can be compared with the notion of interpretative schemes (Bartunek, 1984) and the related interpretation modes at the level of the organization (Daft & Weick, 1984). Especially those alliances in which the organizations involved have large cognitive distances (Nooteboom, 2000) may encounter difficulties in the translation of useful knowledge. Resources that support the pattern maintenance function are knowledge, (alliance) experience, technology, skills to organize and adapt to new circumstances.

Table 2-1 provides an overview of the four functions, the resources that influence effective alliance management, and managerial interventions in alliances. Each of these mechanisms produces its own type of processes and, within these processes, its own type of resources that influence the alliance-specific collaborative processes. Each functional process requires specific intervention methods that, ideally, lead to an increase of resources (Groen, 2005) and proclivity of alliance evolution. As we have argued, the primary assumption of Parson’s social system theory is that only when all four mechanisms are developed sufficiently can a social system (which we have defined here as a strategic alliance) last or continue to evolve. The difficulty is that the underlying theory also suggests that all these dimensions work at the same time and influence each other in a structured, though not deterministic way. What does this mean for alliance management in the post-formation phase? For instance, if one partner is overly oriented towards optimization of business processes (e.g., Benner & Tushman, 2003), this might negatively affect joint product development at the level of the alliance in explorative alliances (Koza & Lewin, 1998), but also in exploitative alliances, as our case will demonstrate. In that situation, alliance management avoids variation and the necessary playfulness (Allport, 1962; Miner, 1994) to induce creativity in the joint innovation process.
Another example that potentially leads to adaptability concerns is related to different organizational values and knowledge bases residing within systems, procedures and routines (Doz, 1996; Lane & Lubatkin, 1998) or cognitive distance and different cognitive schemes of partner firms. It is especially in such situations where pattern maintenance capabilities reveal their importance in collaborative processes. It does not necessarily question the willingness of partners “to be flexible in response to unforeseen circumstances” (Kale & Singh, 2009, p. 49), but the capability to change systems, procedures and routines at the parent firm level. We argue that this is an important challenge, especially for firms involved in nonequity-based alliances. As Doz (1996) has demonstrated not only do the initial alliance conditions matter, but also it is also important how alliances adapt to changing conditions emerging from exogenously or endogenously induced circumstances imposed on the alliance. For alliance management though, this implies that post-formation activities such as the use of coordination

<table>
<thead>
<tr>
<th>Function/AGIL scheme</th>
<th>Basic Mechanism within a Social System</th>
<th>Resources that Influence Effective Alliance Management in the Post-formation Phase</th>
<th>Possible Managerial Interventions in Alliances</th>
</tr>
</thead>
<tbody>
<tr>
<td>Adaptive</td>
<td>Economic optimization adaptive function</td>
<td>Financial resources, means to produce efficiently</td>
<td>Using financial incentives, lower interests rates, cost-cutting, lean manufacturing</td>
</tr>
<tr>
<td>Goal attainment</td>
<td>Strategic goals as goal attainment</td>
<td>Power, authority, influence, strategic intent of actors</td>
<td>Using power, redefining alliance strategy</td>
</tr>
<tr>
<td>Integration</td>
<td>Interaction pattern process</td>
<td>Capable boundary spanners and effective communication mechanisms</td>
<td>Revise relationship management</td>
</tr>
<tr>
<td>Latent pattern maintenance</td>
<td>Institutionalization and pattern maintenance</td>
<td>Values, organization, knowledge, skills, experience, technology, trust</td>
<td>Training and education, team-building among interacting members in an alliance, knowledge-sharing, introduce adaptive organizational/ inter-organizational systems</td>
</tr>
</tbody>
</table>

Table 2-1  The four functions: mechanisms, resources and possible managerial interventions
mechanisms, development of trust and conflict resolution practices (e.g., Kale & Singh, 2009; Kale et al., 2000) are important mechanisms to address and facilitate such changing conditions, but their role seems to be supportive. To illustrate the dynamic character of our four-dimensional framework, Figure 2-1 denotes the relationship between these previously discussed functions and the different stages of the alliance life-cycle as offered by Kale & Singh (2009).

2.3.5 Research context

This section introduces the organizations under study and their rationale for entering into the alliance. The first partner firm is a 25-year-old, privately owned leather tannery based in New York with 130 employees. It is primarily active in the executive segment of the aviation industry and supplies high-end custom-made leather for seat covers and other interior parts to such companies as Cessna and Bombardier. The US partner has over 20 years of experience
with the corporate and VIP aircraft industry and is one of the leading suppliers of high-end products in this industry. This company is able to meet complex customer requirements and has the ability to transfer customer needs into customized high-end leather products delivered in small quantities, in cut and “ready to trim” packages. This saves the customer time in selecting and cutting the right material for seat covers and other interior parts. In other areas, such as repair and after-sales services, this company works closely with downstream business partners. Over the years, they have gathered experience in establishing close business relationships with other actors in the industry. Recently, the company has received many inquiries from airlines and aircraft seat manufacturers to offer leather for the commercial aviation industry. Unfortunately, they were unable to fulfill such requests due to limited production facilities and loss of flexibility to existing customers if they accepted such large orders.

Some large European leather suppliers supply their raw material (referred to as “crust,” a mostly naturally colored, manufactured, unfinished leather product) at purchase volume. Leather producers prefer working with North West European bull hides because of the consistency in their quality and yield. One of these suppliers and future alliance partner is a privately owned leather tannery located in the Netherlands. This company has existed for over 100 years, has a rich tradition in leather production, and is a well-known player in Western Europe. The firm employs 150 people.

The relationship between the two partners began 20 years ago, and it has developed into a strategic customer–supplier relationship. The Dutch tannery has a production scale five times that of its US partner’s capacity and for the most part supplies leather to the West European high-end furniture industry. Business experts consider this company a leading supplier of consistent quality leather, produced with state-of-the-art technology in terms of production efficiency and environmental friendliness. In 2005, several aviation industry outlooks (i.e., Boeing, Airbus, Embraer) indicated that the market was growing in the coming years. Thus, each partner’s complementary resources and their trusted relationship formed the basis for entering into a strategic alliance. While the Dutch partner lacked any market-based experience in the aviation industry, the US partner had established a good reputation in the VIP aviation industry. The commercial aviation and the VIP aviation industry have overlapping similarities in terms of industry characteristics and network structure. Some of the differences are that customers in the VIP industry value exclusivity and service, such as repair and ex-stock deliveries, while the commercial aviation industry values economy and requires other services such as maintenance, repair and operations (MRO).

In recent years, the Dutch partner had encountered a dramatic market decline in the European furniture industry. This problem was mainly due to changing customer behavior regarding the purchase of home and office furniture. It seemed that these developments were structural, and management was concerned about the future. Entering a strategic alliance with a trusted partner and becoming active in another growing industry would provide a potential opportunity to compensate for the losses in the furniture industry. As discussed earlier, the US partner based its rationale for entering into this alliance to take advantage of the opportunities
provided by the commercial aviation industry without jeopardizing its existing operations. Therefore, they chose to promote the Dutch partner’s production facilities for aviation leather. The Dutch partner became responsible for European sales activities, and the US partner agreed to cover the US and the rest of the world. They agreed to share direct marketing costs and split the profits minus the cost price of producing and testing the aviation leather. Some of these agreements were formalized in an alliance contract.

2.3.6 Alliance Design

The production methods for furniture and aviation leather are significantly different because aviation leather requires a chemical treatment to enable it to pass several Federal Aviation Regulations (FAR) or Airbus directives (ABD), such as flammability, smoke and toxic tests. The knowledge of how to make this kind of leather was an important issue in the alliance. This knowhow was to be transferred to selected members of the Dutch partner. To achieve this, the US partner produced an alliance handbook in which they described their production recipe, including testing procedures. This handbook also contained a list of chemical suppliers and quality test equipment manufacturers. The Dutch partner made some other commitments and invested an amount of €300,000 in test and production facilities. They agreed to amortize this amount over a five-year period, parallel to the numbers in the marketing and sales plan that the partners discussed. The agreement that both partners signed also included a paragraph regulating disputes and early alliance termination. The partners agreed on a contract for a period of 10 years.

At the time our involvement started, the members had established an alliance agenda. It consisted of: (1) discussing technology and planning the transfer of expertise on how to make the product (aviation leather); (2) the development of a long-term sales and marketing plan; and (3) a period and agreed frequency of visits between the US and the Netherlands.

2.4 Research Methods

Our involvement covered the time span from June 2006 until February 2007. During this period, the first author was a participant acting as sales manager for transportation leather, a broadly defined function that covered different kinds of sectors, such as the railway, aviation and automotive industry. The second author’s role was to co-interpret the data from a more distant position. To improve the credibility of the research, we involved the participants in all relevant phases of the research project. This approach allowed us to experience organizational life from the inside and yielded more credible and insightful results. We characterize this approach as participatory research (Bradbury & Lichtenstein, 2000; Reason, 1994).
<table>
<thead>
<tr>
<th>Dimension</th>
<th>Resources</th>
<th>Indicators</th>
<th>Theoretical basis</th>
<th>Question types</th>
<th>Open questions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Integration function</td>
<td>Contact (multiplex, filling structural holes, cohesive, centrality).</td>
<td>• How many contacts MT members have outside the firm.</td>
<td>Derived from Burt, (1992)</td>
<td></td>
<td>Open questions</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• The frequency of interaction with members outside the organization (direct ties).</td>
<td>McEvily &amp; Marcus (2005)</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Non-redundancy</td>
<td>McEvily &amp; Marcus, 2005</td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Five-point scale</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
<td></td>
<td>Scheme/table</td>
<td></td>
</tr>
<tr>
<td>Goal attainment function</td>
<td>Power, authority, influence, strategic intent</td>
<td>• Market orientation and moderating environmental effects (no inter-functional coordination).</td>
<td>Jaworski &amp; Kohli, 1993</td>
<td>Five-point scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Status-based power.</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Derived from Podolny (1993)</td>
<td>Five-point scale</td>
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<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Pattern maintenance function</td>
<td>Values, organization, knowledge, skills, experience, technology</td>
<td>• Problem-solving external ties and amount of trust.</td>
<td>McEvily &amp; Marcus, 2005</td>
<td>Seven-point scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Interfunctional coordination (without environmental moderating effects).</td>
<td>Jaworski &amp; Kohli, 1993</td>
<td>Five-point scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Adaptive function</td>
<td>Money, time</td>
<td>• Balancing exploration/exploitation.</td>
<td>He &amp; Wong, 2004</td>
<td>Five-point scale</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Installed process efficiency metrics.</td>
<td>Derived from Kaplan &amp; Norton (1992)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Table 2-2. Literature supporting the processes within the four-dimensional framework
2.4.1 Research Participants

Eight participants were involved in our research: the Dutch organization’s Chief Executive Officer, Commercial Manager, Financial Manager, and Operational Manager; and the US organization's Chief Executive Officer, Chief Operational Officer, Head of the Technical Department, and Production/Purchase Manager. These participants completed questionnaires and attended the workshops. (see for a list of the participants appendix C).

The research design was structured as follows. First, we acquainted the eight participants with our framework and the four functions with their underlying processes (See Table 2-1). After that, we distributed a questionnaire consisting of several scales (see Table 2-2) selected from the existing literature that covers the processes underlying the four functions of our framework. After completion of the questionnaires (see for an example of a questionnaire Appendix a), we drew preliminary conclusions about the extent to which the participants perceived that these processes were active within their own organization. The results are depicted in Figure 2-2.

Figure 2-2. Comparison of the two partners on each AGIL dimension

The second part of the research design was a workshop, one held in each organization. In these workshops, we created an open atmosphere that allowed the participants to reflect and find consensus about the quantitative part just described. We also discussed the possible implications for alliance progress.

A third part of the design consisted of several observations of alliance meetings and the outcomes of critical events that occurred during the post-formation stage. Our participative approach also allowed us to have informal conversations and interviews with other members who were not directly involved in alliance activities. We also attended sales events, such as
the Aircraft Interior Show in Hamburg 2007, client visits (e.g., Lufthansa Technique, Airbus Toulouse), and informal meetings with organizational participants and customers during site visits. We made field notes and document the data for further analyses and conformation.

2.4.2 Research results and outcomes

Questionnaire results revealed that the managers have different ideas about the extent to which the processes that supported the functions (Table 2-1) were in place in their organizations (see Figure 2-2). The respondents from the US partner felt that they had sufficient processes in place to support the integration function, which enabled them to access network resources (e.g., in terms of contact frequency, number of boundary spanners). The participants from the Dutch partner, in contrast, stated that they had fewer supportive processes in place.

Participants on both sides rated the process that supported the goal attainment function as sufficient. This finding implies that the participants believed they were able to exert power in their network. The participants from the Dutch partner conceived the process that supported the pattern maintenance function as underdeveloped, unlike their US counterparts. This perception implies that the Dutch partner was potentially more vulnerable to “inertial forces” than the US partner. The situation concerning the processes that supported the adaptive function was the opposite – Dutch participants felt that they had processes in place to monitor efficiency and progress, something that participants from the US partner did not.

The questionnaire results formed the impetus for a workshop at both organizations. In these workshops, we ensured an open atmosphere in which the participants could reflect on the results and speak freely about what the data meant to them. Discrepancies between participants were evident, but the outcome always ended in a kind of consensus. Table 2-3 represents our translation of the outcomes of the discussions, including the participants’ beliefs about the implications for the alliance.
<table>
<thead>
<tr>
<th>Integration function</th>
<th>Dutch Partner</th>
<th>US Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Network awareness and interest were rather low.</td>
<td></td>
<td>• Networking is important to them. They encourage employees in different disciplines to have contact with surrounding business partners.</td>
</tr>
<tr>
<td>• Members did not think in terms of network positions. They deal with customers, suppliers, and competitors - and contacts with them are based on departmental responsibility (i.e., the sales department maintains contacts with customers and the purchase department with suppliers).</td>
<td></td>
<td>• They consider themselves as having a central position (as a hub) in the private aircraft interior industry.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Goal attainment function</th>
<th>Dutch Partner</th>
<th>US Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Their reputation as a solid partner in their home market, with over 100 years of experience, enables them to retain a certain position in the marketplace.</td>
<td></td>
<td>• They see themselves in a position where they can exert influence in the market.</td>
</tr>
<tr>
<td>• Many final customers in the furniture industry know their brand and that makes it easier for them in discussions with customers.</td>
<td></td>
<td>• They are the market leader in the aviation industry, and this status puts them in a position where they can achieve their goals. Usually, competitors follow them.</td>
</tr>
<tr>
<td>• In the longer run, however, they sense that the benefits of reputation will diminish.</td>
<td></td>
<td>• Due to their small-scale operations, they cannot exert much buying power over suppliers. However, firms are willing to supply, and at competitive prices, because they represent a good reference.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pattern maintenance function</th>
<th>Dutch Partner</th>
<th>US Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Customers are the responsibility of the sales department. Each department has its own responsibilities, and top management is responsible for orchestrating the different activities. This is necessary to maintain production efficiency and assure consistent quality.</td>
<td></td>
<td>• Sharing relevant information about customers and suppliers is encouraged.</td>
</tr>
<tr>
<td>• There is no incentive or systems installed to share information about customers, competitors, and suppliers.</td>
<td></td>
<td>• They consider themselves as better than their competitors in transforming customer needs into valuable products and services.</td>
</tr>
<tr>
<td>• All organization members operate within their given task, and relevant information is transferred top-down. R&amp;D is done inside the firm, and customer or market requirements are coordinated through the sales department. The focus is to do things right first time without spillovers (e.g., time, material).</td>
<td></td>
<td>• Proactive behavior is expected. Production people are also involved in design and NPD (New Product Development) within the firm and at customer sites. NPD and the associated new product program have high priorities.</td>
</tr>
<tr>
<td>• There are no interdisciplinary problem-solving teams. Subordinates are responsible for following progress and acting if something occurs.</td>
<td></td>
<td>• Knowledge and best practices about how to solve problems are not documented.</td>
</tr>
<tr>
<td>• Organizational changes are implemented top-down, but members can suggest opportunities for improvement.</td>
<td></td>
<td>• They use a CRM (Customer Relation Management) system to monitor customer needs and let organization members work and report with this system regarding customer projects and orders. Customer satisfaction is measured instantly, mostly by qualitative information (visits, calls, etc.).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• They are certified to aviation standards (FAR 145) and maintain systems to update changing requirements.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Adaptive function</th>
<th>Dutch Partner</th>
<th>US Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>• The performance of each process is thoroughly measured by means of an enterprise resources planning system. Managerial reports appear every week, and actions for improvement are implemented almost instantly.</td>
<td></td>
<td>• No systems are in place to measure production performance.</td>
</tr>
<tr>
<td>• They know exactly which product groups are contributing to profits and which ones are not.</td>
<td></td>
<td>• Members fear inflexibility if they emphasize efficiency.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• There is no integrated enterprise resource planning system.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>• Product group profit analyses are not made.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Participant's opinions about alliance management</th>
<th>Dutch Partner</th>
<th>US Partner</th>
</tr>
</thead>
<tbody>
<tr>
<td>• They are convinced that the organization can absorb and integrate alliance activities with existing systems. After all, their partner is also a strategic customer, and they have not had many problems in the past.</td>
<td></td>
<td>• They had noticed that their Dutch partner had a strong profit orientation and was rather impatient. Over the years, they had been able to establish a trustworthy relationship, and this was seen as a good basis to discuss disputes, which they expected to arise during alliance formation.</td>
</tr>
<tr>
<td>• They were hopeful that the market demand forecast given by their partner was realistic and that their investment would pay off.</td>
<td></td>
<td>• So far, discussing alliance concerns had gone well. However, they noted that their Dutch partner had difficulties in enforcing agreements in their organization.</td>
</tr>
</tbody>
</table>

Table 2-3. Summarized results of the workshops
The Post-formation Period

The discussions in the workshops reflected the initial findings from the questionnaire. The participants from the Dutch organization agreed that they emphasized process efficiency instead of encouraging the development of new ideas and combinations. The motto of the owner (CEO) was “time is money,” and this strong attitude was dominant in his organization. Members in different departments had clear task descriptions and task-related performance indicators. The members were used to that situation, and some were even comfortable with it as it provided them with a certain identity and clear overview of responsibilities. Another important conclusion in the Dutch partner is that the majority of participants believed their position and reputation in the market were significantly dependent on historical values, stemming from the first owner of the company. The imprinting’s of the past were clearly an important part of the culture, and these values were imperative in the socialization processes for new employees. In another discussion we had with the Commercial Manager, he noted that:

“Such values cannot be taken for granted in the near future, especially if we enter markets in which they have never heard of us.”

The focus should be, he continued, to

“Be able to develop high quality products that exactly meet customer requirements, but so far, research and development (R&D) had not been very successful in this. Look at the Italian leather producers and what they can offer these days!” (Commercial Manager Dutch organization)

His observation is something that all the participants were concerned about, as they were wondering if tighter departmental control, including measuring R&D results very closely, would be appropriate for developing new products. In their opinion, sales should continue to take the lead and assign the workload and R&D projects. If sales was capable of properly translating the customer's needs into internal specifications, R&D must be able to meet these specifications. The perception was that there was no direct need to involve R&D members with customers and alliance partners.

The US partner recognized this way of working, but it has not yet caused difficulties in their relationship. They did expect, however, that there would be frequent interactions in the beginning of the relationship, and while this approach might not be the most efficient, it was important to “get things started.”

Members from the US partner admitted that they did not pay much attention to their own process efficiency. They believed that their overall performance would decline if they installed such processes. They did not worry about a few losses when making customized orders as the result counts, and, thus far, customers have been willing to pay the additional
costs. The Production Manager stated that he was aware that they lacked performance measurement systems for key processes, but he noted that:

“Such processes might also constrain us in doing the things as we do them today and lessen the options that we have for tomorrow’s products.” (Product Manager US organization)

During our visits, we observed that there were many external partners visiting their plant. We talked to designers from Bombardier and some of their agents in Europe who were on site for product training. One of the members told us that such visits were common in their organization because they liked to be in touch and know what is going on outside the firm.

It appears that the processes that supported the pattern maintenance and integration functions appealed more to their business model. In fact, as they stated, they encouraged members of each discipline in their organization to participate in customer projects because such involvement enabled them to directly learn what the customers really wanted. The CEO of the US partner stated:

“I know a lot of people at design centers, aircraft manufacturers and aircraft interior firms who I can contact directly.” (CEO US organization)

After reflecting on the questionnaire results, we discussed the implications for the ongoing alliance formation. The participants from the Dutch partner affirmed that managing the alliance was primarily the responsibility of the sales department. Their partner was already a customer, and processes to support this relationship were sufficiently in place. They did not expect major differences in interaction patterns.

During the post-formation phase, there were a few recurrent problems that arose in the development of some leather samples of the required aviation quality. Developing the high quality samples was a necessary step in the alliance because approval of these samples would serve as the market introduction of the alliance. The US partner expected to have these samples in house within eight weeks after the formal alliance agreement was signed. The Dutch partner believed that the manufacturing process of such a product was similar to fireproof leather products they produced in the past for railway customers. The members believed that a trial order could be easily processed within the existing system through which they handled all new orders. The results, however, were rather disappointing for themselves and for the US partner. The samples were not good enough to pass basic FAR and ABD standards, and the appearance of the leather did not meet commercial aviation industry standards.
The US partner took immediate action by planning a visit to their Dutch partner. They sent the Head of the Technical Department, the Chief Operating Officer and the Aviation Sales Manager to discuss the results and possible solutions. The atmosphere of the meeting was rather disappointing for the US delegation because they felt that they were not heard in their attempt to actively participate in providing technological solutions to solve the problem. The problems were mostly related to different insights about the use of chemicals. Despite the handbook that was provided by the US partner, the Dutch company was not able to produce the few samples that were required to pass the standard FAR requirements. The Dutch partner continued to produce samples in different ways, but mostly relied on their own ideas about this kind of leather. During the turnaround time of eight weeks needed for processing the samples, there was little technical communication between the partners about progress and difficulties. The marketing and sales activities, including the making of plans and budgets, continued during that time.

After a while, a few samples of the second attempt barely passed the test, and the Dutch partner decided to present them to their US partner. Unfortunately, the US partner rejected these samples, once again, based on their appearance and feel and the negative results of an independent US aviation fabrics and leather-quality test facility. At that time (approximately 4 months after the start of the post-formation stage) the US partner lost confidence in their Dutch partner. Matters became more troublesome because the US partner encountered difficulties after processing the raw material that was still being routinely supplied to them. The material revealed a certain looseness or bagginess that appeared after finishing the leather. This was the moment that management of the Dutch partner put more internal pressure on its members to investigate the root cause of the problem. People from the chemical laboratory, R&D, and even the purchasing department were involved in finding the source of the trouble. Some argued that it was due to the period of the year when the quality declines naturally and that the problem would solve itself over time. Others believed that it was due to a recent change in the specification of the pickling agents. There were also people who argued that it was a combination of the chemical agents used by the Dutch partner and US partner that was responsible for the looseness of the material. In the end, there was a lot of controversy and disagreements about the cause and possible solutions. What happened was that the competence trust (Das & Teng, 1996, 2001) of the US partner declined, and they lost confidence in the alliance as well.

During discussions at the Dutch partner, two R&D members of the Dutch partner, who were only partly involved in the alliance, posed that the problems that arose could not be solved by modified recipes and existing systems. A more radical approach was necessary. Their idea was that management of the Dutch partner should visit the US partner and learn more about their production and testing methods. They also proposed following their raw material through production to see if something previously unnoticed could be identified that might lead to a possible solution.

Instead of management, both R&D members were asked to visit the US partner for a two week period. After these two weeks, the members came back with new information and
insight about producing aviation leather and about procedures to process raw material. After some internal meetings at the Dutch partner, they agreed on a few parallel sample productions with different recipes. After the normal six weeks of turnaround time, the Dutch partner was able to produce samples that could easily pass the FAR and ABD requirements while retaining their appearance. The US partner approved these samples, and finally they were able to specify their first mutually developed aviation leather.

The Dutch partner acquired the first order for the alliance. The order came from Malev (Hungarian Airlines), which replaced seat covers for two of their B737 planes. Shortly after that, the US partner also acquired orders from some US-based airlines. The root cause of the raw material trouble was also found – a chemical supplier had slightly changed the composition of a pre-tanning agent and did not properly communicate this modification.

In evaluating the first months of the post-formation stage, the US participants felt that their Dutch partner was inflexible, and its management was not taking the necessary steps to organize the necessary actions. They also encountered difficulties with the way the Dutch partner set up its communication lines. The US members argued that technical difficulties needed to be discussed among technicians rather than following the Dutch route of going through willing but uninformed back office employees in sales offices. Despite these difficulties, in the end this alliance proved to be successful, and, today, it is expanding in Europe and the US.

2.5 Discussion and Conclusion

We believe the social system approach – adaptive, goal attainment, integrative and latent pattern maintenance functions based on Parsons (1951) – was helpful in analyzing pre-existing managerial conceptions about their firm-specific organizational processes. In principle, such social system approaches avoid any type of reductionism because social systems are composed of interrelated parts/mechanisms that influence each other. The workshops, interviews and observations confirmed the results of the initial quantitative analyses. More importantly, however, we witnessed how these functions come into existence through critical events during the collaborative process. The empirical dynamics of this study had naturally drawn our attention to some of these functions. We observed in more detail the dynamics and tensions between Parson’s (1951) pattern maintenance function and adaptive function. As the chapter has illustrated, the Dutch partner emphasized efficiency (a well-developed adaptive function) and was not able to adjust the resources to the needs of the alliance. Despite the fact that patterns between both firms were maintained and were routine in the older setting of their business relationship, the same systems and routines did not hold in the new situation.
The US partner was well aware of these differences and for this reason had formed a multi-disciplinary alliance team. They expected to communicate directly with people within the same discipline at the Dutch partner. Unfortunately, the Dutch partner was not able to organize boundary-spanning activities (integrative function) and link them to the right people. This failure was important because the US partner knew that simply following the handbook would not be sufficient to produce aviation-quality leather – it considered frequent interactions and evaluations essential. As Kale, Singh & Perlmutter (2000, p.232) argue, “the acquisition of difficult-to-codify competencies [which leather production is by definition] is best achieved through wide-ranging, continuous and intense contact between individual members of the alliance partners.” However, managers at the Dutch partner did not focus on a change of routines to allow them to establish such wide-ranging levels and contacts between members. On the contrary, they stressed efficiency instead of bringing in more variety. Consequently, despite established trust and good intentions, members from both partners became frustrated and lost confidence in the cooperation.

A rather unnoticed but important finding of the research was that some suppliers recognized the potential power of the alliance. They saw the possibility of increasing the number of clients and, consequently, their chemical volumes. They also saw the opportunity to deliver directly to the US partner to cover their own needs for tanning agents. Management at both partners became aware of these suppliers' considerations (and others in the network) and began to think differently about what they could and should do in the future. They began to discuss other potential activities that the alliance would enable them to accomplish. They also considered possible actions by competitors, in particular the consequences for the US partner after the alliance formation was discussed among the management team members. They anticipated that their current European suppliers of crust (semi-manufactured hide) might turn hostile once they became aware of the alliance between the US firm and one of their competitors. The other suppliers might lose interest in their relationship with the US firm, assuming that from this point forward, it would purchase the majority of its annual volume from its announced alliance partner. Here we notice that network effects arise once new relationships or activities within the network are proclaimed or brought into practice, a finding that is consistent with Gulati (1995) who based his argument on Burt (1982) that events in the network – such as an alliance formation – alter the social structure of the network, firm interest and external opportunities for the focal firm and for other actors in the network.

Nevertheless, in this case, the anticipation of these changing attitudes at both partners had a positive influence on the relationship in terms of increasing an irreversible lock-in and constitutive commitment to their new activity. With this previously unnoticed finding, we demonstrated that in studying alliances, one should enlarge the scope to include the wider network, the reciprocal actions that take place and how they influence the focal relationship. It is the theoretical relationship between inter-organizational routines, as discussed by Zollo et al., (2002), and the influence of network position and shifting strategic identity that matter.
This reflects the notion of dyadic atomization (Anderson et al., 1994) proposed earlier as a type of reductionism that avoids the dynamics of network influences on alliances.

Another key point is that the development of collaborative business processes is not an isolated and linear-patterned event (e.g., Håkansson, Harrison & Waluszewski, 2004; Ring & Van de Ven, 1994). Such processes go along with other embedded, changing or emerging organizational processes that depend on other actors within and outside the organization. Taken together, these conjunctions of processes likely compete with partner-specific but scarce resources, including skills, human effort, and time (Medlin, 2004). It is predominantly for this reason that collaborative processes do not follow a linear pattern of formation, design and post-formation, as we have suggested with our framework. The empirical “messiness” that we encountered in the study revealed that collaborative processes do not have clear-cut stages but follow a highly iterative process of trial and error. Therefore, in understanding collaborative processes, scholars as well as consultants should shift their focus from an organizational perspective to the underlying micro-processes at work (e.g., Abell, Felin & Foss, 2007).

This is particularly important in non-equity arrangements where participant firms operate from their own sites but depend on each other's actions to move forward during each stage of the alliance life cycle. This is where we want to add a few notes for consultants. We believe that our suggested social system framework offers an encompassing tool for analyzing structural properties during the initial stage of alliance formation. For each organization, these properties must somehow be complementary on the one hand (to make the endeavor valuable for both organizations) but compatible on the other (to make the relationship work). This is a paradox and consequently an extremely difficult one where especially consultants responsible for implementation, so-called process-oriented consultants (Schein, 1999), might get involved. At the brink of this paradox, all kinds of problems can and likely do happen that needs to be resolved. So, instead of attempting to implement plans after diagnosis (preferably by means of our system approach) in an overly deterministic “stage-like” consultation process, process-oriented consultants in such situations might consider an approach that takes into account the irregularities and complexities that naturally flow from the interactions between both firms. Scholars have argued for a co-constructive (Hicks, 2010; Hicks, Nair, & Wilderom, 2009) or constructionist (Czarniawska, 2001) perspective on consultancy practices. Both views have in common that they appeal to the “muddling through” (Sarasvathy, 2001; Lindblom, 1959) character of organizational life. Where expert and process-oriented consultants typically enact diagnostic methods and use their expert knowledge to address problems, co-constructive consultants tend to focus “more on cycles of action and evaluation, until the purpose is considered achieved, or the problematic situation is replaced by a more pressing one” (Hicks, 2010 p 205). In other words, knowledge about what to do next is created situational by consultants and participants. Such a view, however, requires that the client and organizational members are considered co-constructors of problems and purposes as well and not receivers of “ready-made” knowledge and solutions.
This approach may require paradigmatic adaptations from both the client and consultants regarding their perception of their co-constructive role in the alliance processes.

In conclusion, we hope that this chapter has contributed to the awareness of the organizational impact of implementing collaborative processes. This notion of scope is not only important for practitioners but also for consultants advising or, better yet, co-constructing with their client's firms. As this chapter has stressed, the scope of concern should extend beyond the structure of the alliance itself and include the impact of micro-processes and their evolution once the inter-firm strategy is initiated. In addition to the attention normally paid to alliance rationale and strategy, it is important to realize that true success also depends on understanding the underlying dynamics that are captured in practice as the alliance becomes a reality.
Chapter 3

A Time-Based Perspective on Business Relationship Development
Temporal work in the Face of Critical Events

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3.1 Abstract

Time concepts, such as the past, present and future, are increasingly considered important for understanding business relationship development from a human perspective. However, how actors experience time and how this relates to relationship development from an empirical point of view has not yet received much attention. In this chapter, we examine business relationship development that results from a change of established time perceptions of actors involved in business relationships about the past, present, and future of their relationship when facing critical events. More specifically, we examine empirically how critical events that occurred in a long-standing buyer-seller relationship prompts actors to engage in a collective process of reconstructing the past, present, and future of their business relationship, also termed temporal work. Temporal work is preceded by a breakdown of time perceptions and is assumed to be a precondition for adaptive interaction, and thus relationship development. Our findings suggest that a change of established time perceptions is a critical process because it is highly conflict laden especially when both parties have differing experiences of a critical event. On the other hand, the change of time perceptions mediate a shift from exchange interaction to adaptive interaction and thereby create opportunities for relationships to develop. We contribute to the existing literature concerned with the relation between time and perceptions in combination with relationship development and also the literature concerned with interaction episodes an, to some extent, the ending of relationships.

Keywords: established time perceptions, critical events, changing time perceptions, exchange and adaptive interaction, temporal work, relationship development.

3.2 Introduction

The key argument of this chapter is that business relationships develop through a processes termed temporal work, in which actors reconstruct the past, present, and future of their business relationship. There is increasing scholarly interest in investigating business relationship development from the perspective of human actors (Corsaro & Snehota, 2012; Tidström & Hagberg-Andersson, 2012). These studies highlight the importance of critical events (Elo, Halinen, & Törnroos, 2010), the social construction of time (Halinen & Törnroos, 1995; Halinen, 1998; Medlin, 2004) and relationship and network development as an ongoing process (Halinen et al., 2012). In particular, the notion of critical events, also understood as specific happenings that affect business relationships, is identified as an important driver of change because it influences the perceptions of actors and thereby shape relationship interaction and outcomes (Elo et al., 2010; Hedaa & Törnroos, 2002; Tidström & Hagberg-
Andersson, 2012). Hence, at the core of relationship development is human interaction which underpins both everyday economic exchange and the adaptive processes necessary to change and advance relationships (Ford, Håkansson, Snehota & Waluwszeswki, 2010; Medlin, 2004; Schurr, Hedaa, & Geersbro, 2008; Brennan & Turbul, 2008). Particularly, Medlin’s (2004) conceptualization of time is useful to understand how interaction in relationships proceeds against a backdrop of time perceptions, suggesting that time is intimately bound up with human interaction. He notes that, “managing" a relationship is a continual balancing act between different perspectives of past, present, and future” (Medlin, 2004:191). This suggests that human interaction cannot be studied without taking account of ways in which actors perceive time. However, how actors perceive time and how this shapes relationship outcomes is underexplored. There are a few studies that seek to address this relationship. For instance, Corsaro & Snehota (2012) examined how perceptions of change relate to a relationships’ past events, present outcomes, and desired outcomes and Tidström & Hagberg-Andersson (2012) examined how relationship outcomes are shaped by the experiences of actors about critical events over time. Yet, none of these studies have addressed how the occurrence of critical events in time shape the perceptions of actors about the past, present, and future in relation to business relationship outcomes.

The purpose of this chapter is to extend current research concerned with relationship interaction and development from a time perspective. Theories of temporal embeddedness make clear that time perceptions of actors are shaped by actors’ temporal-relational contexts (Emirbayer & Mische, 1998). While time perceptions are assumed to be open for re-ordering and thus change (Medlin, 2004), we argue that time perceptions about the past, present, and future on behalf of the actors, can be profoundly stable and even persistent. We propose that this is especially apparent in long-standing business relationships. It is specifically in contexts of long-standing business relationships and networks that future and present interaction is shaped by the experience of past events and largely embodied in the routines of everyday exchange. While it is assumed that adaptive interaction is essential for relationships to develop (Brennan & Turnbull, 1999), we argue that actors are likely to encounter difficulties in making a switch from the everyday exchange interaction to adaptive interaction. Following Medlin (2004), exchange interaction deals with prior experience, routines, and has the present as its main object of time, whereas adaptive interaction deals with change and has the future as its central object of time (Medlin, 2004). In this chapter, we examine how established time perceptions, underlying exchange interaction, change in the face of critical events in a business relationship and how adaptive interaction is enabled through a collective process of re-constructing these time perceptions. This process is termed temporal work which refers to the ability of actors to re-construct links across the past, present, and future once existing strategic settlements come under challenge (Kaplan & Orlikowski, 2013). The research question guiding our efforts is: how does a critical event change established time perceptions underlying exchange interaction and how are time perceptions re-constructed through temporal work and contributes to adaptive interaction?
Empirically, we carried out a research project lasting for eight months into a long-standing international buyer-seller relationship based on a participant observation study (Czarniawska, 2004). We examined critical events, the change of time perceptions and its re-construction from the perspective of actors involved in an international buyer-seller relationship who encountered difficulties in adapting their relationship structure to a new relationship activity in the commercial aviation industry. We focused on how actors respond to unexpected failures in the joint product development process related to the new activity, and how this degenerated into a major critical event in their relationship that challenged the existing perceptions about the past, present, and future of their business relationship. Next, we examined how these time perceptions were re-constructed in order to make the necessary adaptations and contributed to the pursuing of the new relationship goals.

The insights that are emerged from our study is that established time perceptions provide a certain stability to business relationships because they enable actors to routinely engage in everyday interaction. However, despite that actors can re-image a new future state of their relationship, established time perceptions can persistently impede relationship development in the sense that actors continue by dwelling on their habits and routines. Making the necessary changes required a radical change of established time perceptions, providing the opportunity to actors to align the imagined future with the present relationship structures. Even though actors were successful in re-construction the past, present and future of their relationship, our research suggests that temporal work is critical in relationship development. One important reason is that problems of adaptability are likely to occur when actors at partner firms experience the intensity of a critical event in differing ways. This suggests that temporal work - that is the re-construction of time - is above all a collective process that must occur together by the involved actors of each party in a business relationship. If such collective processes do not take place, time perceptions can hardly be re-constructed which may result in further relationship conflicts (Vaaland & Håkansson, 2003) or even relationship termination (Halinen & Tähtinen, 2002).

We contribute to the existing literature concerned with relationship development in various ways. First, we contribute to the literature on relationship development from a time perspective (Halinen & Törnroos, 1995; Corsaro & Snehota, 2012; Medlin, 2004; Tidström & Hagberg-Andersson, 2012;) by showing how time perceptions are intrinsically bound up with two basic forms of business interaction. Second, we contribute to the literature concerned with relationship episodes in buyer-seller relationships and episodes as engines of change (Schurr, Hedaa, & Geersbro, 2008; Schurr, 2007) by showing how a radical change of time perceptions can be considered as an engine of relationship development in itself.

The remainder of this chapter is structured as follows. We start by discussing the received view on time in business relationships and develop an approach that extends these existing approaches. Next, we propose method and describe the research setting. After introducing the participating firms, we provide our case narrative and show how time perceptions change and lead to temporal work from an empirical point of view. In the discussion section, we elaborate and discuss our findings followed by a description of the contributions especially to event-
based approaches, but also to research concerned with episodes and relationship development more generally. Finally, we offer our conclusions and propose avenues for further research.

3.3 Theory

The purpose of this section is first to discuss the existing literature on the role of time especially in the business relationship literature. Then we introduce the idea of how stability and change in business relationships can be approached from a time perspective. From there we conceptualize how this relates to both routine exchange interaction and future oriented adaptive interaction. After that, we introduce the concept of temporal work to understand how actors re-construct the past, present, and future of their business relationship once they have been departed from their existing time perceptions.

3.3.1 Time in business relationships

Business network scholars were early to note that time is an important construct in understanding business relationship development. Time can be understood from both the horizontal and vertical dimensions in understanding business relationship development (Halinen, 1998; Halinen & Törnroos, 1995). The horizontal dimension represents the past, present, and future of a business relationship. The vertical dimension represents the various cultural boundaries of each partner firm that determine the human perspective of the past, present, and future in conjunction with the nature of the management problems in the present (Medlin, 2004). Thus while interaction can only occur in the present, actors draw on their past experience and future projections of their relationship (Medlin, 2002;2004). This implies that whenever actors cognitively deliberate on their relationship, this always involves features of past memories and future expectations, an observation analogous to sensemaking (Weick, 1995).

However, such cognitive deliberations of time do not occur in isolation. The literature suggests that variations in perceptions will continue to arise from other network connections (Håkansson & Snehota, 1995b; Medlin, 2003). In this regard, scholars have demonstrated how perceptions shape behavior, roles and positions of actors in networks (Abrahamsen, Henneberg, & Naudé, 2012; Halinen et al., 2012) and show how present perceptions of actors in relationships are linked to intentions and perceived future outcomes in business relationships (Corsaro & Snehota, 2012; Tidström & Hagberg-Andersson, 2012). The role of events has been identified as critical because they influence the perceptions and interactions between actors in business relationships and significantly shape relationship processes and outcomes (Elo et al., 2010; Hedaa & Törnroos, 2002). Events are considered as incidents or specific happenings as long as they are perceived as such by human actors irrespective of whether they occur outside or inside a business relationship (Hedaa & Törnroos, 2001; Tidström & Hagberg-Andersson, 2012).

In summary, these contributions suggest that actors use the past and future in making sense of the present of their relationship, suggesting that the past and future can only be found
in memory and anticipation (Flaherty & Fine, 2001). Furthermore, time perceptions can be influenced by network connections but on a more daily basis as a result of critical events that occur in a business relationship.

### 3.3.2 How actors depart from established time perceptions

The literature suggests that for change to happen some stability is necessary (Easton & Lundgren, 1991; Raesfeld, Geurts, & Jansen, 2012). In contrast to Medlin (2004) who portrays time perceptions as rather fluid and open to change, we argue that time perceptions tend to stabilize over time because actors develop a shared understanding of the past, present, and future of their relationship which has emerged and is maintained through recurrent interactions. Moreover, we argue that a certain stability of time perceptions is necessary to allow actors to engage in everyday exchange interaction in a business relationship. In other words, it provides some predictability and enables business relationship planning. Yet to say that time perceptions are stable does not necessarily imply that these perceptions must be the same for each partner. For instance, actors at partner A may interpret the past and future of their business relationship differently than partner B. From a time perspective, these differences can be explained by opposing cultural understandings of time at the level of the partner firms (Halinen & Tornroos, 1995; Halinen, 1998) but also through the influence of events in the network that affects partner A more than B (Hedaa & Tornroos, 2008). The point that we pursue to make here is that, despite such differences, time perceptions are commonly accepted in a business relationship in such a way that they enable everyday interaction without demanding actors to continually re-order their time perceptions. This will be especially the case in business relationships in which actors share a rich exchange tradition. In such contexts, actors will probably draw on their past relationship experience in order to maintain both present and future interaction. Hence, although the past and the future are involved in present interaction (Medlin, 2004), actors will dominantly rely on their experience of past interaction. In grounding this assumption in theory, we follow Emirbayer & Mische (1998:975) who argue that “both the projective [future] and practical-evaluative [present] dimensions are deeply grounded in habitual, unreflected, and mostly unproblematic patterns of action by means of which we orient our efforts in the greater part of our daily lives”. This idea of habitual engagement comes closest to Medlin’s (2004) conception of exchange interaction, in which he considers actors to draw on norms and structuration processes (following Giddens, 1979) to exchange goods and services for economic gain. Exchange interaction thus typically deals with the past and present as the central object of time whereas adaptive interaction typically involves the future as the object of time (Medlin, 2004). Adaptive interaction would require a certain openness to change and the revision of norms, expectations, and intentions which had been developed in the past (Medlin, 2004). In other words, changing a relationship structure would require actors to be purposefully engaged in the adaptive processes of relationship development (Beverland, 2005; Brennan & Turnbull, 1999). In spite of the differences between exchange and adaptive interaction including its different objects of time, the literature on relationship development has not addressed how a shift between the different objects of time is enabled. Nevertheless, literature suggests that
critical events can change existing perceptions of actors and thereby determine relationship and network processes and outcomes (Elo, Halinen, & Törnroos, 2010; Corsaro & Snehota, 2012; Hedaa & Tornroos, 2008). Therefore, we propose that critical events as experienced as such by actors, can cause actors to depart from established time perceptions. Consequently, a critical event has the potential to cause a shift from routinized exchange interaction to adaptive interaction. It follows that a critical event may cause actors to de-contextualize the past, present, and future of their relationship. Following Emirbayer & Mische, (1989), de-contextualization deals with the practical-evaluative ability of actors to “contextualize past habits and future projects within the contingencies of the moment” (Emirbayer & Mische, 1998:962). However, to adapt to a new future, it is important that actors are able to re-contextualize the past, present, and future successfully (Kaplan & Orlikowski 2013). We elaborate on the process of temporal work in a business relationship in the next section.

3.3.3 Temporal work to re-construct the past, present, and future

Temporal work are the interpretative processes that allow actors to re-construct links to the past, present, and future once confronted with events that challenge the existing status quo (Kaplan & Orlikowski, 2013). Temporal work concerns the interpretations of actors about “what might emerge in the future, what was currently at stake, and even what happened in the past” (Kaplan & Orlikowski, 2013:1).

The concept of temporal work applied in this chapter may shed a light on how actors in business relationships resolve different perceptions past, present, and future after a critical event in their business relationship.

In Figure 3-1 we present the conceptual model that we used to examine empirically how actors depart from established time perceptions change and shift to adaptive interaction that is mediated through temporal work.

![Fig 3-1. Conceptual model](image-url)
3.4 Method

Our study is based on a qualitative research design which is particularly suitable for capturing processes of change in relationships and networks (Bizzi & Langley, 2012; Halinen et al., 2012). More specifically, we draw on a participant-observation study in a single case that lasts eight months. Participant-observation studies are useful to collect in-depth longitudinal data with a special focus on events (Czarniawska, 2004). Furthermore, we benefited from collected real-time data from the perspectives of both the buyer and seller. Having access to both parties at the same time is rather unique in business relationship research (see also Corsaro & Snehota, 2012). One important benefit is that we were able to collect perspectives and experiences of actors involved within each party while working on the development of new relationship activities. The first author was active as a marketing manager for these business relationships’ new activity and, at the same time, the relationship process researcher. During these eight months, he frequently traveled between the two parties to collect data and to work on the marketing part of new activity of this relationship. This buyer-seller relationship was established in 1985 and involves two leather tanneries. One is located in the United States and the other in the Netherlands. The one located in the US was established in 1969 and employs 130 people. The Dutch company was established in 1876, and employed about 150 employees in 2006.

To assure confidentiality, we use pseudonyms for each company: Dutch Leather and Yankee Leather. Their business relationship began with a single activity: Dutch Leather supplied the raw material, termed crust, to Yankee Leather who used this material for making aviation leather for the private yet industry. Over time, this relationship developed for each party into a strategically important buyer-seller relationship but yet a typical exchange relationship. In September 2006, both parties decided to enter a new joint activity in the commercial aviation industry to deliver certified leather and repair services for seat covers for commercial airliners.

We used two collection techniques, namely observations and interviews. We collected data in two stages and documented it in field notes and files. During the first stage, observations and interviews were used to help understand the established time perceptions of the actors involved, including the relationship structure that enabled exchange interaction. We also observed actors during several internal meetings as long they concerned the new activity of this business relationships. Furthermore, we conducted in-depth interviews with key actors involved in this relationship at both parties. This was necessary to gain sufficient background knowledge of this relationship experienced through the actors involved. Jointly, these observations and interviews led to so-called “thick” descriptions (Geertz, 1994) of the history of this buyer-seller relationship in general and the way interaction is structured including the way actors perceive the past, present, and future of their relationship. Beyond that, we looked at the context in which this new joint activity was about to emerge. This helped to establish a more complete picture of the context in which the new activity takes place, we interviewed purchasing staff members of Lufthansa Techniek in Hamburg (Germany) and purchase managers and interior designers at Airbus and ATR in Toulouse (France). We also
interviewed engineers and purchasers working for Lufthansa (Germany), Malev (Hungary), and LOT (Poland). In addition, we interviewed managers of so-called cut-and-sew shops to fully understand the network and interdependencies of actors involved in commercial aviation seating. Finally, the Aircraft Interior Show in Hamburg in April 2007 was visited to appreciate the atmosphere of the commercial aircraft interiors industry.

During the second stage, we shifted our focus to the process dimensions by looking at the responses of actors regarding the critical events that occurred in relation to the change of established time perceptions and subsequent temporal work in real time. In general, critical events are powerful for studying the dynamics of interaction in networks and business relationships (Elo et al., 2010). Yet is it is also argued that the importance of events when they happen can only be considered post hoc (Czarniawska, 2004), and therefore are subject to reconstruction (Halinen & Törnroos, 2005). Or as Czarniawska, (2004:776) remarks: “In the beginning the researchers tend to panic and try to chase ‘the action,’ but in time they learn that ‘important events’ become such in accounts”. While there was indeed action and panic in our study as a result changing perceptions of time, it was indeed difficult to identify an event as critical while it was happening. To overcome this problem, we structured our case narrative according to a temporal bracketing strategy which is particularly suitable for understanding processes in one or more detailed case studies (Langley, 1999). We bracketed our data into three consecutive temporal phases to show how discontinuities in one phase lead to replication of the analysis in a new phase. We present the case narrative as follows. First we present the background of each partner, then we present findings of established time perceptions of actors involved in this relationship, including the characteristics of routinized exchange interaction. In the following phases, we describe how time perceptions change followed by the process of temporal work which enable actors to engage in adaptive interactions simultaneously.

3.4.1 The study: the backgrounds of Dutch Leather and Yankee Leather

Dutch Leather is a modern leather tannery located in the Eastern part of the Netherlands. This tannery is considered as one the most efficient and state-of-the-art tanneries in Western Europe because of its ability to process raw bull-hides into high quality furniture leather in an environmental friendly way. Dutch Leather has a strong position in the middle- and high-end furniture industry in the Netherlands and Germany. They produce mid-size to large batches and are able to achieve a continuous quality necessary to match customer requirements. The company is a third generation family-owned business that exist already for over a hundred years, and is allowed to use the prefix “Royal”. The current owner received some important management awards over the recent decades and at that time, he demonstrated how a midsize firm can be both profitable and sustainable at the same time. Work seems to be well organized on the shop floor, in the warehouse, and in the offices. All key business processes are supported by an enterprise resource planning system (ERP) that enables a thorough monitoring of the production planning and processing the hundreds of orders that are in production at any given time. The management information flows structured and top down
into the organization and thereby attempting to avoid overflows of information sharing. Therefore, each department receives the information required to do the job. Primary processes are organized around tight planning schedules. Production employees have to adhere to these schedules and are obliged to meet the production deadlines. The research and development department (R&D) enjoys more freedom but also relies on tight schedules and clear new product descriptions in order to meet the ever increasing customer demands. Every department leader reports the status of achievements on a weekly basis. At Dutch Leather, time is considered as a scarce resource. The motto of the owner is “time is money”, which reflects the culture of this company. Managers become somewhat nervous when deadlines are not met, but overall employees and managers people enjoy the challenge of accomplishing work on time and at the quality-level as requested by their customers. One important strategic goal of Dutch Leather is to develop new markets to lower their dependence on the declining furniture industry which currently remains their primary market. While open to change and new strategic directions, management nonetheless greatly relies on existing structures and practices because they are assumed to ensure both continuity and efficiency.

Yankee Leather is located in the state of New York and is, like Dutch Leather, also a family owned business. The present owner bought the company in 1969. This company is active in a few niche markets such as the private aviation interior industry and in exclusive furniture projects throughout the world. The demands of these markets are high in the sense that customers require “custom-made” designs and colors, usually in small batches. To augment customer demands, Yankee Leather offers additional services such as pattern cutting and repairing services. Furthermore, Yankee Leather works closely with other partners, such as cut-and-sew shops and repair facilities throughout the world. Their production scale is only about 20% of that of Dutch Leather. Yankee Leather sometimes accepts orders from airliners to deliver leather for the refurbishment projects of their aircraft interiors. However, such orders typically entail larger production batches than normal. As a consequence, Yankee Leather regrettably has to turn down such requests since they lack the necessary production scale. Despite these business opportunities, their primary activities would be in jeopardy if they were to accept larger orders on a regular basis. To ensure continuing flexibility, the management of Yankee Leather puts a lot of effort into training their workers in carrying out multiple tasks and making them familiar with all the aspects of leather production. To increase market and customer familiarity, people in all work disciplines are invited to talk with customers and interior designers during their visits to Yankee Leather’s production facility. In comparison to Dutch Leather, Yankee Leather has adopted a more flexible style of organizing to suit the nature of its market niches. Although it is important that schedules and deadlines are met, managers at Yankee Leather believe that it is even more important to take the time to meet exact customer needs. The management of Yankee Leather has great future ambitions in terms of becoming a leader in their market niches. More than relying on the past, managers at Yankee Leather are keen to continuously assess environmental changes and business opportunities to secure their future.
3.4.2 The business relationship between Dutch Leather and Yankee Leather

This business relationship started 25 years ago with Dutch Leather supplying semi-manufactured hides, termed crust, to Yankee Leather. In 2006, 30% of Dutch Leather’s annual crust production was delivered to Yankee Leather. Both partners consider this business relationship as strategically important and therefore significant for the future of both their companies. Actors perceive their business relationship structure as solid enough to solve problems in a constructive manner and even to work together on future opportunities. Of course, sometimes actors encounter difficulties with each other in everyday relationship interaction. Most of such problems revolve around planning and quality problems which is inherent in processing natural material, such as raw hides. Nonetheless, actors know how to deal with such problems by relying on the strengths of their relationships. Furthermore, prices, volumes, and other conditions, such as currency exchange, are negotiated on a quarterly basis between Dutch Leather’s commercial manager and Yankee Leather’s purchasing manager. Sometimes these negotiations are tough but the partners usually agree. This is because they implicitly assume that they will continue their relationship for many more years to come. To help ensure this, actors make sure that deliveries are shipped on time and that managers will be informed as soon anything in the operations goes wrong. Key actors, including the sales and purchasing staff, visit each other several times a year, mostly to discuss immediate operational problems which are mostly related to the quality of crust. Once a year, the primary key actors involved in this relationship - including the owners - meet each other and discuss business opportunities and strategic issues. Such encounters are also used to collect and share important knowledge about both technological developments and the market in general. Usually such visits end up in a more social event in which actors retrieve shared memories of the past and also anticipate a joint future in an informal way. As a production leader of Yankee Leather recalls during a social event:

“The relationship with [Dutch Leather] feels almost like a family, we have so many things in common and the most important thing is that we never let each other down”

(Production leader Yankee Leather)

It seems that time plays a role in various ways. First, at the level of the partner firms, we observed that partners vary in their dominant temporal orientations. Actors at Dutch Leather rely on history, routines, and procedures based on their past experience despite their future ambitions. However, Yankee Leather seems to be more oriented towards the present and future since they are actively seeking and evaluating current and future business opportunities.

Nevertheless, these differences in temporal orientations are not affecting exchange interaction. Quite the contrary: it seems that actors appreciate these differences since their buyer-seller relationship is defined by it. Because of their long joint history of over 25 years, actors have shared several past events that helped them to respond effectively to difficulties and challenges that arise at both the operational and strategic levels. Moreover, it is the joint
past experience and a good present relationship atmosphere that has enabled actors to imagine new future directions for their relationship.

3.4.3 A new relationship activity

In 2005, the market outlook for key aircraft manufacturers such as Boeing, Airbus, Canadair and Embraer led to an enormous increase in aircraft production. Some commentators predicted a doubling of the world aircraft fleet over the coming decades. This was reason for Dutch Leather and Yankee Leather to negotiate a new joint relationship. The idea was to produce and distribute high-quality leather for seats for the commercial airliners. Fulfilling large size batches for this industry was not a problem for Dutch Leather so this was a good reason to develop this activity together: Yankee Leather provides product and production knowledge, including a good access to the aviation industry such as aircraft seat manufactures and airliners, while Dutch Leather produces the leather in the desired specifications and quantities according to customer demands. For Dutch Leather, this new activity was an important opportunity to avoid under capacity resulting from a decline in their home market in particular, the furniture industry. However, it had never experienced the complications of making leather for aircraft seat manufacturers. In September 2006, both companies decided to launch their joint activity. It was agreed that Dutch Leather would take care of sales and marketing in Europe while Yankee Leather would distribute leather to customers in the US and the rest of the world. Especially for this new activity, Dutch Leather invested €300,000 for a special milling drum, laboratory and testing equipment to meet the aviation industry’s high standards.

After a legal agreement for the joint activity had been made, actors at Yankee Leather discussed the difficulties of producing leather for seat covers. Unlike the leather applied for furniture, seat cover leather requires a different chemical and production treatment. Furthermore, each batch of seat cover leather needs to meet all kind of regulatory aviation standards concerning flammability performance. To accomplish this, requires skills, craftsmanship, and calls for ‘tacit’ knowledge. To deal with these complexities, Yankee Leather wrote a handbook for Dutch Leather. The idea was that this handbook provided the R&D department of Dutch Leather with some guidelines for producing seat cover leather. Before entering the market, it was first considered necessary that samples were produced that could be evaluated and tested. It takes about eight full weeks to produce and test this kind of leather. The actors agreed that, if anything unexpected happened, they would inform each other immediately. Meanwhile, relationship interaction proceeded as usual.

3.4.4 A few critical events and the departure of established time perceptions

After these eight weeks, Dutch Leather had to inform Yankee Leather that the first sample did not pass the flame and smoke tests. In response, Yankee Leather asked if Dutch Leather’s people from the product development department had read the handbook. They admitted that they had not. In response, Yankee Leather offered immediate support and
proposed to visit Dutch Leather with a technical assistant to analyze what had happened. Although Dutch Leather accepted this offer, they were not so interested in Yankee Leather’s interventions at this stage because they wanted solve the problems themselves first. Nevertheless, Yankee Leather sent technical experts to Dutch Leather in an attempt to find out what exactly had happened. However, the atmosphere of the meeting was rather disappointing for the US delegation because actors at Ned Leather were not open to sharing their methods used for producing the first batch of samples. Actors at Dutch Leather said that they would rather find out what happened. Besides, it was argued that it only concerned one production mishap. As the R&D manager of Dutch Leather remarked:

“Why do they always want to stick their noses into our business? We can do it ourselves, and one mishap does not say anything. We first have to analyze what happened anyway” (R&D Manager, Dutch Leather)

Dutch Leather thus remained faithful to their own ideas of production techniques and recipes. During a visit to Yankee Leather one week later, we observed that actors at Yankee Leather were still disappointed because now they had to wait for another eight weeks without knowing which actions Dutch Leather was undertaking to produce acceptable samples. Yet despite this misfire, actors at Yankee Leather in general were largely positive about their relationship and the business opportunities that they were pursuing together. Nevertheless, we noted that the operation manager of Yankee Leather was less pleased about the situation when he remarked that;

“I noticed earlier that [Dutch Leather] is quite efficiency- and profit-driven and does not take time to explore a little bit deeper to find solutions. (Operation manager Yankee Leather)

He further recalls that:

If there are technical questions, I always have to communicate with the sales department. I hope that this will change in the very near future.”

At this point in time, a negative experience from the past of their relationship was recalled and compared with the present situation of their relationship. Nevertheless, exchange interaction between both companies continued as usual as actors continued working on the existing relationship activity in awaiting for the samples of the second trial order.

After eight weeks, the R&D department at Dutch Leather reported that the second trial order had also failed to meet the quality standards. In contrast to the first misfire, this occasion produced a critical event in this relationship followed by a breakdown of established time perceptions, especially experienced by actors of Yankee Leather. Actors at Yankee Leather expressed to the sales department of Dutch Leather how seriously disappointed they were about the second misfire. If Dutch Leather had listened to them from the beginning, they
would not have had the trouble that they continued to face. Furthermore, Yankee Leather’s own reputation as a reliable partner is seriously at risk as long they could not present any certified product, let alone accept orders from airlines. The lack of response and explanation, especially from Dutch Leather’s production and quality department, worsened the situation as Yankee Leather could only guess what was going on.

During a visit to Yankee Leather, we took notice of how actors at Yankee Leathers’ sales department felt that Dutch Leather had let them down. As the sales manager remarks:

“If [Dutch Leather] is not willing to listen to us or is not capable of producing the leather according to our the aviation standards right now, then we have to do it ourselves at least for the coming period as long they are not ready. We cannot risk our good reputation” (Sales Manager Dutch Leather)

The situation led actors of Yankee Leather to start doubting if Dutch Leather was the right partner for them to develop this new activity. All that they had done in the past together, their joint future ambitions including the otherwise highly appreciated features of Dutch Leather, were seriously questioned in the light of the emerging situation. Furthermore, it was not only the sample failures, but particularly the lack of response from and information sharing by Dutch Leather that upset them. Consequently, serious doubts about a positive outcome of this new activity arose and resulted in a complete breakdown of time perceptions at Yankee Leather as they were highly uncertain about a joint future, at least for their new joint activity.

However, this change of time perceptions about their relationship with Dutch Leather was not so intensely experienced at Dutch Leather. For Dutch Leather, this new activity was still of importance and time perceptions remained consistent for Dutch Leather despite the fact that management of Dutch Leather received a few dramatic e-mails from Yankee Leather in which they shared their concern about the ability of Dutch Leather and their lack of interest in proposing remedial measures. Yet these e-mails remained unanswered and were only discussed internally at Dutch Leather leading into internal discussions and measures, only causing a small upheaval in their organization.

Perhaps much could have been achieved if Dutch Leather had provided relevant and timely information and shared their ideas about how to proceed. However, this did not happen. Instead, a further critical event occurred at Yankee Leather. Pressed by the airliners who kept on asking for samples, Yankee Leather announced an immediate visit to Dutch Leather to see what was going on and thereby forcing Dutch Leather to admit to their difficulties with this new activity. This announcement created alarming signals for Dutch Leather that the future of the new activity was in serious danger, and that there was a lot of work to do to make this new activity successful and also to repair their damaged relationship with Yankee Leather.
3.4.5 Temporal work: re-constructing the past, present, and future.

The critical events that happened and the ensuing departure from established time perceptions that followed - first at Yankee Leather and later at Dutch Leather - resulted into a crises situation. It was not only the new joint activity which was in danger, but also the existing activity that had been defining their buyer-seller relationship for so long.

Consequently, actors at both partner firms also began to realize that something needed to be done now to rescue their entire business relationship from serious trouble. A sales manager at Dutch Leather expressed this urge in the following words;

“We have to do everything now within our power to make this work. There is too much at stake. There are of course commercial but also relationship interests. After all, Yankee Leather is our most important customer” (Sales manager Dutch Leather)

What followed was that actors started to collectively re-construct the past, present, and future of their relationship, a process termed temporal work.

Yankee Leather proposed to make an immediate visit to Dutch Leather which was now easily accepted by Dutch Leather. During the first meeting, the key actors involved started to clearly imagine the future state of their relationship on the basis of both activities. Actors also looked back at how they used to solve relationship problems and concluded that the critical events that occurred were caused by the way both partners used to work with each other, rather than deliberately obstructing the new activity, which had initially been assumed by Yankee Leather. Temporal work particularly succeeded because key actors were encouraged to spell out freely the present situation in light of the future and the past of their relationship, including what was needed to make the necessary changes to the relationship structure. For instance, actors at Yankee Leather proposed direct communication with the key people at Dutch Leather, rather than communicating only with sales people which they had been used to in the past. After the actors had negotiated the implications for their relationship structure, actors could start to actually work on the necessary adaptations to the relationship structure as well as solving the pressing technical problems. Actors agreed on a new product specification and decided to carefully monitor the production process at Dutch Leather. In the subsequent weeks, actors frequently visited each other to discuss further arrangements for the new activity such as marketing and the selection of target customers. After another eight weeks, Dutch Leather finally succeeded in producing a sample that could met the high aviation standards.

3.5 Discussion

In this study, we have explored how actors depart from established time perceptions in a long-standing business relationship in the face of critical events and how this lead to temporal work and adaptive change. This study showed how changing time perceptions matter in
business relationship development. Our study contributes to the existing literature concerned with relationship development in various ways. First, we contribute to the literature on relationship development from a time perspective (Medlin, 2004; Halinen & Törnroos, 1995; Tidström & Hagberg-Andersson, 2012), and more in general, the literature concerned with the various interaction modes underlying relationship development (Brennan & Turnbull, 1999). We have demonstrated how time is inextricably bound up with the two central modes of interaction with each dealing with a particular object of time. Our study adds to this stream of research by showing how critical events help actors to depart from established time perceptions and routinized exchange interaction and allow them to engage in adaptive interaction whilst re-constructing time. In that regard, we also contribute to the scholarship concerned with relationship interaction episodes in buyer-seller relationships (Schurr et al., 2008; Schurr, 2007). We have showed how interaction episodes relate to time perceptions and that a change of time perceptions can be an important driver of change in a relationship.

We also contribute to the literature concerned with the processes of relationship ending (Halinen & Tähtinen, 2002; Tahtinen & Halinen, 2002). Our research demonstrates that adequate adaptive interaction is dependent upon a simultaneous re-construction of the past, present, and future of a business relationship by the actors involved. However, Kaplan & Orlikowski (2013) note that if actors are not able to re-construct the past, present, and future in a plausible, coherent, and acceptable way, further interpretative breakdowns will occur. In our case, we observed how temporal work was already happening at Yankee Leather whereas Dutch Leather remained faithful their established time perceptions. Although both partners engaged in temporal work just in time after the second critical event, hypothetically speaking this may also have led into further troubles and perhaps relationship ending if they had failed to do so.

We believe that these contributions are valuable. Yet, there are also some points for discussion. For instance, while critical events are considered important triggers of change (Elo et al., 2010), this does not mean that this should necessarily lead to a radical departure of time perceptions. For instance, a machine breakdown in the production facilities at one partner that has consequences for delivering goods to the other partner would not bring the relationship into immediate jeopardy. In other words, actors may not immediately question the past, present, and future of their relationship especially when problems can be quickly restored. However, we suggest that the occurrence of a critical event in relation to a change of time perceptions is strongly related to the moments that expectations between the parties are no longer met. Indeed, the literature shows that expectations and norms are critical in buyer-seller relationships (Andersen, Christensen, & Damgaard, 2009).

Another point for discussion deals with the question if business relationship development always presupposes a radical departure of established time perceptions. While this likely applies to long-standing business relationships, it remains a question how actors engage in the adaptive interactions necessary to develop new business relationships. In such business settings, there is an absence of mutually established time perceptions, and hence, actors cannot draw on a shared past, experiences, norms, and routines. We propose that especially in
such settings, actors are far more engaged in the process of temporal work in which they attempt to construct a shared past and imagined future, in an uncertain present. This leads to the suggestion that business relationships emerge through more intensive cycles of temporal work and the adaptive interactions necessary to enable exchange interaction in the future. A final point for discussion is that this chapter is positioned in a stream of literature interested in relationship and network development from a process perspective which is especially strong to understand the role of time and shifting cognitions of actors in relation to events over time (Halinen et al., 2012). In essence, we focused on relationship development from a social constructionist perspective assuming that the mind of actors in terms of individual perceptions forms the central locus of change (Abrahamsen, Henneberg, & Naudé, 2012; Corsaro & Snehota, 2012). As a consequence, we did not include the role of substantiated dimensions for instance materiality in the structure or a business relationship as well as the processes of change. For instance, our case showed how material objects such as the production facilities, products, equipment, and departments, played an important role especially in the emergence of critical events and also the way actors perceive these objects as different. We suggest that future research should include both social as well as material dimensions in understand this relationship and consequences for relationship development.

3.6 Conclusion

In this chapter, we have explored how actors depart from established time perceptions in a long-standing business relationship in the face of critical events and how this is followed by a process termed temporal work. This study showed how business relationships develop by changing perceptions about the past, present, and future of a business relationship. We showed that established time perceptions developed in a long–standing business relationship provides some stability and continuity and in fact offers the possibility to actors to imagine a new future on the basis of a new activity. However, we also have showed that established time perceptions can be persistent in realizing new relationship ends and that critical events and the processes of temporal work are of key importance to re-construct time for the actors involved. Hence, our study suggests that time perceptions and in a more broader sense, cognitions are despite its fluidity not so easy to change as commonly assumed in relationship and network research.

Finally, our study also deals with the limitations as well as the advantages of single case studies especially in terms of depth and accuracy (Yin, 1994). Nonetheless, we regard our study as an explorative one and therefore invite business network researchers to further develop our framework and extend the findings, especially in other empirical settings. For instance by examining how time perceptions stabilize in new business relationships through temporal work. Also the opposite directions can contribute to theory development. For instance, the study of critical events in relation to temporal work during the processes of
relationship ending (Halinen & Tähtinen, 2002). In that context, researchers may examine how actors fail to re-construct the past, present, and future of one of their relationships, and in essence, lose interest to continue interaction.
Chapter 4

A Socio-Material Approach to Business Relationship Development: Breakdowns as a change-oriented process

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4.1 Abstract

This chapter explores how business relationships develop through various degrees of practice breakdowns. While prior research interested in relationship development tends to focus on either process or structural dimensions, we examine relationship development by interweaving both these dimensions. We apply Heidegger’s phenomenological lens to help understand how resources transform from “objects in use” as activated in structures to “subject of concern” at the cognitive level when actors are confronted with breakdowns in their business relationships. Our study draws on a participant observation study lasting for eight months in a long-standing buyer-seller relationship as the parties attempted to develop a new joint activity in the commercial aviation industry. While in this case actors usually unreflectively appreciated resources as objects in use, we observed how resources gradually become a subject of concern once actors were confronted with mounting degrees of practice breakdowns. Our study revealed that there are three different actor responses to practice breakdowns: reinforcing, problematizing and adjusting, with each having distinct consequences for business relationship development: actors reinforce the value of resources as objects in use when confronted with minor breakdowns in their relationship. However, actors start problematizing resources as subject of concern when they fail to resolve minor breakdowns. Adjusting occurs when actors are exposed to a total breakdown in their relationship because at such moments, actors uncover the features of resources that otherwise remain unnoticed. Nevertheless, we found that even though that the occurrence of practice breakdowns in a business relationship contributes to change, it is at the same time a critical process that brings a relationship in jeopardy especially when the parties have different experiences of the problems in their business relationship. This presents a social paradox to actors. This study contributes to the literature concerned with business relationship development, and to some extent the literature dealing with technological development and path dependencies in networks.

Keywords: practice breakdowns, resources as objects-in-use and as subject-of-concern, structure and process, relationship development

4.2 Introduction

This chapter aims to help understanding of how business relationship develop from practice breakdowns that mediates a shift between structure and process dimensions. Structure deals with stability and depicts the network reality as it is while process concerns the deliberate efforts of actors to change that reality. Scholars have argued that both dimensions matter in relationship and network development, since without at least some stability there would be chaos (Ellis and Mayer, 2001; Håkanson & Lundgren, 1979; Raesfeld et al., 2012).
The structural dimensions of network and relationship development have been particularly addressed by scholars pursuing the resource interaction approach in business relationship and network research (Baraldi et al., 2012; Baraldi & Strömsten, 2008). This approach favors explaining network or relationship development in terms of various structural configurations of resource combinations and interfaces that have been developed over time (Håkansson & Waluszewski, 2002; Araujo, Dubois, & Gadde, 1999; Chou & Zolkiewski, 2011; Gadde, Hjelmgren, & Skarp, 2011). The resource interaction approach operates within a framework that focuses on resources as consisting of social, economic and technical dimensions, for instance embodied in products, production facilities, units (including the human actor), and business relationships that are connected by interfaces (Baraldi et al., 2012; Baraldi & Strömsten, 2008).

The process dimensions in turn, represent the ongoing interactions between actors, which disrupt, transform and reproduce prevailing structures (Nicholson, Lindgreen & Kitchen 2009). Process studies of relation development typically address the subjective experience of humans in relation to both time and change (Halinen, Medlin, & Törnroos, 2012; Medlin, 2004). In addition, event-based approaches are effective in improving our understanding of how critical events influence the perceptions and behaviours of human actors and, in essence, shape relationship and network processes (Elo et al., 2010; Halinen et al., 2013; Corsaro & Snehota, 2012; Tidström & Hagberg-Andersson, 2012). In the context of business relationships, Corsaro & Snehota (2011) found that interpretations of critical events along with the parties' perceptions of the available resources and how these resources are combined are important for alignment in business relationships. Thus, process approaches mainly focus on the human experience of change and thereby take the changing cognitions of human actors as the central unit of analyses (Abrahamsen, Henneberg, & Naudé, 2012; Henneberg, Naudé, & Mouzas, 2010).

In turn, the resource interaction approach mainly focuses on the structural aspects of resource development and thus neglects how new resource combinations come into existence in the hands of human actors. Or, as Baraldi et al., (2012:274) puts it: “focusing solely on the resource structure may leave out important aspects and attributes of resources that derive from how actors perceive and interpret resources”. Yet because of the main focus on either structural or process dimensions, neither approach fully captures the dynamics of relationship and network development. Håkansson and Waluszewski (2002) present a way of looking at the interplay between the two dimensions. They use the term resources as ‘objects in use’ and resources as ‘subject of concern’ to suggest two different realms (see Håkansson et al., 2009) to indicate that there is a difference between structural and process/cognitive dimensions. Resources as objects in use are composed of activated actors bonds, activity links and resource ties. Changes in the activated structures imply interactions and physical interventions in established structures (Ford et al., 2010) and, as a result, create tensions and frictions (Håkansson & Waluszewski, 2002; Håkansson & Waluszewski, 2011). In contrast, resources as “subject of concern” are easier to change because they reside in the cognitive realms of actors and typically concern “the pattern of different logic, includes knowledge of different
technical possibilities as well as actors’ problems, goals and ambitions” (Håkansson and Waluszewski, 2002:820). Following this approach, Abrahamsen, Naudé, and Henneberg (2011) demonstrated how networks develop as a result of the interplay between both by making an analytical distinction between actor’s ideas and network reality.

In this chapter, we extend this idea of resources as objects in use and subjects of concern in the context of business relationship development to bring closer the relationship between structure and process dimensions. For the purpose of this chapter, we consider resources as objects in use when actors unproblematically use them to pursue pre-defined relationship ends. In contrast, resources as subject of concern reflect the problems that actors encounter when resources do not work as expected and undermine the realization of business relationship goals. This happens especially if actors encounter some form of a critical event in their relationship, an occurrence that we label practice breakdowns for the remainder of this chapter. The term practice breakdown is borrowed from the phenomenologist Heidegger (Heidegger, 1962) and followers of his line of thinking, such as Dreyfus (1991). For Heidegger, the occurrence of practice breakdowns in everyday situations mediate the relationship between the way actors relate to objects from the unreflective to the reflective. Heidegger holds that practice breakdowns disclose what would otherwise remain hidden. Because of his interest in how humans relate to objects, his approach can also be understood as socio-material (see also Chia & Holt, 2006; Sandberg & Tsoukas, 2011). In this chapter, we study how resources transform from objects in use to subject of concern once actors are confronted with practice breakdowns. The research question that guides our effort is: how do practice breakdowns mediate the relationship between resources as ‘objects in use’ and ‘subject of concern’ and how does this contribute to business relationships development?

We present findings based on participatory-observation research (Czarniawska, 2004; Van Maanen, 1982) in a long-standing buyer-seller business relationship involving two leather tanneries, one located in the United States and the other in the Netherlands. Our involvement in studying this relationship lasted for eight months, which allowed us to take advantage of ethnographic data collection techniques and enabled us to focus on the micro-processes of change and breakdowns as they occur in practice (Lok & de Rond, 2012; Sandberg & Tsoukas, 2011; Yanow & Tsoukas, 2008). Our research centered around the development of a new joint activity in the commercial aviation industry. For the purpose of this research, we investigated the moments when this otherwise unproblematic and effective relationship ran into difficulties at the start of the partners’ new activity. We examined how actors struggled to bring the new activity to life and show how various degrees of breakdowns finally contributed to an adjustment of resources in actual structures. In analyzing the data, we identified three related actor responses that essentially contributed to relationship development: reinforcing, problematizing, and adjusting each dealing with different breakdown intensity. The insight that emerged from our study is that actors reinforce the value of resources as objects in use when confronted with minor breakdowns. If they fail to recover from a minor breakdown, actors start to problematize resources and encounter them as subjects of concern. Adjusting occurs when actors are exposed to a total breakdown in their
relationship. It is during a total breakdown that actors become thematically aware of resources and are able to identify features of resources that would otherwise remain unnoticed. We also found that practice breakdowns are critical for relationship development yet, paradoxically, are necessary to make the required changes in resource structures.

This chapter contributes to the literature concerned with business relationship development. Especially event-based perspectives may benefit from our research because we emphasize how structural dimensions matter in relationship development without dismissing the role of critical events and subsequent changing perceptions. Second, we contribute to the resource interaction approach by showing how resource combinations come about through the interplay between resources as objects in use and subjects of concern, mediated by practice breakdowns. Our study also contributes to the resource interaction approach and technology development in networks by showing how frictions in resource structures works in the minds of the human actor (Olsen, 2013). Third, our work builds to some extent on previous work interested in adaptive interaction in business relationships and episodes of change, including scholarship interested in relationship endings.

The chapter is structured as follows: we first introduce Heidegger’s phenomenological lens and describe how we can think of resources as either objects in use or as subjects of concern in relation to various degrees of practice breakdowns. After that, we introduce the case setting followed by a description of the data collection and analysis techniques. Next, we present our findings and discuss our results. Finally, we draw our conclusions and propose directions for future research.

### 4.3 Heideggerian Phenomenology

Phenomenology, in its original Husserlian form, is concerned with how a phenomenon appears to conscious awareness (Husserl & Moran, 2001), which is “the way one’s mind is intentionally directed towards objects” (Yanow & Tsoukas, 2009:1324). In contrast, a Heideggerian phenomenological account appreciates the embeddeness of cognition in everyday activities, and how this is mediated by tools (Yanow & Tsoukas, 2009). Consequently, Heidegger’s approach is useful because it allows to consider resources, their values, and connections between resources in its ordinary and unreflective use but also in more reflective ways when resources appear problematic. Heidegger favours the use of a breakdown to make his point that mental content arises whenever a situation requires deliberate attention (Dreyfus, 1991). He notes that breakdowns occur whenever there is a confrontation between the goals that actors aim for and practical circumstances. Heidegger’s interests lies in how humans usually relate to objects (resources) and others (actors) in everyday practical situations and how breakdowns in such relationships change the way people experience themselves, others and the objects that surround them. This led Heidegger to suggest that bare perception can never be our principal access to the world, which was also
his key argument against the traditional way of thinking (Dreyfus, 1991). More specifically, Heidegger was making his point against the Cartesian tradition, which holds that humans are subjects that know objects. For Heidegger, people do not usually encounter an object by first identifying its meaning, properties and features; instead, people unreflectively appreciate objects in terms of their function and purpose; that is, in everyday use. Hence, people are considered first and foremost as doing-subjects who interact practically with objects, a state of being also termed absorbed coping or dwelling (Chia & Holt, 2006; Dreyfus, 1991). Heidegger favors using the example of a carpenter. A carpenter does not need to recite what he is doing, by which means, and for what reason, each time he hits a nail with his hammer. Normal life would be impossible if that would be the case. Therefore, absorbed coping implies that actors usually get along with objects and others and respond to situations in a spontaneous yet unreflective way (Dreyfus, 1991). Absorbed coping implies that resources are transparently available: they are \textit{ready-at-hand} implying that they are means to achieve certain ends by manipulation; that is, \textit{the things at hand to get something done} (Dreyfus, 1991:62). Resources as objects in use typically fall into this category because they are transparently available and used by actors to realize certain ends.

\subsection*{4.3.1 Practice breakdowns}

While for most of the time actors no longer take notice of their own presence in practice and the use of resources, they become consciously aware of themselves and resources whenever confronted with some form of a breakdown (Dreyfus, 1991). In a breakdown situation, resources are no longer considered as \textit{ready-at-hand} but ‘show up’ as \textit{present-at-hand} (Dreyfus, 1991). Depending on the degree of a breakdown, actors must somehow pay deliberate attention to the situation because of an experienced dysfunction. There are basically three kinds of breakdowns with each having distinct consequences for the way actors experience resources: malfunction, temporary breakdown, and a total breakdown (Dreyfus, 1991; Sandberg & Tsoukas, 2011; Yanow & Tsoukas, 2009). We discuss each of these below.

\textit{Malfunction}: for a short period of time, actors become aware of resources when there is a minor breakdown in ongoing practice. This is also termed as \textit{“reconstituted absorbed coping”} (Yanow and Tsoukas, 2009:1352). For instance, the carpenter cannot immediately find the hammer in its usual place. When a malfunction is encountered, actors momentarily experience resources as unavailable but yet expect to promptly resolve the problem by shifting attention to possible commonsense solutions. Therefore, a malfunction resembles an everyday experience of actors and is therefore considered as a modified form of absorbed coping because actors are motivated to continue what they were doing. Despite malfunction, resources are still considered as objects in use because they are only momentarily unavailable and are soon expected to be functional again as usual.
Low temporary breakdown happens when the character of a malfunction seems to be more persistent than something just momentarily unavailable. This implies that actors become consciously aware of the unavailability of resources as they appear to be problematic to them. As a consequence, resources are experienced as present-at-hand instead of ready-at-hand because actors must now pay deliberate attention to the task they are working on. Resources as present-at-hand may imply that they are missing, broken, or just obstruct ongoing practice. In any case, when resources are encountered as present-at-hand, they can no longer be transparently used as they have entered the awareness of actors. Therefore, resources transform into subject of concern since what were previously considered as transparent as objects in use now become explicitly manifest. Nevertheless, a low temporal breakdown implies that actors remain concerned to get going again since “our deliberate attention to what has become unavailable remains dependent on the practical activity in which the temporary breakdown has occurred” (Sandberg & Tsoukas, 2011:344).

Persistent temporary breakdown: In this situation, an actor becomes ever more thematically aware of the situation and must engage in reflective planning while still motivated to continue (Dreyfus 1991:72). At the same time, resources that are not broken, absent or obstructing will also be considered as unavailable because their significance in relation to the previously not functioning resource is also disturbed (Sandberg & Tsoukas, 2011). In other words, a persistent temporary breakdown cause resources previously unaffected also to be considered as a subject of concern.

Total breakdown: the relationship between actor and object is completely interrupted when reflective planning and action are of no use. In that case, actors become detached from practice and engage in an analytical stance or helplessly stare at the situation. This stance implies that resources are increasingly deliberated as a subject of concern but now are encountered in an entirely theoretical way: they are examined in terms of context-less properties. Or as Dreyfus (1991:79) notes “Once our work is permanently interrupted, we can either stare helplessly at the remaining objects or take the new detached theoretical stance toward things and try to explain their underlying causal properties”. In that case, actors identify the economic, technical, and social features of resources independent from their previous relationships to other resources. This implies that a total breakdown opens up an opportunity for actors to change by redefining features and provided the ability to assign causal relationship between resources of which actors were previously unaware. Or as Yanow & Tsoukas (2009:1353) put it. “A new view may be obtained that was not previously available: patterns are noted, connections established, and mechanism postulated”. In Table 4-1 we summarize the various types of breakdowns, type of actors’ experience and responses, and the way in which resources are encountered either as object in use or as subject of concern.
<table>
<thead>
<tr>
<th>Type of cognitive experience and responses in situations</th>
<th>Ongoing practice</th>
<th>Malfunction</th>
<th>Temporary breakdown</th>
<th>Total breakdown</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Unreflective appreciation of resources use to attain ends</td>
<td>Shift to a new way of absorbed coping</td>
<td>Attention to the task in order to get going again</td>
<td>Reflective planning in order to get going again</td>
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<tr>
<td>Resources encountered as</td>
<td>Available</td>
<td>Momentarily unavailable</td>
<td>Unavailable</td>
<td>Unavailable also resources not affected</td>
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<td></td>
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<td></td>
<td>Occurrent, as isolated things</td>
</tr>
</tbody>
</table>

**Table 4-1: type of experience, responses and the way resources are encountered as objects in use or as subject of concern (table is adjusted from Yanow and Tsoukas (2009))**

In summary, Heidegger’s phenomenological allows us to see how actors can experience resources either as objects in use or as subject of concern, depending on whether or not actors experience a practice breakdown. We argue that especially in long-standing business relationships actors usually appreciate resources as objects in use because they are already functionally utilized to realize business exchange and relationship goals. Actors will not deliberately reflect on these resources as long business interaction proceeds in a customary way. However, whenever there is a significant disturbance in a business relationship, resources and their relations to other resources are momentarily brought into view as unavailable and therefore encountered by actors as subjects of concern. Some examples are a failing production facility at the partner firm, incorrect product deliveries, sudden opportunistic or deviating behavior on the part of actors at the partner firm. If actors are able to jointly solve the problem, they soon will shift back to “business as usual” because absorbed coping is the primary mode of their existence in a business relationship. However, when the disturbance cannot be eliminated quickly, actors switch to reflective planning and action yet are still motivated to continue. When reflective planning and action has no value, actors become detached from practice, and encounter resources as subjects of concern in a totally analytical way. A total breakdown presupposes that actors single out the properties of resources and become specific about their technical, economic or social features independent of their usual context. For instance, actors may point to the features of products in relation to...
the features of a production facility, or the capabilities of a human actor, which are otherwise tacitly taken for granted as objects in use.

The aim of the next section is to first describe the research setting and methods used followed by a narrative of how a long-standing business relationship develops through practice breakdowns. We describe how actors usually relate to resources as objects in use in their relationship and how various degrees of practice breakdowns transform resources into subjects of concern when the parties entered a new joint activity in the commercial aviation industry.

4.4 Research setting & Method

We studied a business relationship between two family-owned leather tanneries. One is located in the United States (New York), with 130 employees with a strong position in the private aviation industry. The other is located in the Netherlands, with 150 employees with a good position in the furniture industry as its primary home market. The relationship started in 1981 with a single activity, with the Dutch partner producing and delivering semi-manufactured leader hides (termed crust) to the US partner; it developed into a strategically important buyer-seller relationship. In September 2006, the partners decided to enter the commercial aviation industry together by marketing certified leather and repair services for aircraft seats. US Leather’s production capacity was limited, so it was necessary for the Dutch partner to develop and produce the leather that could meet the quality standards set by the aviation industry. However, the Dutch partner was unfamiliar with the development and production of this kind of leather which has specific quality requirements particularly regarding fire performance that had to meet both the US Federal Aviation Regulations and Airbus standards. These requirements are totally different from those for furniture leather. Meeting these requirements demands special production methods, including special chemical treatments and extra milling time. The Dutch partner invested a 300,000 Euro in a new laboratory, equipment, and a milling drum. Both partners expected to have the first leather sample ready within two months. In this chapter, we particularly highlight the problems that arose during the development of the leather needed to qualify in this industry and how this affected the relationship as a whole. To assure confidentiality, we have used pseudonyms for both companies: US Leather and Ned Leather.

Our research involvement lasted for eight months (June 2006 – February 2007) and draws on a participant-observation study (Czarniawska-Joerges, 1998; Czarniawska, 2004; Van Maanen, 1982). According to Czarniawska (2004:785), participant observation implies that “the researcher assumes the role of an organizational member (or the other way around—an employee becomes a researcher)”. This approach allowed us to theorize from the “logic of practice” (Czarniawska, 2009; Sandberg & Tsoukas, 2011) from having a privileged access position by looking at how actors experience their relationship and, more specifically, the resources in use to maintain their relationship from the perspectives of both parties. The first
author was involved as the marketing manager for this new activity as well as a researcher interested in business relationship development. His presence in the business relationship started a few months before both partners engaged in the new activity and data were collected over a period of eight months. This brief introductory period allowed him to familiarize himself with this particular business relationship and socialize with colleagues in their daily routines in the leather production plant and offices, while leaving sufficient room for what Bruyn (1966) termed detached involvement. Throughout this period of eight months, data was collected at both companies by taking notes at several planned and ad-hoc meetings particularly organized around marketing and product development challenges. In addition, minutes of the meetings and e-mail exchanges between the partners related to product development efforts were studied. Furthermore, in-depth interviews were conducted with key actors involved as well as frequent and more informal exchanges with colleague and their counterparts. Additionally, data was collected from market actors to understand the context in which the new activity between the partners was about to develop. For that purpose, interviews were conducted with purchasing staff members of Lufthansa Technik (Hamburg, Germany) purchase members of Airbus and ATR (Toulouse, France). Furthermore, interviews were conducted at several European airlines, including Lufthansa, Malev, and LOT. Finally, two so-called cut-and-sew shops were visited to improve our understanding of leather processing for the use of aircraft seat covers.

We followed Miles & Huberman’s (1994) suggestions for data analysis. Furthermore, we draw on the ideas suggested by Sandberg and Tsoukas (2011) to explore practitioners’ responses to practice breakdowns and to understand how actors at both partner firms sustain and transform their relationship practice. Furthermore, we used Orlikowski’s (2007) suggestion for exploring socio-material relationships at work how by looking at how actors express their relationship to resources through the use of their language. We were especially sensitive to deviations in the way actors express their relation to resources, indicating that resources emerge as subject of concern. In addition, we followed the suggestions of Cantų, Corsaro, and Snehota (2011) to adopt a methodological sensitivity to identify shifting meanings of actors about resources over time. Resources can be products, facilities, departments, business relationships and its units including the human actors involved that all carry social, technical, and economic features (Baraldi et al., 2012; Håkansson& Waluszewski, 2002)

4.5 The case study

In this section, we first describe the business relationship in a situation in which resources are most of the time considered available, and thus objects in use. We then proceed by dwelling on certain moments to illustrate how a sequence of minor and persistent breakdowns led to a total breakdown in which resources are considered as subject of concern and thus subject for change during the development of the new product intended to result from this relationship’s new activity. We describe the case narrative in a chronological order.
4.5.1 Absorbed coping in a business relationship: resources as objects in use

US Leather is a customer-oriented company focusing on the specific needs of customers who own or operate private jets. US Leather produces small quantities of leather hides to meet customers’ specific requirements. US Leather collaborates with designers and network partners, such as cut-and-sew shops, to co-design and create aircraft leather interiors to the highest standards. In doing so, US Leather expects a flexible, pro-active attitude on the part of its workers. To assure flexibility, workers are mainly trained on-the-job to maximize the development of multiple skills. In general, the production of seat cover leather and also leather for interior parts involves tacit knowledge and requires many iterations and improvisations during production.

Ned Leather, on the other hand, is a medium-sized tannery that produces leather hides in large batches mainly for the European furniture industry. For most customers in the furniture industry, it is important that each delivery is of a uniform quality because they produce catalog-based furniture. In the leather industry, Ned Leather’s production plant is considered to be an excellent state-of-the-art tannery capable of processing finished leather from raw hides in an environmentally friendly manner. In contrast to US Leather, Ned Leather processes finished leather from its own raw hide processing which, coupled with economies of scale, puts them in a strong market position. Furthermore, Ned Leather relies on a centralized organizational structure and its workers are usually task specialists. Thanks to a large degree of standardization and dear procedures, Ned Leather is capable of producing high-quality leather efficiently, giving them a competitive advantage over most other leather tanneries.

The relationship between Ned Leather and US Leather is based on the delivery of crust (a semi-manufactured leather product that has undergone some level of dying) to US Leather, which they use for further processing into finished aviation leather for the private jet interior industry. Over time, the companies have developed a solid business relationship and both parties consider this relationship as strategically important. Thirty percent of US Leathers annual demand for crust is nowadays met by Ned Leather and the volumes are increasing because Ned Leather has proved to be a reliable partner, capable of delivering uniform quality, mostly on time, in the exact quantities, at acceptable prices.

There are two departments involved in the daily practice of this business relationship. Actors in Ned Leather’s sales department are responsible for all the day-to-day communication with the actors in US Leather’s purchase department. These actors ensure that operational matters are taken care of within both organizations. At the operational level, Ned Leather has a back-office employee who controls delivery schedules, shipping and invoicing. She communicates with US Leather’s purchasing manager, sometimes by telephone but in most cases by e-mail because of the six-hour time difference between the partners. These actors normally rely on a one-day response time, which is considered acceptable for keeping processes running or dealing with problems as they occur. Price agreements are negotiated on a quarterly base between Ned Leather’s commercial manager and US Leather’s purchasing
manager. Sometimes these actors negotiate prices during visits to the Netherlands or the US, but in most cases they are settled by telephone. Actors who are directly involved in the business relationship, but also some actors who support the relationship on the background, meet each other at least twice a year. These meetings are considered to be important because they ensure that a good atmosphere is maintained and the latest technological developments are discussed.

However, sometimes the partners encounter difficulties in their business relationship. We asked key actors at each partner how they cope with problems and if they could mention some examples of recent problems. Most of these problems can be related to delivery, quality or production issues. Such difficulties are part of the everyday business and are therefore classified as malfunctions as we described and defined earlier. Whenever such problems arise, actors usually know what to do and how to respond. Only occasionally are solutions not found. This is because leather is a natural product so quality and supply inevitably vary for a variety of reasons. Ned Leather’s commercial manager expressed how the partners usually deal with such difficulties as they arise.

“We cannot always avoid these quality problems, because they are caused by the irregular quality of the raw hide, which is a natural product, including seasonal influences. These effects only appear once the hides are produced and we cannot check all the hides microscopically. What matters is how soon we respond to US Leather when such problems arise” (Commercial manager Ned Leather)

In our analysis, we considered such difficulties as an instance of minor breakdowns and thus a form of a malfunction. When actors encounter minor breakdowns in their relationship, they experience resources as momentarily unavailable yet expect to resolve the problem by their reliance on commonsense solutions which tend to be based on past relationship experience. Despite the possibility of such minor breakdowns, it seems that the actors involved in this relationships are primarily absorbed in their relationship practice in which resources typically fall under the category of objects in use. How this manifests itself is reflected by few statements from actors at US Leather. US Leather’s operational manager stated this during one of our earlier visits to the company:

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“Ned Leather is one of the most efficient and reliable leather suppliers we know of, and as far as I remember, they have never let us down” (Operation manager US Leather)

US Leather’s production leader expressed the good atmosphere of the relationship as follows:

“It feels sometimes like a family and there is much that we [US Leather & Ned Leather] have in common” (Production leader US Leather)

US Leather actors typically express the good atmosphere of their relationship by indicating how their relationship with Ned Leather functions well overall. In other words, actors on both sites consider the relationship itself as an object in use serving their own strategic interests as well the possible future opportunities that arise from their relationship.
4.5.2 The start of the new activity

In September 2006, both partners negotiated the start of a new activity in the commercial aviation industry. To do so, it was important for Ned Leather to first develop a product that could meet the aviation standards before taking significant orders from airlines and seat cover manufacturers.

Before placing the first trial order, actors from US Leather visited Ned Leather several times to satisfy themselves with the idea that Ned Leather had understood the methods and procedures for making aviation leather. During the first kick-off meeting, US Leather offered Ned Leather’s actors from the product development department a handbook which documented the composition of the chemicals, production procedures and how to use the test equipment. After the meeting, actors from US Leather expected to evaluate the first trial order after eight weeks.

4.5.3 Developing problems: the emergence of a temporary breakdown

After eight weeks, Ned Leather had to inform US Leather that the first trial order had not met the aviation standards. In response, US Leather expressed that they had not have expected this result because they believed they had discussed the recipe exhaustively during the kick-off meeting.

“Did you follow the procedures in the handbook?”, was the first reaction of US Leather’s operation manager.

To try to remedy the situation, US Leather offered technical support and proposed to visit Ned Leather soon to analyze exactly what happened. Although Ned Leather did not immediately reject this request, actors were not really interested in what they regarded as US Leathers’ interference at this stage. As Ned Leather’s Research and Development Manager stated:

“We can do it ourselves, and one misfire does not say anything. We first have to find out what happened anyway” (R&D Manager, Ned Leather)

Despite this, US Leather sent a few technical people to Ned Leather with the aim of finding the root cause of the misfire. It was an uncomfortable conversation because actors from Ned Leather’s production and R&D department were not open for any discussion and only provided an overview of the chemicals used and the procedures followed for producing the first sample. These actors expressed that they would rather take some more time internally to find out what exactly happened. For Ned Leather, this misfire had the character of a malfunction; that is, a minor breakdown which is considered acceptable during product development. Also Ned Leather’s owner became aware of the misfire. He was particularly insisting on the importance of strictly following the company’s product development
procedures. Although primacy was given to the new activity with US Leather, these actors went on placing a second trial order based on an improved recipe without making use of the expertise and help offered by US Leather.

Shortly after the first misfire, we visited US Leather to discuss other relationship matters. During this visit, actors from US Leather expressed they were disappointed with Ned Leather’s response in not making any use of their help. They emphasized the importance of the special skills and exacting procedures needed to produce seat covers. Although they accepted that failures can always occur, they were most worried about not knowing how Ned Leather intended to produce the second batch of trial samples. Furthermore, they were concerned about whether Ned Leather was committing sufficient resources in terms of time and effort in their new activity. As US Leather’s operations manager remarked during our stay:

“I noticed earlier that Ned Leather is quite efficiency-and profit-driven and does not take sufficient time to explore a problem and find solutions” (Operations Manager, US Leather)

The troubled atmosphere during our visit to US Leather indicated that they were anticipating a persistent breakdown since they could not see how Ned Leather could produce the second batch of samples. This implied that actors at US leather started to see resources as subject of concern by already referring to the potential unavailability of Ned Leather’s resources. More specifically, they were highlighting Ned Leather’s production and R&D facilities and the capabilities of the actors involved in relation to the product, which they no longer expected to meet aviation standards. Furthermore, they were worried about Ned Leather’s ignorance to accept their help which was very unusual in the history of their relationship. As a consequence, whereas Ned Leather considered the first misfire as only a minor breakdown, for US Leather this situation caused a persistent breakdown because they could not see how Ned Leather is going to handle the problems. A minor breakdown is a form of malfunction that typically motivates actors to resolve the problem as soon as possible aimed to reconstitute absorbed coping; that is, to get going again. Hence, for Ned Leather, resources remain considered as objects in use; that is, suitable for what they should do. US Leather, in turn, required more attention to be devoted to the task and reflective planning although it was still concerned to proceed with the relationship activity. However, the difference is that for US Leather, Ned Leather’s production and R&D facilities, including the human actors involved, were already considered as subjects of concern. This imbalance of breakdown experience played an important role in the next phase of their new activity because Ned Leather then had to report that the second batch of samples did not meet the aviation standards.

4.5.4 A total breakdown in the business relationship

After waiting for eight more weeks, Ned Leather had the uncomfortable experience of having report a second misfire to US Leather. While expecting this result, US Leather’s key
actors such as the operation and commercial manager and the business owner, responded that they were highly disappointed in Ned Leather’s recent performance. They were considering momentarily suspending the new activity with Ned Leather. As US leather’s commercial manager putted it:

“If [Ned Leather] is not willing to listen to us or is not capable of producing aviation leather according to our and FAR [Federal Aviation Regulation] standards right now, then we have to do it ourselves for the coming period. We cannot risk our good reputation” (US Leather’s Commercial Manager)

Furthermore, US Leather’s operations manager indicated that it has always been difficult to get in contact with Ned Leather’s right people when they needed information. He remarks that:

“Even if there are technical questions, I always have to communicate with the sales department” (US Leather’s operation manager)

It seems that the second misfire triggered US Leather to treat their entire business relationship with Ned Leather as a subject of concern. Actors at US Leather were not able to see how to continue without discussing seriously what recently had gone wrong in their relationship. Ned Leather became aware of their alarming concerns which also led to their thematic awareness that their relationship had run into serious trouble. It followed that actors from both parties now were facing a total breakdown in their business relationship. At Ned Leather, management started to assign blame to their production facilities, chemical department, and to people responsible for product development and testing aviation leather. As a member of Ned Leather’s R&D department remarked:

“Nobody at [Ned leather] knows how the testing equipment works. In addition, the handbook does not explain much, so the best thing we could have done was to talk with our partners and asked them for help earlier” (Member Ned Leather’s R&D department)

4.5.5 Adjusting: taking advantage of resources as subject of concern

It was clear by now that both parties were thematically aware of the dysfunctions in their relationship. Actors on both sites felt that they had to find root causes and make effective arrangements in order to make the new activity work. For instance, a sales manager at Ned Leather expressed this feeling as follows:

“We have to do everything now within our power to make this work. There is too much at stake. There are of course commercial interests but also relationship interest. After all, [US Leather] is our most important customer” (Sales Manager Ned Leather)
In the following weeks, we observed how actors from Ned Leather started to approach US Leather to inform them openly and comprehensively about the difficulties they had encountered during product development, including the recipes used for the chemical treatment of the leather. Once the concerns had been openly discussed, actors at both parties scheduled a few one-site meetings in which they could discuss face-to-face the concerns about the relationship and possible solutions. Previously, US Leather had agreed to train two R&D staff members of Ned Leather in their production site to familiarize them with the production and testing of aviation leather. During the meetings at Ned Leather, technical staff from US Leather tried to carefully reconstruct the procedures followed in the production processes for the two misfires and also examined test reports. These visits were not restricted to going through the technical difficulties, but also to repairing the social bonds which were considered to have been seriously damaged over the previous eight weeks. Although, the actors at both sites still found their relationship as a subject of concern, they now were able to de-contextualize both technical and social resources, and to identify the features that had caused the recent difficulties in their relationship. In so doing, actors could discuss these features openly and see if and how these could change in order to advance their new activity. For instance, actors were discussing how their communication structure should improve to enable more open and direct communication. Furthermore, they discussed the exact amount of chemicals used for producing aviation leather, when they should be applied and at which stage of the production process. Having reached consensus, actors jointly re-wrote a procedure that intended to result in a third batch of samples that would meet aviation standards.

After eight more weeks, Ned Leather was pleased to report that the third sample trial had passed all the aviation tests and was now ready to take sufficient orders from airlines and seat cover manufacturers. In terms of communication, actors established a modified social structure in which responsible actors could freely communicate about relationship matters, a structure that was unfamiliar to Ned Leather. While getting used to this new structure and their newly acquired ability to produce aviation leather, the relationship could now proceed as previously, namely in a situation in which resources were considered as objects in use.

4.6 Discussion

Our case highlights how resources transform from objects in use to subjects of concern through breakdowns that occurred in this business relationship. By taking the three levels of breakdown experience of both parties into account, our case illustrates how this relationship develops through two misfires in the product development process. Each party responded differently to the first misfire which led to an imbalance within the breakdown experience. For Ned Leather, it was only regarded as a minor breakdown which implied that resources remained considered as objects in use. In contrast, US Leather considered this event as a persistent breakdown and was anticipating the unavailability of resources. In other words, resources from the other party were already revealed as subjects of concern as actors were
demanding reflective planning and effective actions from their counterpart. We identified this imbalance as a critical moment because it led to further doubts about the new activity. This could perhaps have been avoided if Ned Leather had been more receptive to US Leather’s offered help after the first misfire. Nevertheless, the total breakdown that occurred after the second misfire led to a tipping point in their relationship. Both parties considered their entire business relationship as a subject of concern as actors were thematically aware of those resources that constrained their new activity. However, although the relationship was pushed into this total breakdown situation, actors could now engage in reflectively working on those resources and identifying the social and technical features that had caused the difficulties. These resources include: production and testing facilities, the chemical department, including its responsible human actors, as well as the communication structure that was a subject of change.

Ironically, it seems that this total breakdown was apparently necessary to make the essential adjustments to these resources which otherwise might not have taken place if Ned Leather had accepted US Leather’s offer of help earlier. This observation leads to a paradox because since business actors are usually oriented to avoiding breakdowns and thereby maintain resources as objects in use, this also limits their ability to (1) reflect on resources and; (2) identify their social, economic, and technical features in new ways in order to discover promising new or modified resource combinations.

We identified three analytically distinct actor responses which are of importance for business relationship development and the relation between resources as objects in use and as subjects of concern: reinforcing, problematizing, and adjusting. When actors are exposed to minor breakdowns such as malfunctions, they reinforce the effective functioning of existing resources in relation to other resources, and thus as objects in use. As a result, actors close off the option to change resources and strive resume habitual activity because there is no immediate need to do so. When a situation persists in the form a persistent breakdown, actors start to problematize resources as subjects of concern and require reflective planning and action because they anticipate future difficulties. However, if no additional action take place, then a total breakdowns occurs which implies that actors are thematically aware of resources and the features that cause the problems. In that case, actors regard resources entirely as subjects of concern, and are able to identify technical, social, and economic features of the resources which then can be re-negotiated and changed as necessary.

Our study has shown how structure and process are both constitutive parts of relationship development. Structure is embodied in the way actors use and exploit resources as objects in use without any intention to change them. Process dimensions are presented in the change efforts that actors pursue once resources are considered as subjects of concern. Our research shows how this can be understood as a cyclical process, which is not only restricted to the phases of actor’s responses that we just have described. The order of responses that we found may typically apply in the context of long-standing business relationships in which resources have been considered as objects in use for quite some time. This might be different in new business relationship settings or in typical innovation environments. In such contexts, actors
may be particularly exposed to resources as subjects of concern since it is not clear how they could be effectively related to other resources. Scholars have argued that conflicts in such contexts contribute to relationship development, suggesting that is good to start with conflicts to help achieve project results (Vaaland, 2004). Our research sheds light on how that can be the case since conflicts usually relate to various levels of breakdowns. After all, all interaction is ultimately concerned with the physical world (Ford et al., 2010). This is to say, interaction always concerns ‘something’ or ‘somebody’, either taken as objects in use or as subject of concern.

Furthermore, our study also shows how actors derive the value of resources from the way they are combined with other resources over time, and this is to some extent path-dependent (Håkansson & Waluszewski, 2002). Furthermore, from a path-dependent perspective, possible to understand how it is that actors maintain divergent views on the value of the relationship, pointing to the dual-faced nature of resources (Håkansson et al., 2009; Corsaro & Snehota, 2010 Cantù., 2012). Our study shows how path dependencies persist because actors are not aware of all the features of resources as long they are considered as objects in use. The implication is that change and thus the development of new paths can be constrained by the fact that actors dominantly consider resources as object in use. This limits actors in their ability to engage in innovation and network development. Our study also extends the notion of the term ‘friction’ in technological development. According to Håkansson and Waluszewski (2011: 171) “friction can act both as a stabilizer and a de-stabilizer of existing resource interfaces”. So far, the term frictions is understood as trigger of change that results from a movement of resource structures. Although it are the human actors who cause this movement, how frictions work in the human mind is underexplored (Olsen, 2013). With our framework, it is possible to understand how frictions work in the mind of human actors when they are confronted with practice breakdowns in their business relationships.

We also contribute to the literature concerned with business relationship development from an event-based perspective (Corsaro & Snehota, 2012; Halinen et al., 2013; Elo et al., 2010; Tidström & Hagberg-Andersson, 2012). As we have argued earlier in this chapter, event-based approaches assume the existence of resources, but their role in relation to change remains underexamined. Rather, its focus is on changing perceptions of actors about change and alignment in business relationships (see also Corsaro & Snehota, 2011). Yet as Cantù et al., (2011) showed, both resource and actor dimensions are intimately related in the development of resources in business relationships. Therefore, our study enables event-based researchers to study resource and actor dimensions in relationship and network development integrally.

Of course, not all relationships must necessarily develop through breakdowns. Moreover, it is possible that actors will pursue new relationship goals and perhaps are able to implement the necessary changes to attain such goals in their relationship structure without the need for any breakdown at all. What matters though is that in the development of new resource combinations, actors must be aware of the possibilities. We showed how especially a total breakdown help to create the necessary variety that enabled actors to re-define it technical,
social, and economic features that otherwise would have been difficult. Due to the dominantly characterized routine character of business interaction (Ford, Gadde, Håkansson, & Snehota, 2003), we thus challenge the ability of human actors to be consciously aware of these features at all time, especially when relationship interaction proceeds in a customary way.

4.7 Conclusion

The objective of this study was to understand how business relationships develop through breakdowns, with a particular focus on the relationship between resources as objects in use and subjects of concern. We asked: how do practice breakdowns mediate the relationship between resources as ‘objects in use’ and ‘subject of concern’ and how does this contribute to business relationship development? Heidegger’s phenomenological lens was helpful in understanding this relationship and how changes come about through the experiences and actions of human actors. In so doing, we included both structural and process dimensions in understanding business relationship development, which so far has been treated as two different realms (Abrahamsen, Naudé, & Henneberg, 2011). We have proposed that the three related actor responses to breakdowns are characteristic for long-standing business relationships since in such contexts resources are more likely to be taken as objects in use. Despite the need for a further theory improvement in the context of long-standing relationship development, future research may also focus on how intensities of breakdown experience apply to other business settings. For instance, in new relationships or network arrangements especially in a highly innovative context. In innovative contexts, actors typically deal with the mobilization of resources and attempt to identify the future value of resources (see Finch, Wagner, & Hynes, 2011; Gadde, Hjelmgren, & Skarp, 2011). In this endeavor, resources are likely to be treated as subjects of concern as long actors have found ways to utilize resources over time. Furthermore, our framework may be used by scholars with an interest in the processes underlying business relationships ending (Halinen & Tähtinen, 2002). As our study indicates that breakdowns are also conflict laden and may lead to relationship termination especially in a situation when actors fail to develop resource combinations in their relationship. Further research should also take into consideration the notion of time. For instance, Halinen and Törnroos (1995) and Medlin (2004) argue that actors cognitively elaborate on time while interacting by making sense of the past, present, and future of their relationship. Although we have studied how a business relationship develops over time, we did not take into account precisely how actors experienced the past, present, and future in the moments that they encountered a breakdown in their relationship. Therefore, a time perspective in conjoint with a socio-material perspective as we did in this chapter, would advance theory development on the relationship between structure and process in business relationship and network research.

Although we have benefited from a participant-observation study, it does remain a single case study, which constrains it generalizability (Yin, 2009). Therefore we must consider our research as explorative. Nevertheless, case studies do provide a valuable means for
developing theory by utilizing in-depth insights gained from empirical phenomena (Dubois & Gadde, 2002). Therefore we believe that we have offered a good starting point for further research by considering breakdowns as a change-driven process that includes both structure and process dimensions.

Acknowledgements:

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Chapter 5

A Socio-material Perspective on Temporal Work: Practice Breakdowns during Strategic Upheaval

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5.1 Abstract

How does a breakdown in ongoing organizational practices result in temporal work? While the mainstream literature mostly assumes that strategic change is a purposeful and future-oriented process, recent work demonstrates that strategy making requires temporal work on the part of actors to make strong interpretative links across the past, present, and future to re-establish strategic settlements once existing ones have broken down. The purpose of this chapter is to extend the concept of temporal work by approaching it from a socio-material point of view. We draw on a field study lasting for three years at six agricultural nonprofits at risk of losing significant revenues as a result of substantially changing subsidy priorities set by the government, which causes strategic upheaval in their field. We examine how the socio-material structures underlying the practices of these associations break down and shape temporal work when actors are facing the upcoming changes. More specifically, we examine in detail how variations in socio-material structures produce several levels of temporal work and with what implications for practice alignment and development. Our study revealed that differences in socio-material structures lead to different levels of temporal work, namely low, moderate or substantial. Low temporal work implies that actors re-produce ongoing practice and postpone actions to change. Moderate implies a re-alignment of practices in the present in anticipation of the future. Substantial temporal work results in a drift as actors could not see how to align future demands with ongoing practice. Our findings reveal that different socio-material structures produce various levels of temporal work in practices of associations that are nonetheless, active within the same institutional field. We contribute to existing research that is concerned with the practices of strategy making but also to the literature on radical and institutional change by demonstrating how socio-material dimensions in relation to human agency matter in avoiding problems of inertia as well as changes in organizational practices as a response to environmental change.

Keywords: socio-materiality, practice-theory, practice breakdowns, temporal work, change, Nonprofits.

5.2 Introduction

How actors make sense of an ambiguous and uncertain environment and go on to develop strategy remains an important theme in organizational scholarship (Garud et al., 2010; Kaplan, 2008; Kaplan & Orlikowski, 2013; Stensaker & Falkenberg, 2007). The Strategy-as-Practice approach (S-as-P) emerged and aimed to shift the focus from organizations and strategies to strategists and strategizing (Jarzabkowski, 2005; Whittington, 1996). In doing so, the S-as-P approach adopts a ‘sociological eye’ by directing the focus on what actors do with
things’ during strategy making. As such, S-as-P shows how strategy making is a social practice of organized human activity (Whittington, 2006). Yet despite its appreciation of the micro-activities of social and historically embedded actors, the S-as-P approach tends to adhere to the idea that strategy actors themselves are in charge of strategy processes and act purposefully towards pursuing goals. Because of this focus, scholars have argued that the S-as-P tends to follow an individualist social ontology by giving primacy to strategy actors, rather than the social practice itself (Chia, 2004; Chia & MacKay, 2007; Sandberg & Dall'Alba, 2009). Furthermore, Vaara and Whittington (2012) propose that the social practices of strategy making should be taken more seriously by considering human agency as part of practice, emergence, and materiality (see also Balogun, Jacobs, Jarzabkowski, Mantere, & Vaara, 2014). Materiality matters and therefore should be included in organizational analysis as proposed by scholars interested in the relationship between work, technology, and organization (Orlikowski, 2007; Orlikowski & Scott, 2008).

In terms of human agency, Kaplan and Orlikowski (2013) demonstrated how strategic change require actors to make strong interpretative links to the past, present, and future to move forward when exposed to a breakdown of existing strategic settlements. So rather than by solely invoking accurate foresight and careful planning, their study revealed that strategic change requires actors to re-interpret their temporal orientations in order to re-settle on a new strategic account. Therefore, temporal work can be considered as an important interpretive process underlying agency that produces strategic change. Nevertheless, while the concept of temporal work is sensitive to the struggles of situated actors in practice, there seems to be a cognitive overtone in the sense that change is due to the re-construction of the past, present, and future. In other words, it is unclear how temporal work and subsequent change comes about from the positions of actors in their structurally embedded contexts. Informed by Chia and Holt’s (2006) notion of a ‘dwelling mode’ and a ‘building mode’ of existence involved in strategy making, we examine how temporal work develops from a more fundamental dwelling mode of existence. A dwelling mode of existence presupposes that actors are engaged in socio-material practices and realize ends without being thematically aware of that practice. In turn, a building mode of existence reflects purposeful behavior and thought that occurs after actors experience a breakdown in their socio-material practices. We understand temporal work as a building mode of existence that allow actors to deliberately re-construct the past, present, and future in response to the background of their involvement in socio-material practices. The approach taken in this chapter reflects what Ericson (2014:12) describes as, “an understanding and interpretation that ontologically pertains to existential entwinement in relation to live activity in time”. To understand how actors relate to their socio-material practice, we adopt a practice perspective that understands a social practice as a nexus of organized human activities and material arrangements (Schatzki, 2002). This approach allows us to see how variations of socio-material dimensions, such as technology in use (tools, equipment, etc.), that actors use to attain practice goals, the standards of excellence they draw on, the raw materials they use and produce, but also how practice history and the maintenance of practice values and norms coherently relate to each other and are mediated through shared understandings. Our research question is: how do variations in organizational socio-material
structures underlying ongoing practices shape the various levels of temporal work and what are the implications for strategic change and practice development?

Our study is structured around an event with system disturbing potential (Barley & Tolbert, 1997). Based on a multiple case study design (Miles & Huberman, 1994), we studied temporal work at six agricultural nonprofits in the eastern part of the Netherlands over three and a half years. These associations - all concerned with preserving the ecological and cultural value of their local landscapes - draw on specific socio-material practices to conduct landscape work that is paid for from using both national and EU subsidies. Though this was the case for a long time, in 2015 these associations will have to cope with drastic change in the European and national selective subsidy regimes. Both bodies demand that agricultural associations adopt both professional standards and entrepreneurial practices that lower their reliance on subsidies. The system-disturbing potential in our case is that these changing requirements unleashed a breakdown in the socio-material structures since actors encountered difficulties in anticipating on the expected changes in relation to their ongoing practices.

The insights that emerged from our study is that variations in the socio-material structures underlying each association’s practice several different levels of temporal work, with each having specific outcomes for change. A low level of temporal work implied that actors maintain ongoing practice and postpone actions to change. In other words, the past, present, and future remained coherently linked. This was found to be the case at two associations. Here we observed that actors draw on a rich practice history, multiple activities, and are strongly embedded in their local operating context. At two other associations, we observed moderate temporal work which implied that actors re-aligned their practice in anticipation of the upcoming changes. Actors were able to re-construct the past, present, and the future successfully. At these two associations, we observed that actors draw on a rich practice history, operate in an environment with abundant natural resources such as woodlands and exploitable plan material, and focused on a continuous improvement of their specialist skills, technology and standards of excellence. Finally, a substantial level of temporal work was observed at two other associations. Actors encountered significant difficulties in re-constructing the past, present, and future since they could not see how their current practice could cope with the expected future changes. These associations both share a lack of sufficient resources to promote entrepreneurial practices and have a short, and interrupted practice history. In addition, one association encountered constraints of the older generation of board members to anticipate on the future during our research involvement.

This chapter makes several theoretical contributions. First we show how temporal work emerges from actors’ existential situations and how variations in the socio-material structures shape various levels of temporal work. In doing so, we extend current views on the emergence of intentionality and practice development (Lounsbury & Crumley, 2007; Stensaker & Falkenberg, 2007). Second, our research contributes to S-as-P scholarship by responding to those scholars call to explore how strategy making can be understood from a socio-material point of view (Balogun et al., 2014; Sandberg & Dall’ Alba, 2009). Finally, we contribute to the institutional entrepreneurship literature interested in human agency in relation to the
transformation of fields (Dorado, 2005; Lawrence, Suddaby, & Leca, 2011). We show that the “logic of action” (Dorado, 2005) of individual actors in a given field is predominantly shaped in terms of the structure of their socio-material practices, rather than through field characteristics.

We structured the remainder of this chapter as follows. In the next section, we develop a framework for understanding temporal work from a socio-material perspective. We then describe the research methods. This leads to a presentation of the level of temporal work at the six agricultural associations in relation to the socio-material structures of each association. After that, we compare the cases and propose three levels of temporal work in relation to the implications for strategic change and practice development. In the final section, we discuss and conclude our findings and make proposals for further research.

5.3 Theory

Business actors are frequently confronted with both ambiguity and uncertainty when looking into the future. Scholars have argued that actors use framing practices as a mean to make sense of the future and to reduce ambiguous information and environmental uncertainties (Gioia & Thomas, 1996; Kaplan, 2008). Particularly sense-making approaches (Weick, 1995) make clear that actors also make interpretative links in time either through retrospective rationalization (Balogun & Johnson, 2004; Gavetti & Levinthal, 2000) or by future perfect thinking (Weick, 1979). In other words, dealing with challenges require cognitive re-orientations of time to move forward. Sense-making particularly occurs when there is a gap between actors’ expectations and experience, for instance by surprise (Louis, 1980). When this happens, actors start to act in a more thoughtful way (Weick & Roberts, 1993; Weick, Sutcliffe, & Obstfeld, 2008). Recently, Kaplan & Orlikowski (2013) demonstrated how actors engage in so-called temporal work once existing strategic settlements break down. Temporal work entails the interpretative processes through which actors re-construct links across the past, present, and future when confronted with a breakdown of their current understandings. Their study showed that actors can re-construct links between the past, present, and future once they consider them as coherent, plausible, and acceptable, leading into concrete strategic choice and action. However, if fail to do so, further interpretative breakdowns occurred. Therefore, temporal work can be considered as a distinctive analytical category of agency that can produce strategic action and change (see also Emirbayer & Mische, 1998). Indeed, Kaplan & Orlikowski (2013) argue that “temporal work is a central practice of strategy making” (p 26). Nevertheless, while their concept is sensitive to the struggles of situated actors (Suchman, 1987), we suggest that temporal work is primarily occupied with the cognitive re-orientations of time itself, rather than how such re-orientations are shaped by the engagement of actors in their structural contexts. In other words, it is unclear how temporal work, and thus agency, is shaped by actors’ existential situations. Recently, S-as-P scholars have increasingly advocated the adoption of a so called ‘life-world perspective’ when studying strategy making (Chia & MacKay, 2007; Sandberg & Dall'Alba, 2009). Such an approach brings “to the fore the manner in which practice is
constituted through our entwinement with others and things in our world” (Sandberg & Dall’Alba, 2009:1349).

In this chapter, we extend the concept of temporal work from the perspective that the reconstruction of time is preceded by actors’ entwinement in socio-material practices (Sandberg & Tsoukas, 2011). Such a perspective gives primacy to the idea that temporal work is a derivate mode of agency that develops from a more fundamental mode. The difference between these modes of agency can also be understood as a building and dwelling mode of existence (Chia & Holt, 2006). Such a perspective presupposes that the cognitive re-orientations of actors across the past, present, and future that enable actors to more forward cannot be separated from their existential situations in everyday practice (Ericson, 2014).

The remainder of this section is structured as follows. We first discuss how we can understand the engagement of actors in everyday socio-material practices. After that, we introduce the concept of temporal work as a derivate mode of agency that emerges from a more fundamental mode when actors are confronted with practice breakdowns.

### 5.3.1 Engagement of actors in socio-material practices

Scholars note that aspects such as objects, machines, resources, artifacts, desks, matter in organizations (Carlile, Nicolini, Langley, & Tsoukas, 2013; Feldman, 2004; Orlikowski, 2007). Whenever materiality becomes integral to human activities and relations, this can be understood as socio-material (Orlikowski, 2007; Orlikowski & Scott, 2008; Sandberg & Tsoukas, 2011). Therefore, objects of all kind are essential to human activity and organizational outcomes since actors draw on them and use them for various purposes. Orlikowski and Scott (2008) identified three ontologically different typologies of social material relationships. The first type views the relationship between social and material dimensions as consisting of discrete independent units which causally relate to each other. In this type, human actors and objects relate to each other but remain, in the end, self-contained entities. The second type considers social and material dimensions as independent entities yet they shape each other through ongoing interaction. The third type sees social and material dimensions as 'sociomaterial' assemblages (without a hyphen). They are so fused together that they can be considered as “agencies that have so thoroughly saturated each other that previously taken-for-granted boundaries are dissolved”(Orlikowski and Scott, 2008:455). As a result, the third type requires an acceptance that materiality is so implicit in everyday activities and relations that the boundaries between humans and objects are dissolved (see also Pickering, 1993).

A prominent body of literature that particularly draws on the third ontology is actor-network-theory (ANT). ANT permits to see how technological artifacts are treated as equal members in a network of other human-and non-human agencies which are provisionally configured to produce effects (Callon, 1986; Latour, 2005; Law, 1994). At the core of an ANT is a relational ontology: one that flattens out conventional dualisms and conceives of agency as distributed across social and material elements (Latour, 2005). Yet rather than
explaining stability, ANT is primarily occupied with the emergence and dynamics of socio-material configurations. Or as Rip (2010:382) remarks; “ANT prefers to address changing, fluid, “hot” situations”. Recently, Gehman, Treviño, & Garud (2013) applied an ANT perspective to study empirically how values, such as honor codes, materialize into organizational practices through a process termed, values work. Rather than seeing values in abstract terms or as being culturally defined, Gehman et al., (2013) describe the processes through which values become entangled into socio-material practices across individuals and collectives.

Practice theory and more specifically what is referred to as the ‘practice turn’ (Schatzki, Knorr-Cetina, & Von Savigny, 2001), addresses how social practices are composed of both social and material relationships. According to Schatzki et al., (2001:2), “practice theorists conceives of practices as embodied, materially mediated arrays of human activity centrally organized around shared practical understanding”. Whereas ANT is primarily concerned with the emergence and change of socio-material configurations and an insistence of a full symmetry between social and material dimensions (Law, 1994), a practice approach is mainly occupied with understanding how actors routinely engage in social activities in conjunction with things that are given thematic coherence by shared meanings and the understandings of actors (Schatzki 2002). Therefore, a practice is first of all stable because it carries on the normative understandings in terms of what actors ought to realize or ones that are acceptable for them to do so Schatzki (2002). As a result, the development or transformation of a practice is challenged by the normative understanding of actors regarding the means-ends relationships of a practice, pointing to the teleological structure of a practice (Schatki, 2002). Furthermore, practices can also be considered as temporal structures since they are defined by both their teleological end points and their practice memory (Schatzki, 2006). In other words, actors draw on prior practice experience when realizing practice ends. In this regard, Orlikowski and Yates (2002) offered a practice lens to understand how actors use both objective and subjective notions of time in social practices, usually in a taken-for-granted fashion. An important feature of practice theory is that it places mind, body, objects, process and agency on the same ontological footing, that is, as one coherent whole. In other words, the practice itself is the smallest unit of analysis (Reckwitz, 2002). Therefore, human actors are subordinated to practice - yet embody it - rather than being in charge of it (Chia & MacKay, 2007). Furthermore, human actors are usually routinely involved in practices; that is, without being thematically aware of that practice. Or as Swidler (2001:75) notes: “practice theory moves the level of sociological attention ‘down’ from conscious ideas and values to the physical and the habitual”. This kind of engagement of actors in practices is also suggested by the term ‘absorbed coping’, a mode of existence that allow actors to routinely deal with equipment, resources, or technology to realize practice goals without the need to have a thematic awareness of the practice itself (Dreyfus, 1991). This mode is also termed as a ‘dwelling mode’ of existence (Chia & Holt, 2006) and resembles Bourdieus’s (1990) idea of ‘habitus’ (Bourdieu, 1990), and also Gidden’s conception of practical consciousness in routine practices (Giddens, 1984). These viewpoints on the position of cognition in everyday life, is to a large extent, informed by philosophers such as Heidegger (1962).
In summary, a practice-driven approach enables us to see how it is that actors draw on shared understandings about objects, others and time to realize practice ends without the need for a thematic awareness of that practice as long they continue consider those ends as coherent.

5.3.2 Practice breakdowns and temporal work

While actors usually realize practice ends without being thematically aware of their practice, there are moments in which actors shift to a more thoughtful mode of existence. Or in the terminology of Heidegger: mental content arises when the availability of ready-to-hand coping breaks down and attention shifts to unready-to-hand, or to a present-at-hand occurrence when actors can no longer see how to move on (Dreyfus, 1991). Unready-to-hand happens when something does not work properly, is missing, or obstructs ongoing practice. In such situations, the relationship between practice-ends and the practice itself is temporarily interrupted and becomes shortly open for thought and action (Sandberg & Tsoukas, 2011). In that case, actors must pay attention by articulating their concerns and do something in order to continue their practice. In a present-at-hand situation, the constitutive assignment between cognition, activity, and goals completely breaks down (Patriotta, 2003). In such a case, actors either engage in purely theoretical reflection and start to identify aspects of their practice as mere objects with isolated properties, or stare helplessly (Dreyfus, 1991). Hence, there are distinctive kinds of breakdowns, ranging from a low to a complete breakdown with each having distinct consequences for the degree of scope that actors have in their practice (Yanow & Tsoukas, 2009). This shift to an elaborated mode of existence is reflected in the distinction made by Chia and Holt (2006) between dwelling and a building modes of existence. While a dwelling mode reflects the everyday engagement of actors in socio-material practices, a building mode echoes the way actors engage in a more thoughtful way of being once their practice is interrupted.

Given these insights, we suggest that temporal work is a specified form of a building mode of existence, since it addresses how actors make sense of the past, present, and future of their practice once established strategic approaches are no longer tenable. A view on temporal work understood from a socio-material perspective highlights the ability of actors to re-construct the past, present, and future in relation to the socio-temporal structure of their practice. Hence, whenever actors succeed in re-constructing links across the past, present, and future, it is because they have succeeded in negotiating the social-material relationships underlying their practice anew when these were momentarily brought into view. However, if actors fail to negotiate these relations, they also fail to re-construct links across these time dimensions in relation to their practice, which implies that further interpretative breakdowns will occur (Kaplan & Orlikowski, 2013) The level of temporal work; that is, the extent to which actors make interpretative links across time is dependent on the intensity of the breakdown experienced in their socio-material practice.

In summary, rather than seeing forward movement as an outcome of re-constructions of time only (Kaplan & Orlikowski, 2013), our approach suggests that a successful re-
construction of time can only proceed once actors see how the socio-material relationships of their practice match with the exigencies of that moment. It follows that the level of temporal work will be low once actors experience a mild breakdown in ongoing practice, yet substantial if actors face a complete breakdown in the socio-material relationships of their practice.

5.4 Method

We studied temporal work at six agricultural associations all operating regionally in the Eastern part of the Netherlands. These associations usually perform landscape work using subsidies or other public funding but now they are seriously threatened by selective subsidy requirements. Each association draws on a specific a socio-material practice. Some operate in an area with sufficient and diverse natural resources, while others have to cope with resource scarcity and difficult work conditions. There are also variations in the multiplicity of activities, knowledge, equipment, and standards of excellences required to perform good landscape work. Furthermore, some associations experienced with efforts to commercialize their activities in order to lower their dependence on subsidies while others remain faithful to their respective historical values. These variations in socio-material structures allows us to examine how temporal work occurred, its intensity, and the effects in terms of strategic change and practice development.

We use an embedded case study design that combines multiple data sources (Miles & Huberman, 1994) for a cross case examination of how variations in socio-material structures at the six agricultural associations produce different types of temporal work in the face of far-reaching changing funding conditions. Our research involved two and a half years of fieldwork and started in August 2009 until April 2012. Our embedded case study forms a research in a context with a “system-disturbing potential” created by changes in technology, new regulations, laws, or major economic shifts leading to change (Tolbert & Zucker, 1997:104). Organizations are usually assumed to anticipate such events by announcing the adaptation of new practices and technologies, personal changes, in response to upcoming changes (Barley & Tolbert, 1997). Such an approach demands from researchers the use of a before and after design on the basis of baseline data of an event that will occur. Therefore, we used multiple and distinctive data collection techniques, such as interviews, observations, and archive studies to understand the context, the various socio-material structures at the level of the associations, and subsequent temporal work. We spent a total of 250 hours in the field doing observations on site and participation in cluster meetings. Furthermore, we conducted a total of 24 formal and 20 informal interviews with key informants and members of the associations. In addition, we read about 500 pages of archival materials, meeting minutes, annual reports, newsletters, and governmental policy regulations. We use pseudonyms to safeguard the names of the six agricultural associations: Trim Cutter, Green Care, Coppice Expert, Heathland Preservers, White Spots, and Green Heritage. All of these six nonprofit associations are located in the eastern part of the Netherlands. Below we first elaborate on the
background of these agricultural associations followed by a further specification of our data collection and analysis techniques.

5.4.1 Background of agricultural associations and regulatory changes

In the Netherlands, there are about 200 agricultural associations with a total of about 9000 members: usually farmers but also many volunteers. Most agricultural associations were founded in the 1990s to resolve tensions between groups interested in the natural environment and the agricultural interests of farmers. Nowadays, agricultural associations work on a subsidized basis and perform the work necessary to preserve ecological and cultural value of their local environments in close collaboration with local farmers. Some of these farmers are actively involved in agricultural work through their presence in the work forces for which they receive a payment. Volunteers are mostly local people with an interest in preserving and doing good for their local landscapes. Landscape work may consist of all kinds of activities such as designing new landscape elements, protecting wildlife, maintenance of riverbeds and roadides, coppicing hedges, but also maintaining larger wooded areas. Most landscape work is financed by national or European subsidies and is in general conceived as serving the public interest. Some associations have managed to lower their reliance on subsidies since they receive income from municipalities and private landowners who pay for the maintenance of their private landscape elements. Therefore, it is important for some associations that they maintain a strong local focus as they depend on good relationships with local authorities and landowners to continue in existence. The region called ‘de Achterhoek’, is well-known for its biodiversity and its unique landscape. However, the ecological conditions in which these association operate varies. Some associations operate in an area that is of significant biodiversity and dense woodlands, while other operate in a less ecologically rich area, with many fallow lands often termed ‘white spots’. As a result, some associations developed have multiple activities to conduct landscape work in an area full of bio-diversity whilst others rely on one single activity because that is dictated by the local circumstances. This also applies to the use of equipment. Some associations conduct landscape work using state-of-the-art equipment, unlike others who do the job by hand in a perhaps a less professional manner. Despite differences, all these associations are highly appreciated by local, provincial, and national bodies as they are considered good stewards of the natural environment and also a legitimate spokesman for local agricultural and landscape matters.

Between 2009 and 2012, some of the associations joined an interregional cross-border project between the Netherlands and Germany to explore the opportunities for exploiting biomass materials for heating purposes. This enabled these participating associations to experiment with different practices and ways of earning extra incomes. Unfortunately, this initiative did not live up to the expectations because there was a lack of interest in adopting biomass for heating in the relevant communities.

In 2012, the Dutch Ministry of Economic Affairs published drastic changes in the subsidy requirements for agricultural landscape maintenance work. These changes drastically contradict with current standards about how best to finance and structure landscape work. The
reason why the ministry is declaring the new regulations is that they believe that the cost of bureaucracy can be reduced and competition amongst landscape work organizations encouraged. One of the most important changes is that this Ministry expects that future landscape work must be performed by so-called ‘farmer collectives’, which are intended to be organizational arrangements able to manage and perform large-scale landscape work. The Ministry is determined to see these changes implemented. A ministerial note states; “Without proper design and implementation, the proposed greening measures will hardly be effective in stimulating farmland biodiversity and reducing greenhouse gas. Their effectiveness would be improved by tailoring them to local conditions and stimulating the realization of ‘green infrastructure’ through regional coordination” (PBL note, greening the CAP, 2012). While these requirements are still in development, most associations worry about the impact on ongoing practices. To deal with the uncertainties and to anticipate the coming changes, the six associations founded a so-called participation cluster of collaborating agricultural associations, called VALA (original name), in January 2013.

5.4.2 Data collection

We drew upon three data sources: interviews, documents, and observations to assure a thorough understanding of the impact of the funding changes, socio-material structures, and temporal work. Table 5-1 summarizes the chronology of our research, including focus areas and methods used in more detail.

First we started collecting data to understand the context and historical background of agricultural associations in general. Consistent with our practice perspective, we start searching for the coherence of socio-material structures underlying each associations practice. We did so by following the suggestions of Sandberg and Tsoukas (2011) to search for the entwinement logic of practice of actors at these associations. Following in-depth interviews and observations on site, we could identify different configurations of the socio-material structures at each association. We specified variations of these configurations in the following terms: historical background, standards of excellence, practice ends pursued, material arrangements such as equipment and knowledge, environmental working conditions, and local embeddedness. We present the findings in Table 5-2. Finally, we shifted our focus to understand the degree of temporal work on the basis of variations in these socio-material structures in response to the upcoming regulatory changes. For that purpose, we used the guidelines offered by (Sandberg & Tsoukas, 2011:349) to search for deviations and boundary crossings. “Deviations emerge when new discourse items are introduced or new actions appear. Exploring how practitioners respond to deviations enables researchers to see what is significant to practitioners (what matters to them) and, therefore, comes close to grasping the logic underpinning their sociomaterial practice”.
<table>
<thead>
<tr>
<th>Year</th>
<th>Key phases in the development of agricultural associations</th>
<th>Research focus area</th>
<th>Primary data sources and amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995-2006</td>
<td>Founding of agricultural associations in ‘de Achterhoek’ necessary to restore and preserve the balance between natural and agricultural interest</td>
<td>Context, understanding historical development of each association.</td>
<td>(2009) 8 formal interviews with key members of each association (8 hours recorded, transcribed verbatim)</td>
</tr>
<tr>
<td>1999-2011</td>
<td>A stable subsidy regime enabled the associations to locally perform practices and achieve ends</td>
<td>Establishing variations in socio-material structures at the level of the agricultural associations.</td>
<td>(2009) 2 expert interviews with knowledgeable agents (experts of umbrella organizations, notes)</td>
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<td></td>
<td>Some association probed in lowering dependence on subsidies by an involvement in regional bio-mass project</td>
<td></td>
<td>Archival data (CLM Oerlemans report, 2004)</td>
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<td></td>
<td>(2009 – 2013) Observations on site and during meetings, workgroups, etc.</td>
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<td>(Results presented in Table 5-2)</td>
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<tr>
<td>2012-2013</td>
<td>New subsidy and regulatory changes are announced (GLB) in 2012, yet rather vague. (clarity expected in 2014). Increasing concerns about the future.</td>
<td>Understanding temporal work deriving from actors’ engagement in practices in relation to implications</td>
<td>2012-2013 Observing board members of the associations during cluster meetings (6 meetings)</td>
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<td></td>
<td>Association joint cluster association to reduce and interpret upcoming changes and consequences to act in a larger ‘farmer collectives’.</td>
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<td>(2009-2011)</td>
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<td></td>
<td>Associations identify larger scale opportunities (biomass energy) to lower dependency on subsidy regime.</td>
<td></td>
<td>(2012) 14 formal in-depth interviews (recorded, 8 hours) and informal (notes) interviews to understand the degree of temporal work at each association.</td>
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<td>(Results presented in Table 5-3)</td>
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Table 5-1 phases and data collection techniques
<table>
<thead>
<tr>
<th>Organization</th>
<th>Practice history</th>
<th>Practice ends pursued</th>
<th>Standards of excellence (how is good landscape work achieved?)</th>
<th>Material arrangements (equipment, technology, environmental circumstances and social relationships)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Trim Cutter</strong></td>
<td>Initially driven by representing farmer interest and conducting landscape work in an area that has a rich bio-diversity but dispersed which makes landscape work complex.</td>
<td>Strives for continuing landscape activities conducted for farmers by farmers. Explores commercial ends.</td>
<td>Performing good landscape work is a matter of coordination of workgroups in the field and regular training and dealing with the tensions that arise with balancing the responsibility between environmental and agricultural matters.</td>
<td>There are work groups consisting of farmers working with fairly modern equipment. Average richness of biodiversity (dispersed) and therefore difficult to exploit in a cost effective way (for instance, as biomass products). Identity towards local communities is vague due to diverging views internally that persist for a long time.</td>
</tr>
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<td></td>
<td>400 members, mainly farmers and 100 % depended on subsidies</td>
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<tr>
<td><strong>Green Care</strong></td>
<td>Started as a project bureau for organizing and conducting landscape in commission of communities and other bodies interested in persevering the local cultural value of landscape elements.</td>
<td>Strives for continuity by executing re-current projects according to the standards set by their clients.</td>
<td>Performing good landscape can only be completed by proper planning and continuity. Accounting and “good” governance by being transparent are considered key values.</td>
<td>Work groups work rather independently because of recurrent projects. The main part of the work is done by hand because work locations are difficult to reach with heavy professional equipment. There is a mixed biodiversity which require different work practices. PAN is considered as a leading organization in landscape work and participates in a local pilot project with other local parties.</td>
</tr>
<tr>
<td></td>
<td>100 members, 80 donators. Subsidy dependence is 35% - 40% and based on lonstanding contracts.</td>
<td></td>
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</tr>
<tr>
<td><strong>Coppice Experts</strong></td>
<td>Initially driven by representing farmer interest and conducting landscape work in an area that has a rich bio-diversity.</td>
<td>Strives to conduct landscape work in a professional and efficient manner. Increasingly pursues commercial ends.</td>
<td>Performing good landscape work requires continuous development of professional knowledge about landscape work in relation to regulations.</td>
<td>Work groups (farmers) are used to work with state of the art equipment. These workgroups are familiar with the principles of this association and trained on the job by experts. This area is well-known for its density of forests and landscape elements. The association maintains contacts with local policy makers but also with provincial bodies and legislators.</td>
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<td></td>
<td>About 535 members. Commission driven, less dependent on subsidies. Only (re-current) projects.</td>
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<tr>
<td><strong>Heathland Preservers</strong></td>
<td>Strong community driven association mostly driven by volunteers. Heathland Preservers owns some important landscape elements in their operative area which require specialized hand work to maintain. Hand work has become their cornerstone.</td>
<td>Strives to remain the leading local authority in preserving the valuable local nature by involving all kind of stakeholders (schools, municipalities, etc.). Landscape work is based on a social and joyful activity performed by many volunteers. Sharing knowledge and show goodwill is important to stay accustomed with the local community</td>
<td>There are workgroups consisting of volunteers (farmers, inhabitants). There is much biodiversity and new sources are attracted regularly. Landscape work requires old fashion handwork and some special equipment is occasionally hired if necessary. The involvement of local communities (elementary schools, farmers, and the municipality) has a long tradition.</td>
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<tr>
<td><strong>White Spots</strong></td>
<td>Initially established to represent the interest of farmers and cultivation of landscape elements.</td>
<td>Strives to secure income for farmers as workforce members. Good landscape work is built on a basic knowledge of nature (plant material) and dealing with the problems typical for this area</td>
<td>Work groups use fairly modern equipment. The areas consist of many so called white spots (few landscape elements) which constrains efficient work. Profiling the association to bordering municipalities is sometimes complicated and deserves continuous attention.</td>
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<tr>
<td><strong>Green Heritage</strong></td>
<td>Founded as a spin-off of the municipality of Lichtenvoorde which offered a stable work base which still provides a secure income for this association. Never rally on maintenance of landscape elements.</td>
<td>Strives for carrying out sufficient landscape maintenance work (mainly road sides) and also authority in respect to subsidy regulations. Good landscape work requires a basic understanding of nature which especially applies to the work forces but also the knowledge of changing regulations necessary to advice farmers.</td>
<td>Work groups use fairly modern equipment. The area is difficult to maintain because of the many dispersed elements. There is a long term relationship with the municipality as major provider of work but the association is in favor of intensifying relationship with farmers for acquiring more work.</td>
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**Table 5-2. Configurations of the socio-material structures of each agricultural association**
**Interviews.** We used formal face-to-face interviews to collect rich data from the points of view of key actors. We had expert interviews with leading and visionary people familiar with regulatory changes and the purpose of agricultural associations in general. (See for the list of experts Appendix D). Furthermore, we interviewed the chairman of the participation cluster (VALA) because of his familiarity with the practices of each association, including their positions in respect to the regulatory changes. This so-called “birds eye” perspective (Birkinshaw, Brannen, & Tung, 2011), was beneficial as additional data to see how it matched our field observations (on site) and interviews conducted at each association.

We interviewed key informants such as the coordinators and the chairmen of each association. During these interviews, we specifically asked these key informants for the historical development, cornerstones, values and how they became structured and sustained in today’s practices (see Gehman et al., 2013). This was necessary to understand how the past persists in today’s socio-material structures and is reproduced in today’s ongoing practice as practice memory (see Schatzki, 2006). (See for an interview protocol used Appendix E). On occasion, we went into the field to observe the environmental conditions in which actual landscape work takes place.

Once our understanding of ongoing practice was sufficiently understood, we turned our focus to the present struggles at these association regarding the upcoming regulator changes. We organized special interview rounds with coordinators and chairmen of the associations. According to Sandberg and Tsoukas (2011), practitioners tend to temporarily step back from their socio-material practices when researchers prompt practitioners to reflect on what they do. “Practice then becomes reflexive insofar as practitioners obtain a clearer view of their actions and, looking back at them, can see aspects they could not see before” (Sandberg & Tsoukas, 2011:350). By placing practitioners into a mode of deliberation, we were able to capture and document how practitioners revert to socio material relationships when establishing links across the past, present, and future. Our central interview question was: in what way will the upcoming regulatory changes affect ongoing practices and what should be changed in their practice to match the expected future demands? (see for an interview protocol used Appendix F). All formal interviews were recorded and transcribed for coding purposes. We elaborate on this in the data analysis section.

**Observations.** Observations are suitable for understanding micro-processes of strategy work (Whittington, 2006), and to help to search for the entwinement of social and material relationships (Sandberg & Tsoukas, 2011). We observed everyday work within the associations on a regular basis to understand how practices are embedded in the local context and also gained micro-level insights of daily work in organizations (Feldman, 2004; Jarzabkowski, 2005b). We observed the coordinators and chairmen of each association during their presence in cluster meetings and document how they respond to initiatives taken by members of the other associations. These observations helped to reveal what these members consider as significant in their own particular practice (see also Stensaker & Falkenberg, 2007). It was thus possible to identify temporal work during these cluster meetings in as far key members deliberately reflect on the upcoming changes in relation to their practices and
that of others. Finally, the first author attended several workshops, so-called road shows, organized by three of the six associations in early 2009 to promote biomass material as sustainable energy source in the region. During these workshops, he was able to observe how members of agricultural associations are responding to the potential need of adopting new practices.

Archival materials. We made use of documents such as agricultural magazines, reports and historical data to improve our understanding of the context. Furthermore, we were included on distribution lists to obtain meeting agendas and minutes. Using a variety of data sources was helpful for triangulation (Eisenhardt, 1989) but also contributed to enriching our understanding of how change unfolds over time at these associations.

Data analysis. Analyzing the data started during our initial field work in which we began to gradually develop knowledge about the core concepts studied as presented in Table 5-1. Our understanding of the institutional context in which these agricultural associations operate gradually emerged throughout our involvement in the project. Based on the data collection techniques described in the previous section, we developed typographies of the socio-material structures of each association on the basis of the aspects as discussed in the data collection techniques. In addition, we also included key figures of each association in terms of size (total members) and the extent of subsidy reliance. Our findings are presented in Table 5-2. In the final phase, we started analyzing temporal work in relation to outcomes. The intensity of temporal work was indicated by the degree of breakdown experience of ongoing practice in light of the upcoming changes. Low temporal work indicated that socio-material relationships remained significant to actors. As such, actors remained considering the past, present, and future as coherent. Moderate temporal work is indicated by the persistence of breakdowns in ongoing practice, requiring actors to re-establish links across time to match expected future demands. Substantial temporal work is indicated by a complete breakdown of the socio-material structure. Here, actors encounter significant problems in linking the past, present, and future. In Table 5-3, we present illustrative quotes from the interviews that we categorized into the levels low, moderate, and substantial temporal work.

Finally, we analyzed how the socio-material structures showed up as problematic to the actors in our study in the light of the upcoming changes, and how this influenced the way actors struggle to re-establish links between the past, present, and future. We present these results as case descriptions and cross-analyzed the descriptions of the data in the results section below.
5.5 Results

Our study revealed that differences in socio-material structures at the level of each individual association, produce different levels of temporal work, and also distinct outcomes for strategic change and practice development. We found three different levels of temporal work, namely low, moderate, and substantial. Low temporal work occurred at Green Care and Heathland Preservers. Here we found that low temporal work resulted in a continuation of ongoing practices, and thus no strategic change. We observed moderate temporal work at Coppice Experts and Trim Cutter. This lead to changing strategic orientations and adaptations in ongoing practice. Finally, substantial temporal work occurred at White Spots and Green Heritage because actors faced a complete breakdown in ongoing practice. Below we discuss the case narratives in respect to the different levels of temporal work in relation to the socio-material structures of the practices we studied. The key findings are presented in Table 5-4.
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<thead>
<tr>
<th>Level of temporal work</th>
<th>Links to:</th>
<th>Illustrative examples from the interviews:</th>
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| Low:                   | (Green Care and Heathland Preservers) | “We always knew that being dependent on subsidies is a risk, therefore we have always looked and found alternative funding sources” (coordinator Green Care)  
“We workforces are used to directly sell wood material by themselves, for own profit, our association had never benefited from that money. Yet, if subsidies cease, we might have to change in the future and of course, this will be a source of tensions between us and the workforces” (coordinator Green Care). |
| Present                |         | “Although we are attentive these changes [in the subsidy requirements], today, there is no sense of urgency in our association yet,. everybody here is satisfied: board members, workforces, and coordinator” (coordinator Green Care)  
“You see, subsidies spend on landscape work serves a public interest for a long time, if such interests decline, than our whole sector is in danger but for now we should focus on our primary task” (coordinator of Green Care)  
“However, our area is very difficult to maintain for its bio diversity, special areas, and complex structure.... it requires specific knowledge and a good understanding of local circumstances..... we are a special kind of an association and deeply embedded in the local community....it is difficult for any other party to do the same” (chairman Heathland Preservers)  
“We don’t see the need to change right now, we operate in a special landscape and still have a lot of work...nevertheless, we should think about the future” (coordinator Green Care)  
“Yes, the GLB [changing subsidy requirement] provides opportunities but nobody knows in which direction exactly.... we don’t see it as a problem yet ” (coordinator Green Care) |
| Future                 |         | “for the future, we are of course too small for doing large scale activities and therefore our current presence in the cluster (VALA) is important for us” (Heathland Preservers)  
“We have to professionalize in the future but also continuing to strengthen our relationship with the community trough intensive collaboration and employing multiple activities” (chairman Heathland Preservers)  
“The idea of exploiting biomass material in the future comes to life” (chairman Heathland Preservers)  
“If subsidies decline in future, we have to see how we can charge users for wood to cover the costs..... this might lead to tensions in the future since workforces who act independently sell the wood material themselves” (coordinator Green Care) |
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<tr>
<th>Level of temporal work</th>
<th>Links to:</th>
<th>Illustrative examples from the interviews:</th>
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<tbody>
<tr>
<td>Moderate:</td>
<td></td>
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<tr>
<td>(Coppice Experts and Trim Cutter)</td>
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<tr>
<td>Past</td>
<td></td>
<td>“We have always been busy with creating value with wood but it seems that it becomes more valuable these days” (coordinator Trim Cutter)</td>
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<td>“Our knowledge of landscape maintenance and subsidy developed in the past becomes even more important for the future” (coordinator Trim Cutter)</td>
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<td>“In the past, we have always focused invest in growth by improving knowledge and capabilities involved in landscape maintenance, it is a continues process” (coordinator Coppice experts)</td>
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<tr>
<td>Present</td>
<td></td>
<td>“If regulations keep on changing, we must commercially exploit biomass....it also serves our workforce members because of increasing labor” (coordinator Trim Cutter)</td>
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<td></td>
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<td>“Our strength is that we have strong relationships with local farmers as our members but also provincial bodies” (coordinator Trim Cutter)</td>
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<td>Today we see that, despite changes in the subsidy requirements, private parties increasingly ask us to do maintenance work of their landscape elements” (coordinator Coppice Experts)</td>
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<tr>
<td>Future</td>
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<td>“In the future, we will increase our focus on private owners for extra income” (coordinator Trim Cutter)</td>
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<td>“If the subsidy requirements change so drastically, our future role as a collective becomes even more important because farmers in our area lack to knowledge of these changes ”(coordinator Trim Cutter)</td>
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<td>“The future is not so uncertain,...of course, the upcoming changes in the subsidy regime bears on us because we have to invest in revise administration systems and become busy with that....we have to upscale and standardize ways of working with all the other associations ”(coordinator Coppice Experts)</td>
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<tr>
<td>Level of temporal work</td>
<td>Links to:</td>
<td>Illustrative examples from the interviews:</td>
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| Substantial: (White Spots & Green Heritage) | Past | “In the past we just focused on helping farmers with subsidies and doing landscape work together with them, this seems to become problematic” (coordinator White Spots)  
“In our area we always had limited possibilities for landscape work... we solely rely on a funding provided by one major commission from the municipality for maintenance of road sides throughout the year” (coordinator Green Heritage) |
| | Present | “We are much younger than most of the other associations and we also operate in an ecologically poor area... [therefore], our existence is really threatened since our area does not provide so many alternatives for becoming self-sufficient” (coordinator White Spots)  
“Currently we are disputing what to do in the future because of this GLB [changing subsidy requirements]... how can we attract money in the future? .... older generation board has no affinity with commercializing... they are difficult to motivate and rather stick to what we always did... nevertheless, we have a few customers who buy wood chips as biomass or hearth wood from us already there is some movement” (coordinator Green Heritage)  
“The board members “new style” are seeing the opportunities and the changes necessary but this is not shared by the older generation of board member” (coordinator Green Heritage)  
“Right now, we are really on a ‘pilot flame’ because it is uncertain how the GLB [subsidy requirements] regulations affect us... ... we just operate in a poor landscape here and that is our challenge and destiny” (coordinator White Spots).  
“Networking is important for us, we have to start think in a commercial way, acting on opportunities, collaboration, or even merging with other associations” (coordinator Green Heritage) |
| | Future | “I see opportunities for our association in the future but only when we operate or merge in a cluster together with other associations” (coordinator White Spots)  
“Yes, I see that we must become the central face in this region, as a collective” (coordinator Green Heritage) |

Table 5-3: Three types of temporal work with illustrative quote examples from the study
5.5.1 Low temporal work

Low temporal work occurred at both Green Care and Heathland Preservers. The actors involved expressed how they appreciate their ongoing practice as useful. More specifically, actors of both associations consider their practice as a coherent whole and emphasize the importance of the social material relationships of their practice. For instance, they valued the equipment that they use in relation to the unique but difficult ecological circumstances in which they have to operate. Furthermore, they expressed the importance of the standards of excellence that they had been developed in the past to conduct good landscape work in the present. Actors at both associations also expressed the importance their practice in terms of practice history and tradition. This was particularly observed at Heathland Preservers, the oldest agricultural association in the Netherlands. The chairman of this association appreciates the historical values that belong to traditional landscape work (hand equipment, labor intensive, craftsmanship) and more idealistic values such as working with and socializing with local volunteers rather than working just for payment. Because of the value assigned to these traits, they still are carried out in today’s practice with pride. Both associations share a strong focus on their local communities (working with volunteers and primary schools), are operating in an area with a high degree of biodiversity, and run multiple activities through which landscape work is performed. Their specialized knowledge about the local circumstances and the application of specialized equipment are also considered as important to sustaining their practice. In other words, despite the fact that actors acknowledge the impact of the subsidy changes for the sector as a whole, it did not unsettle their practice at the moment. Low temporal work implied that links across the past, present, and the immediate future continued to be considered as coherent and acceptable, even when the participants at these associations could to some extent imagine the consequences of these changes for their practice over the long term. For instance, the coordinator of Green Care made clear why future tensions might arise between his association and the workforce about who keeps the profits from selling wood material. Also, the chairman of Heathland Preservers commented that his association is probably too small to deal with all the upcoming changes. Yet, despite recognizing that changes in their practice seems to be unavoidable, their immediate future was not considered to be in danger or at least viewed as problematic and therefore they postponed changes to their practice. For these associations, it was enough to partake in the participation cluster to stay attuned with the expected subsidy changes. In summary, we came to understand low temporal work as a form of coping in which actors, despite being sensitive to developments in their context appreciate their practice by emphasizing its significance, rather than questioning the socio-material relationships in relation to what will happen in the future.

5.5.2 Moderate temporal work

Moderate temporal work occurred at Coppice Experts and Trim Cutter. In these associations, socio-material structures showed up as a theme for both thought and action. In comparison to the previous case, these associations have in common that, since their initiation, their focus was on coppicing landscape elements by using specialist equipment and
developing specialized standards. As a result, experience materialized in practice over time. Furthermore, both associations actively participated in a regional project in 2009 the aim of which was to commercialize wood chips for biomass heating. Their supposed role in this project was to become a contractor that delivers competent workforce services for harvesting and producing plant material for biomass technology. Yet there are also some significant differences in the socio-material structures between the two associations. Actors at Coppice Experts maintain many relationships with local farmers and policy makers at a local level as well as provincial bodies, whereas Trim Cutter seemed to be more oriented towards its local community and is particularly driven by farming interests. In addition, Coppice Experts benefits from a rich area of landscape elements whereas Trim Cutter is less fortunate because it operates in an area with scattered landscape elements which complicates efficient landscape work. Yet actors at both associations share the idea that is important to enlarge their scale of operations, improve landscape work in terms of efficiency, and explore the scope for lowering their reliance on subsidies. However, despite the apparent fit between the expected future changes and present efforts to scale up and develop specialized skills, the future changes still imposed on present practice indicating a significant breakdown in ongoing practice. Actors were deliberately attempting to make adjustments to the socio-material relationships, especially in terms of knowledge improvement, defining the necessary standards of excellence, and redefining practice ends such as attaining commercial goals. While doing this, the actors encountered difficulties in the way they deal with current relationships they have with farmers as cooperating members of their associations. Temporal work was moderate because these associations where ahead of themselves by anticipating the need to improve and explore the opportunities, while at the same time exploiting ongoing practice and satisfying their cooperating members and delivering current landscape work contracts. As a consequence, adjustments to the socio-material relationships required ongoing negotiations among members and integrative efforts which were considered to be capable of matching future demands. Consequently, temporal work enabled the actors of these associations to link their past with the perceived demands of the future by negotiating change in the present. Therefore, what happens in the present is still considered as important since actors at both associations realize that their core business remains earning an income by delivering good landscape work in their own operating areas largely subsidized by the national government and EU.

5.5.3 Substantial temporal work

Substantial temporal work by actors was encountered at White Spots and Green Heritage. Here, the upcoming changes had been already unsettling their ongoing practice significantly. Both White Spots and Green Heritage suffer from a lack of biodiversity (so called white spots areas), which complicates efficient larger scale operations. Furthermore, White Spots has since its founding primarily focused on helping farmers with their requests for agricultural subsidies but also offered the same farmers to work for their associations an extra income. In comparison to White Spots, Green Heritage seems to be more advanced in terms of knowledge about biomass technology. In fact, Green Heritage actually serves a few customers
with woodchips for their biomass heating installations. However, they are largely constrained by a lack of proper plant material. Green Heritage also suffers from severe internal struggles between the older generation board members who want to continue exploiting a long-standing relationship with their municipality for maintenance of road-sides. In turn, the new board members are much more open for change and exploring alternative practices. Actors at both associations could clearly articulate how the upcoming subsidy requirements will change practices for all agricultural associations. Yet because of the current state of affairs in their own associations, they could hardly envisage how to anticipate effectively on the future. We documented how actors at both associations already struggled with present concerns, let alone meeting the challenge of the upcoming changes. Our analysis revealed that the actors at both associations disapproved the socio-material relationships underlying their practice which reflects a complete breakdown of their practice. Rather than remaining concerned about to deal with the upcoming changes, the socio-material structure of their practices completely loses their significance to them. At White Spots, actors thought that they had been focused for too long on local farmers and helping them to earn an extra income by doing work landscape work for the association. As a result, White Spots had become stuck with helping farmers and even if they had the opportunity to do otherwise, they might have faced difficulties in exploring potentially more fruitful activities because of the lack of biodiversity in their operating area. At Green Heritage, the past was relevant because the ideas of the older generation board members imposed on the present and acted as a constraint in conjunction with the poor quantity of plant material that could have been used for commercial purposes. These tensions were paralyzing the present already and this would only be worsened by the upcoming changes in the subsidy requirements. Although actors could clearly imagine a future for farmer collectives, they were unable to finds solutions for their own future because they had distanced themselves from ongoing practice. The only solution envisioned by participants at both associations was that they could immediately merge with other more resourceful and professional associations, like the bordering Trim Cutter. However, that was not feasible at the time so further interpretative breakdowns occurred because of the inability of actors to link the future with the past and the present of their practice.
Table 5-4: differences of socio-material structure, breakdowns, level of temporal work, and outcomes

<table>
<thead>
<tr>
<th>Level of temporal work</th>
<th>Characteristics of the socio-material structure</th>
<th>Breakdown experience</th>
<th>Temporal work</th>
<th>Outcome in terms of practice development</th>
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<tr>
<td>Low temporal work</td>
<td>Several number of activities to pursue ends. Operate in an area with a high degree of biodiversity and sufficient natural resources. Maintain a strong local focus, and are strongly embedded in local community.</td>
<td>Participants appreciate aspects of a practice by articulating the coherence and significance of practice for the time being</td>
<td>Not unsettling a practice: links across the past, present, and future remain coherent because plausible.</td>
<td>Re-production: No current changes necessary as participants preserve their practice. Actions are postponed to the future.</td>
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<tr>
<td>Moderate temporal work</td>
<td>Few activities (dominantly large scale coppicing). On average operate in an area with abundant landscape elements. Building on experience and professional skills. Community driven but increasingly also regionally focused.</td>
<td>Participants call attention to aspects of their practice, re-examining features of practices and align them with future through negotiation.</td>
<td>Links to the past, present, and future are attributed to combine change efforts in the present on the basis of expected future requirements</td>
<td>Aligning: Participants engage in the process of adjusting their practice with regard to the imagined future but also remain sensitive for ongoing practice as they are considered equally important</td>
</tr>
<tr>
<td>Substantial temporal work</td>
<td>Mainly focused on one core activity (by force) because operating in an area with a scarcity of landscape elements, difficult to maintain. Mainly farmer driven.</td>
<td>Because of further interpretative breakdowns, participants isolate practice features as useless and distance themselves from practice.</td>
<td>Links could not be established between the future, past and present. Further interpretative breakdowns occurred.</td>
<td>Uprooting: No change because paralyzed, only offering drastic and unrealistic solutions for the immediate future.</td>
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5.6 Discussion and Conclusion

We began this chapter by highlighting the importance of understanding temporal work from a socio-material perspective. We asked: how do variations in organizational socio-material structures underlying ongoing practice shape different levels of temporal work and what are the implications for strategic change and practice development? Our analysis of the struggles with change at six agricultural associations facing imminent threats showed that different configurations of socio-material structures produced different levels of temporal work with each having distinct outcomes for change. It seemed that a certain consistency and maintenance of historical values, sufficient natural resources and biodiversity, multiple activities in combination with a strong local orientation produced low temporal work. In this case, actors emphasized the significance of the socio-material structures for the time being and, consequently, postponed changes to practices, despite acknowledging the upcoming
changes. Moderate temporal work occurred at associations that were attuned to the upcoming changes but faced internal struggles to balance the demands of the future with present practices, which seemingly went well due to ongoing negotiation processes. Remarkably, these associations had been working for years to improve their specialist skills and standards of excellence and, to a certain extent, benefit from working under acceptable working conditions with sufficient natural resources. In analyzing the case, we found that substantial temporal work occurred because these two associations where seemingly too far ahead of themselves in terms of living already in the future, while at the same time encountering problems in ongoing practice. Temporal work was substantial because actors experienced a loss of significance of the socio-material structure underlying their practice. Socio-material relationships were uprooted typically because these associations suffered from insufficient natural resources, board struggles about which strategic direction to pursue, and largely depend on single activities and feel bounded by past decisions. Hence, actors failed to establish coherent links between the future, present and the past, despite their ability to propose drastic solutions.

Our study showed that understanding the outcomes we observed is incomplete without incorporating how actors are embedded in various socio-material structures. Moreover, our research strongly indicates that the level of temporal work is shaped by a breakdown of these structures, rather than a breakdown of only understandings. In other words, it is not just the past, present, and future that are subject of deliberation but also the socio material relationship in their practice when they break down. This study indicates how agency is shaped by the structuring contexts in which actors are embedded. Following Emirbayer and Mische (1998) threefold structure of agency (composed of the past, present, and future), we showed how these structuring context in which actors are embedded -understood as socio-material structures- inform the ‘practical evaluative’ ability of actors to re-iterate the past, and re-imagining the future in the face of an uncertain present. Moreover, our study showed how various configurations of these socio-material structures and different levels of temporal work can be related to the dominant temporal orientations of actors. For instance, actors were dominantly engaged in the past in the case of low temporal work. In this case, actors relied heavily on their practice history when making sense of the future. In case of substantial temporal work, actors were dominantly engaged in the present and encountered difficulties in making sense of the past in relation to the future, which in essence, lead to further interpretative breakdowns. Moderate temporal work implied that actors were already re-imagining their future and ahead of themselves without disbanding the past and present responsibilities. However, it is difficult to pinpoint if the different levels of temporal work are shaped by of actors’ dominant temporal orientations and how they related to the socio-material structures. However, our results may give reason to think of temporal work as radiating within one dominant temporal orientation since all temporal orientations have sub-tones of the other two (Emirbayer & Mische, 1998). Stated differently, temporal work reflects the practical ‘evaluative ability’ of actors to decontextualize their embedded positions and chose alternative routes of actions but its level of intensity may vary with the dominant temporal orientations. The dominant orientations of actors, in turn, are to a large extent
shaped by the socio-material structure of a practice. Nevertheless, these kind of rigidities and clear demarcations of sub-tones and dominant orientations are difficult to grasp empirically.

Thus, than presenting our work as an exhaustive set of possible outcomes, our study offer opportunities and challenges for future research. Below we briefly reflect on a view of these opportunities and challenges.

5.6.1 Implications for research

Our research sheds a new light on the “praxis” of strategy making, with “praxis” defined as “all the various activities involved in the deliberate formulation and implementation of strategy” (Whittington, 2006:619). Our study showed how the efforts of actors to engage in deliberate strategy formulation are shaped by breakdowns in ongoing socio-material practices. Although scholars have previously argued that strategy praxis is something that actors “do”, our research suggests that strategy praxis derives from a more fundamental way of their involvement in ongoing socio-material practices. Considered as strategic episodes (Hendry & Seidl, 2003), it are the reflections on these practices that forms the input for deliberative and future-oriented strategic actions (see also Chia & Holt, 2006). Indeed, Vaara and Whittington (2012) also suggest shifting focus to emergence rather than deliberate strategy planning as point of departure. In this sense, we also complement studies that are interested in strategic sense-making (Balogun & Johnson, 2004; Gioia & Thomas, 1996). Sensemaking occurs when actors encounter a breach in what they expect and what they experience (Louis, 1980). According to Weick (2012), sensemaking is confined to interruptions, anomalies, and the unexpected and there must be considered as an episodic processes. As Weick notes; “In the language of Heidegger, sensemaking is triggered when the availability of ready-to-hand coping is interrupted and attention shifts to unready-to-hand occurrentness. The interrupted project still provides a frame and restoration occurs within that frame” (Weick, 2012:146). We show that that socio-material relationships are part of sensemaking processes as they show up when actors encounter a breach. In other words, aspects of practices are only discovered in the breach (Suchman, 1987).

Our study also contributes to the organizational change literature, and particularly those studies concerned with examining the antecedents of radical change from an organizational perspective (Greenwood & Hinings, 1996). The organizational change literature is mainly occupied with studying change projects once developed into recognizable forms. Yet recently, Smets, Morris, and Greenwood (2012) have reported that institutional change begins with the level of practice, rather than through external shocks, field contradictions, or intra-organizational dynamics. In a similar vein, Lounsbury and Crumley (2007) examined how new practices are developed unintentionally. We contribute to this stream of literature by shedding a light on which circumstances actors engage in changing practices previously not attained, but also why actors chose to maintain their practice, adopt new ones and combine it with existing practice, or even abandoned their practice in the face of changing environmental conditions.
The interest for human agency and the transformation of fields has also attracted scholars of institutional entrepreneurship (Dorado, 2005; Lawrence et al., 2011) for instance, argues that field level characteristics in terms of degree of multiplicity and institutionalization (Zucker, 1977), shape actors’ logic of actions in terms of strategic (future), sensemaking (present), or a routine (past) orientation. Our study suggests that such orientations are shaped by the socio-material structure of their organizational practices, rather than through field characteristics. For instance, the nonprofit associations we studied each draw on a different temporal orientation, despite being parts of a common institutional field. This observation would challenge the idea that actors draw on one dominant institutional logic in a given field.

5.6.2 Concluding remarks

Our perspective on temporal work approached from a socio-material perspective extends approaches that take temporality, emergence, agency, and embeddedness in strategy research seriously. We have developed a socio-material practice perspective on temporal work that reveal how actors’ interpretations about the past, present, and future are inherently a part of socio-material structures underlying their practice and that also become subject for change when it breaks down. On the basis of a case with a system-disturbing potential (Barley & Tolbert, 1997), we observed how breakdowns of practices at six nonprofits occurred as a result of anticipated drastic regulatory changes.

An important reason to study temporal work in long-standing agricultural associations in an institutionalized setting is because in contexts, actors may have taken the socio-material structures for granted. Nevertheless, for future research, it would be interesting to examine how temporal work occurs in new settings in which new socio-material relationships are about to be developed, and thus appear more fragile and emerging. In emerging fields, actors probably deal with varying pasts and uncertain futures, giving rise to the idea that temporal work occurs sooner, and perhaps, more frequently. Assuming that temporal work is constitutive to organizing, and a practice in itself (Kaplan & Orlikowski, 2013), future research may thus further specify how temporal work leads to the emergence, maintenance, and change of socio-material structures underlying practices.

Finally, our extension of temporal work demonstrates the value of injecting a stronger dose of socio-materiality into current practice research. New practice development and strategic change are about actors re-orientations of the past and the future in the face of present exigencies but these re-orientations cannot be separated from their involvement in everyday socio-material practices.
Chapter 6

Conclusion
6.1 Introduction

This dissertation was driven by the desire to understand how actors often struggle with the duality of structure while innovating their practices. By structure is implied the constitutive assignment between values, standards, norms, understandings, including material and temporal dimensions underlying organizational and business relationship practices. We have argued that structures are dual in the sense that they enable actors to perform everyday practices and to realize predefined goals. At the same time however, structures are also quite pervasive in a sense that actors do not question the coherency and aspects of these structures any longer once practiced over time: they became taken-for-granted (Sewell, 1992; Sydow et al., 2009). Given this constraint, the aim of this dissertation was to improve our understanding of the triggers that enable situated actors to depart from the structures underlying their practice and also how actors engage in the process of changing structures to innovate practices.

Our research question was:

What prompts actors to depart from existing structures underlying their business practices to engage in the process of practice innovation by changing these structures?

In addressing this research question, we adopted multiple theoretical perspectives with each one having its own conceptualization of structure, its ontological foundations and compositional features, the triggers of change, and the role of human agency. Each perspective had its own perspective-horizon and thus allowed us to evaluate and compare the findings from various angles. Using this approach, we attempted to limit what Whitehead (1925) illuminatingly termed ‘the fallacy of misplaced concreteness’. In this dissertation, we applied a social system, a time-based, a socio-material, and a practice-based perspective. The reason for using these perspectives in that particular order is based on the insights that emerged throughout the empirical chapters of this dissertation. Three of the empirical chapters were based on the first single case study. The final empirical chapter was based on a multiple case study that allowed us to compare the outcomes and generalize the findings to a defined extent.

The remainder of this chapter is structured as follows. We first summarize the four empirical chapters and discuss the findings in relation to the theoretical perspectives used. After that, we synthesize the contributions of each empirical chapter in order to answer the general research question. Next, we offer the contributions to literature, in particular the literature devoted to the IMP (Industrial Marketing and Purchasing), the Strategy-as-Practice, and literature interested in and path dependencies and path creation. Next, we suggests what the implications of our study are for practitioners and business consultants concerned with the development of business practices to pursue future business goals. In the final section of this chapter, we identify the limitations of this dissertation and in response to that, an outline for future research.
6.1.1 Summary of Chapter 2

In Chapter 2, we explored the relationship between structure and process from a social system perspective (Groen et al., 2008; Parsons, 1951). We have argued that the strength of a social system perspective is that it allows us to study structure and process dimensions together (Parsons 1977). Therefore, we were able to examine how actors situated in a long-standing business relationship refer to the characteristics of each other’s social system in both structural and process dimensions. Parsons (1951) apportioned an important weighting to the role of tensions in a social system as a source of change. Innovation scholars have argued that actors are repeatedly confronted with tensions that arise in the capital dimensions of a given social system due to the innovation efforts and on which they respond to (Groen et al., 2008). These capitals represent the strategic, cultural, economic, and social dimension of a social system. The strategic dimension consists of the goal attainment function of a social system; the cultural dimension relates to the maintainenance and development of new patterns; the economic dimension deals with the adaptation and the efficient use of scarce resources, such as time and money; and finally, the integrative dimension that indicates the social infrastructure that enables actors belonging to a social system to exchange and to develop the three other capitals of a social system. The tensions follow from pressures that actors experience in the value expectations related to these capitals. Tensions underpin re-equilibrium processes and are considered as important triggers of change as they cause a shift from structure to process. The aim of this study was to understand how actors in a business relationship cope with and respond to the structural differences in the social, strategic, cultural, and economical capital dimensions of their partner organizations when engaging in a new relationship activity. We understood structure as the ways actors consider the structural differences of these capitals within the partner organization as valuable partner-specific resources. Process concerned the responses and actions of actors to the tensions that arise due to difficulties that arose in this relationship. Process dimensions thus reflect the re-equilibrium process resulting from efforts of actors to pursue a new reference state of the social system they belong to.

In this chapter, we report our finding that a stable business relationship structure is important for actors to develop new joint relationship strategies. However, in our case actors encountered difficulties in bringing the new relationship activity to life. At first glance, these difficulties could be easily attributed to the misfires in the leather sample production and, as such, characterized as one of those setbacks that typically occur in an innovation process. Yet, we observed how these misfires produced tensions in this business relationship and shifted the focus of actors to the values pertaining to the capitals dimensions of each other’s partner organization. Rather than continuing to appreciate these values, actors called them into question as they became problematic in realizing their new relationship goal. It was through the tensions that actors were able to bring the problematic aspects of these values into view. From then on, actors could concretely engage in re-negotiating these values in such a way that they enabled continuation of the new relationship activity. This study showed that adjustment involves more than just solving technical problems that arise in business relationships: it also
involves the questioning and re-negotiation of otherwise accepted values which are brought into view and subject to change as a result of tensions.

This chapter highlighted how a shift from structure to process is mediated by the actors’ experience of tensions in the context of a business relationship. The methodological approach taken in this chapter also allowed us to see how the actors themselves could understand the structure of their relationship in terms of complementary values underlying the capital dimensions of the social system of each other’s organization. In other words, a social system approach is particularly useful to understand how the virtual structures in terms of value expectations are maintained in a business relationship. However, the process dimensions and particularly the role of the human actor in change processes remained underemphasized. There are two reasons for this. The first reason is that this chapter is considered as an explorative study into the relationship between structure and process. More specifically, we had described how actors negotiate these values and, in essence, were working on the adaptation of both social systems yet we did not systematically analyze the process of change in detail. The second reason is that social systems are assumed to be self-adaptive (Laszlo & Clark, 1972). Consequently, the role of human agency in re-equilibrium processes is downplayed. However, for Parsons humans are central in the re-equilibrium process. He observed that a new reference state of a social system would not come into existence without human effort (Parsons, 1968). By the term effort he implies that actors are motivated to attain goals yet are bounded to the values of norms of a given social system (Parsons, 1951). However, despite his interest in the role of human agency in re-equilibrium processes, he did not clarify how exactly actors would perceive the changing values and how subsequent action unfolds as a result of this change.

6.1.2 Summary of Chapter 3

Therefore, in Chapter 3 we adopted a perspective that allows us to open the “black box” of human agency in both structure and process dimensions. Building on Emirbayer & Mische’s (1998) notion of the threefold structure of time that informs human agency, we examined how human actors are temporally engaged in structural and process dimensions. According to Emirbayer & Mische (1998), agency is conceptualized as a temporally embedded process of social engagement, in which actors are informed by the past but also oriented toward both the future and the present. We have anchored this chapter in the Industrial Marketing Purchasing (IMP) literature, especially the stream that focuses on the processes of change in business relationships and networks (Bizzi & Langley, 2012; Halinen, 1998; Halinen et al., 2012). In general, any process perspective should take the role of time seriously, and identifies tensions and contradictions as ‘drivers of change’ (Langley et al., 2013). In the IMP literature, the focus is on time as a backdrop of interfirm interaction and varying perceptions which are shaped by critical events that drives network relationships and network change (Halinen & Törnroos, 1995; Halinen et al., 2013; Tidström & Hagberg-Andersson, 2012; Medlin, 2004). It is argued that critical events impact on the perceptions of actors involved in a business relationship (Halinen, et al., 2013; Corsaro & Snehota, 2012).
and can even break the structure of a business relationship (Halinen et al., 1999). In this chapter, we focused on: (a) how time perceptions of actors about past, present, and future of a business relationship change when problems occur during business relationship development activities; and (b) how time perceptions are reconstructed through temporal work. Temporal work happens when actors are confronted with a breakdown of their current understandings about the past, present, and future (Kaplan & Orlikowski, 2013). We have conceptualized the difference between structure and process as two distinctive interaction modes, namely exchange interaction and adaptive interaction (Medlin, 2004). According to Medlin (2004), interaction is always concerned with time since actors draw on their past, present, and future when they interact. Exchange interaction is based on routine and experience whereas adaptive interaction is oriented towards change to enable future interaction. In this chapter, we examined how critical events caused a shift between exchange and adaptive interaction and requires actors to depart from previous assumptions about the past, present, and future of their relationship, and to reconstruct new assumptions in order continue interaction in the future.

We observed how established time perceptions between parties provide a certain stability to a business relationship. Yet established time perceptions can also be persistent even when actors are exposed to mounting problems in their business relationship. We also found that critical events are important drivers of change because they cause a shift from exchange to adaptive interaction. Our research showed how time is critical during this shift as it leaves relationship outcomes uncertain. However, this departure of existing time perceptions in this case was necessary to open up a space for adaptive interaction. Temporal work, that is the reconstruction of the past, present, and future, is identified as a key process underlying adaptive interaction. In other words, the actions needed to pursue future interaction requires actors to be reflective and critical about the past and present. Furthermore, our research suggests that successful adaptive interaction requires actors at both parties to mutually engage in the re-construction of the past, present, and future of their business relationship. If not, temporal work will not be successful and just lead to further interpretative breakdowns at one party, as the case demonstrates. Finally, our research showed that established and tacitly taken-for-granted assumptions about the past, present, and future can essentially lead to critical events since time perceptions are inherently linked up with relationship practices and the experiences of actors.

In Chapter 2 and 3, we focused on the role of the social dimensions of structure and process by approaching the relationship between the two in Chapter 2 from a social system perspective which considers the capitals and related values as having a virtual existence and in Chapter 3 in terms of varying time perceptions of human actors in. In other words, for the former we adopted a social ontology that locates the properties of social change in the system itself, while in the latter the locus of change is located in the human mind (Schatkzi, 2002; Reckwitz, 2002). As a result of using these perspectives, we did not analyze how social dimensions interact with the substantiated dimensions. In other words, we did not looked at how material objects such as the product samples, product recipes, handbooks, departments, production facilities, and the laboratory played a role in both structure and process dimensions.
in this business relationship. Indeed, scholars have increasingly argued that social processes in organizations cannot be examined without including the role of materiality (Orlikowski, 2007; Orlikowski & Scott, 2008). Therefore, we turned to an examination of both social and material dimensions in the structural and process dimensions in the next chapter.

6.1.3 Summary of Chapter 4

In Chapter 4 we took a so-called socio-material approach and argued that material objects and how they are related to actors can be described in terms of structural dimensions when utilized for some purpose in a business relationship but also in process dimensions once they appear as problematic and perhaps become subject to change. Like the previous chapter, this chapter is positioned within the IMP literature, and more specifically the resource interaction approach (Baraldi et al., 2012; Cantų et al., 2011; Håkansson&Waluszewski, 2002). This approach departs from the idea that resources are heterogeneous and functional (tangible or intangible) entities that generate value in use (Penrose, 1959; Vargo & Lusch, 2004). Within the resource interaction approach, resources can be considered as products, technology, systems, departments, human actors, knowledge, but also a business relationship as a whole (Baraldi et al., 2012). Håkansson&Waluszewski (2002) note that the changing qualities of resources always imply ‘work’ on behalf of human actors suggesting that the resource interaction approach is inherently socio-material. This assumption is implicit in the two different realms in which resource can exist, namely resources as objects-in-use and/or subjects-of-concern (Håkansson et al., 2009). Furthermore, this approach considers that the qualities of resources are not ‘fleeting’ but are imposed on them from the interaction with other resources, also indicated by the term ‘heaviness’ (Håkansson&Waluszewski, 2002). Therefore, any change of a single resource will affect others and create ‘friction’ in resource structures (Håkansson&Waluszewski, 2002; Håkansson & Waluszewski, 2011). However, according to Olsen (2013), it remains poorly explored how friction works in the human mind and how it causes intensive interactions amongst actors to innovate, to adjust resource interfaces, or alter relationship practices. Indeed, within the resource interaction approach there is a tendency to look at the development of resource structures, rather than how resources structures are developed in the hands of human actors. Or as Baraldi et al., (2012:274) remarks “focusing solely on the resource structure may leave out important aspects and attributes of resources that derive from how actors perceive and interpret resources”.

To understand the appearance of frictions in resource structures from a human actor perspective, we first had to understand the relationship between actors and materiality from an ontological point of view. For that purpose, we borrowed from Orlikowski and Scott (2008) their typology that sees such social and material relationships as inherently fused in practice. Or as Orlikowski and Scott, (2008:455) put it: “agencies that have so thoroughly saturated each other that previously taken-for-granted boundaries are dissolved”. Using this ontology on the constitution of the relationship between human actors and resources, we were able to understand the taken-for-granted characteristics of the structure dimension. Yet while seeing
this constitution as one that is inherently fused, we became stuck in understanding how human actors actually engage in the process of identifying new qualities of resources and changing them.

A solution was found in the writings of Heidegger (1962), and more specifically the interpretations of the concept of practice breakdowns by Dreyfus (1991). In the language of Heidegger (1962), mental content and reflection are prompted when the availableness of ready-to-hand coping is interrupted and attention shifts to unready-to-hand in the case of mild breakdowns or present-at-hand when actors face a total breakdown (Chia & Holt, 2006; Dreyfus, 1991; Sandberg & Tsoukas, 2011). This approach allowed us to see how the otherwise fused relationships between human actors and resources disentangle when actors are confronted with a breakdown in their business relationship. In this chapter, we adopted this Heideggerian framework to understand how a shift from structure to process comes about from the perspective that resources are objects-in-use (in its structural dimension), and subjects-of-concern (in its process dimension), and that there are various levels of practice breakdowns (frictions) that mediate this relationship. We re-analyzed the case and examined what causes actors to depart from their ways of dealing with resources as objects-in-use and therefore encounter them as subjects-of-concern and how that enabled them to reflect on resources, and reveal a range of previous unnoticed social, technical, or economic values of resources.

The case illustrated how actors can consider resources both in terms of objects-in-use and as subjects-of-concern, and thereby show how structural and process dimensions can be studied from a socio-material perspective. Actors take resources as objects-in-use when they unreflectively appreciate resources for their pre-defined purpose in a given business relationship. Yet whenever resources fail to realize their previously defined utility, actors start to consider resources as subjects-of-concern. If that happens, resources appear as problematic to actors and prompts them to think about these resources and take action. In the narrative structure of this particular case, we observed how this business relationship ran into trouble because of two failed leather sample productions. Each of these failures had a different impact on the new business relationship activity. We identified three distinct actor responses: reinforcing, problematizing, and adjusting. These responses relate to the various degrees of practice breakdowns and essentially caused a shift from resources as objects-in-use to resources as subjects-of-concern. Reinforcing occurs when actors are exposed to minor breakdowns. In the case, this happened after the first product failure. Despite this failure, actors reinforced the proper functioning of existing resources and thus continues to consider resources as objects-in-use. As a result, actors closed off the opportunity to change resources to achieve better results and were mainly oriented to continue. A persistent breakdown occurs when a troubled situation continues or is repeated. This happened in the case after the second product failure. A persistent breakdown implied that actor’s begin to problematize resources and attempt to find causes to the problems at hand. Resources are then subjects-of-concern because they thwart continuation. A total breakdown occurs when actors cannot resolve the problems. A total breakdown implied that actors become thematically aware of resources and
the problematical social, economic, and technical values. The disclosure of these values is important to actors as they appear as a subject for re-negotiation and change.

This chapter also showed that the intensity of a breakdown experience in a business relationship intensifies when there is an imbalance in the way in which it is experienced. For instance, the second product failure at Ned Leather resulted in a persistent breakdown, while for US Leather, this event caused a total breakdown. Yet a total breakdown was apparently necessary to force Dutch Leather to take the problems at hand sufficiently seriously. This observation lead to a paradox, because whereas breakdowns in a business relationship are important to uncover new features of resources and develop new combinations, actors responsible for a business relationships are usually oriented to avoiding breakdowns because of a general and mutual interest in preserving the good relationship and consequently, tend to conceal the development of existing and new resources combinations.

The analytical focus of Chapter 4 is on the relationship between social and material dimensions in the structural vs. process relationship, including the role of practice breakdowns as triggers of change. Through this focus, we were able to analyze how social and material relationships are inherent parts of business relationship development. However, in Chapter 3, we argued that social processes do not only stretch over time, but are also shaped through time. This implies that the experience of time by actors is inherently related to their embedded positions in socio-material structures.

6.1.4 Summary of Chapter 5

Therefore, in Chapter 5 we studied how temporal aspects and socio material relationships are related in both the structural and process dimensions and how a shift between these dimensions is mediated by varying degrees of practice breakdowns. In so doing, we adopted a practice perspective (Schatzki, 2002; Schatzki et al., 2001). According to Swidler (2001:75) “practice theory moves the level of sociological attention ‘down’ from conscious ideas and values to the physical and the habitual”. So, rather than seeing time perceptions as a feature of the mind of an individual actor as discussed in Chapter 3, a practice perspective presupposes that the mental is an integral element of practice (Reckwitz, 2002). We positioned this chapter in the so-called strategy-as-practice (S-as-P) approach. This approach is mainly concerned with the question of what actors do with objects during strategy formulation and implementation (Jarzabowski, 2005; Whittington, 1996, 2006). Within this stream of literature, there is an increasing interest in the role of emergence, agency, and socio-materiality in strategy practices (see Vaara & Whittington, 2012). So-called life-world perspectives to strategy practices are largely inspired by the work of Heidegger, (1962) who is considered as an early practice scholar. Life-world perspectives are especially geared to understanding how situated actors engage in the development of new strategies and practices (Chia & Holt, 2006; Chia & MacKay, 2007; Sandberg & Dall’Alba, 2009). Building on a Heideggerian perspective to strategy making, Chia & Holt (2006) drew a distinction between a dwelling mode and a building mode of existence, and identified the role of practice breakdowns as the prime trigger for reflection and change. Dwelling pertains to structure.
because in this mode, actors take their practice—including its socio-material relationships—for granted. Consequently, they do not constantly reflect on their practice while performing it. Socio-material relationships can be the technology in use, raw materials, the norms, standards of excellence, and the goals attained by a given practice. Besides socio-material relationships, time is also present in the structure of a practice. Following Schatzki (2006), the past is embodied in the practice history and practice memory, the present in the real-time performance of a practice, and the future in terms of the teleological end-points that actors pursue. A building mode of existence resembles the engagement of actors in process dimensions. In this mode, actors reflect on their otherwise taken-for-granted practice and are purposeful in their actions once confronted with a practice breakdown. In a building mode, both socio-material relationships and the past, present, and future of a practice are brought into view and become a subject of articulation and re-construction. To understand how socio-material relationships and time dimensions are articulated and re-constructed at the same time, we draw on Kaplan & Orlikowski’s (2013) concept of temporal work.

Applying this practice-based framework, we examined variations in the socio-material relationships and temporal dimensions underlying the practices at six collaborating agricultural non-profit associations who were facing a drastic change in the subsidy regime. We used a multiple case study (Miles & Huberman, 2004), a method that provides a stronger base for theory building as opposed to a single case study (Siggelkow, 2007).

The insights that emerged from our study is that variations of these relationships underlying each association’s practice produced varying levels of temporal work, with each having specific implications for change. A low level of temporal work implied that actors maintain ongoing practice and postpone actions to change. In other words, the past, present, and future remained coherently linked. This was found to be the case at two of the six associations. Here we observed that actors draw on a rich practice history, multiple activities, and are strongly embedded in their local operating context. However, at two other associations, we observed moderate temporal work which implied that actors re-aligned their practice in anticipation of the expected changes. Actors were able to re-construct the past, present, and the future successfully. At these two associations, we observed that actors draw on a rich practice history, operate in an environment with abundant natural resources such as woodlands and exploitable plant material such as biomass, and focused on the continuous improvement of their specialist skills, technology and standards of excellence. Finally, a substantial level of temporal work was observed at the remaining two associations. Actors encountered significant difficulties in re-constructing the past, present, and future since they could not see how their current practice could cope with the expected future changes. These associations both share a lack of sufficient resources to exploit plant material for commercial purposes which hindered the development of entrepreneurial practices, and also suffered from both a short and unsettled practice history.
6.2 Synthesis

Taken together, the empirical chapters enabled us to answer the general research question of this dissertation. We benefited from using multiple theoretical concepts with each having its own perspective-horizon in regard to the ontological foundations of structure and compositional features, the triggers of change, and the role of human agency. The social system approach we used in Chapter 2 amplified how tensions constrain pattern maintenance and how change is preceded by actors questioning otherwise accepted values and negotiate them anew. Although action and change was clearly observable, a social system approach is limited in theorizing about the role of human agency in re-equilibrium processes. By applying the process perspective used in Chapter 3, we were better equipped to observe how human actors are both socially and temporally engaged in social processes (Emirbayer & Mische, 1998). This perspective allowed us to observe how time perceptions are influenced by critical events and mediated a shift from routine and exchange interaction to adaptive interaction, which is oriented towards change. In using this perspective, we observed how time perceptions are persistent rather than fluid, even if actors are exposed to emerging contingencies in the present. This observation is consistent with Emirbayer & Mische’s (1998) remark that the ability of actors to project a new future and practically evaluate their present situation is “deeply grounded in habitual, unreflected, and mostly unproblematic patterns of action by means of which we orient our efforts in the greater part of our daily lives” (1998:975). While amplifying how time perceptions change and vary between actors at both participating firms, we could also observe how adaptive interaction required a simultaneous reconstruction of the past, present and future between the actors of both parties. Both a social system and a process perspective augmented the social aspects of structure and process. However, as a result of considering these two perspective horizons, we did not include the role of materiality in our analysis. The socio-material perspective described in Chapter 4 was helpful to theorize and observe the relationship between human actors and materiality in both the structural and process dimensions. From a Heideggerian perspective (Heidegger, 1962), we were able to observe how actors experience resources differently in both dimensions. On this basis, we could observe how apparently mundane setbacks in a joint product innovation process can cause a breakdown in resource structures underlying a business relationship. In Chapters 2 and 3, we had already demonstrated why tensions or critical events are considered important triggers of change and thus address to some extent, when actors depart from existing structures. However, so far we have left undertheorized the various intensities of the impacts of these triggers. Clearly, not all tensions or critical events caused actors to depart from existing structures. Therefore, there was a need to further open the black-box of the triggers responsible for a shift from structure to process. In doing so, we used Dreyfus’s (1991) phenomenological framework as described in Chapter 4 to help understand how varying degrees of practice breakdowns shape various kinds of actor responses and actions, and thus inform human agency. From this perspective, we could observe how the occurrence of a practice breakdown spurs a move from considering resources as objects-in-use into subjects-of-concern. This chapter has made clear that a shift from structure to process is dependent upon the degree of a practice breakdown. Furthermore, this
chapter had illuminated that a practice breakdown is a fundamentally socio-material phenomena, rather than purely a social phenomenon. In other words, material dimensions are an inherent part of the structures underlying practices (Barad, 2003; Sewell,1992).

Building on the insights that emerged from the previous chapters, we developed an approach that allowed us to study how socio-material relationships are intrinsically bound up with the temporal dimensions of a practice. Building on a practice-based perspective (Schatzki, 2002; Schatzki et al., 2001; Chia & Holt, 2006), we examined how temporal and socio-material aspects of a practice are constituted in a dwelling mode and thereby become a theme for thought and change in a building mode, for which we borrowed the concept of temporal work (Kaplan & Orlikowski, 2013). Drawing on Dreyfus’s (1991) refinement of practice breakdowns, we observed how variations of these aspects at six agricultural associations produce different kinds of temporal work. Temporal work ranged from mild, moderate, to substantial the level of which depends on the socio-material as well as the temporal structure of a practice.

Especially the findings of Chapters 4 and 5 make clear that certainly not all practice breakdowns lead actors to depart from existing structures or to engage in changing them. For instance, in the first case we saw how the experience of a minor practice breakdown in the business relationship lead actors to reproduce structures by emphasizing the importance of it in realizing new relationship goals. We observed a similar pattern in the second case study at two agricultural associations that experienced mild temporal work. At these two associations, actors tended to continue ongoing practice and appreciated aspects of their practice - especially the practice history- even when actors could see how the expected regulatory changes would affect their work. From both cases, we observed how structures are only temporarily revealed by actors but not considered as problematic to the realization of goals. The minor practice breakdowns we observed bear a resemblance to the actor responses observed by Garfinkel (1967) in his famous breaching experiments. He demonstrates how disorganized interaction highlights to actors how the structures of everyday activities are ordinarily produced and maintained. He concludes that actors commonly draw on background expectancies and are usually not aware of the social norms and rules in everyday social situations. It is only when such norms or rules are violated that they become temporarily explicit to actors who then tend to ‘normalize’ a situation (Garfinkel, 1967). Or as Suchman, (1987) notes, aspects of practices are only discovered in the breach. Yet minor practice breakdowns only reveal the pervasiveness of existing practices while they are temporarily illuminated. Recent organizational studies have indeed shown how actors collectively restore practice breakdowns just to maintain highly institutionalized social practices. For instance, Lok & de Rond (2012) exhibited how the maintenance work executed by practice members varies with the nature and process history of practice breakdowns in the annual race organized by the Cambridge Boat Club, a practice that draws on a long-standing tradition. Heaphy (2013) showed how actors maintain their institutionalized role expectations in hospitals through repair work on the otherwise taken-for-granted beliefs in the face of everyday disruptions in conversations with patients. These contributions show which micro-processes in
institutionalized social practices are upheld in the face of disruptions or practice breakdowns, without the need for actors to structurally change them. This resembles Dreyfus’s (1991) notion of minor breakdowns which are typically oriented towards “get going again” (p125) and thus prompt a reproduction of existing structures just because they are temporarily disrupted. In the first case study, we observed the occurrence of a minor practice breakdown resulting from a problematic situation in real time, whereas in the second case study we documented how a mild breakdown is caused by an event that has not occurred yet. In both cases, actors were merely oriented towards getting going again and essentially pursued the continuation of existing practices.

A tipping point was observed when actors encountered a significant practice breakdown. In contrast to a minor practice breakdown, significant practice breakdowns enable actors to develop sufficient scope in the structures underlying their practice through a greater reflection. From the first case study, we observed how a persistent practice breakdown develops into a total breakdown and revealed the relationship practice as a whole. From that point, actors could start negotiating the values and properties of resources while making sense of the past, present, and future of their relationship. In the second case, we found that moderate and substantial temporal work lead actors to reflect on their practice in anticipation of the upcoming changes. The two agricultural associations that engaged in moderate temporal work were able to secure their future by integrating the past and the anticipated future in the very present. Moreover, we observed how actors were able to integrate entrepreneurial practices within a non-profit organization that emerged historically. However, the actors who encountered substantial temporal work at the two other associations were unfortunately not able to integrate the anticipated future in ongoing practice because of an inconsistent and short practice history. While reflecting on their practice, actors were not able to re-construct the past, present, and future in the light of the anticipated changes, and remained stuck for at least the time being. More specifically, these actors were anxiously looking to find solutions to integrate the anticipated future into ongoing practice but failed to do so. Similar is observed in the first case study in which the members involved in this business relationship encountered a total breakdown and struggled in bringing the past and the future in accordance with the uncertain present. However, the difference with the second case study is that in the first case, actors had already a long-standing shared relationship experience which ultimately prevented them from falling short on finding a solution.
In summary, we can draw the following conclusions:

- Minor practice breakdowns prevent actors to engage in change despite a momentarily reflection on their practice.
- Significant levels of practice breakdowns are at least needed to disclose to actors the underlying structures of a given practice.
- A significant level of a practice breakdown cause actors to articulate aspects of the structures underlying their practice in terms of the values of capital dimensions (considered as intangibles resources), material objects (tangible resources), and the past, present, and future of their practice.
- Despite the structure disclosing power of significant practice breakdowns, they will not always lead to practice innovation as long as the envisioned future cannot be linked to the past and to the present.
- An inconsistent or interrupted practice history complicates adaptive change when actors experience a significant level of a practice breakdown.
- Conversely, when actors rely on a consistent practice history they will probably be able to engage in practice innovation successfully once they have experienced a significant practice breakdown.
- For actors in business relationships, it is important that each party has the same sense of commitment to changing their relationship structure otherwise further practice breakdowns are likely to occur.

6.3 Theoretical contributions

With this dissertation, we also wish to make several contributions to the literature. First we contribute to the literature concerned with business relationships and network development from a process perspective (Halinen et al., 2013). Such a perspective highlights the importance of the subjective experience of events in time in relation to development (Medlin, 2004; Elo et al., 2010; Halinen et al.,2013; Hedaa & Tornroos, 2008). We have shown how business relationships develop through changing time perceptions followed by a re-construction of time which is a part of adaptive processes. We have challenged the idea that time perceptions are fluid in nature during business relationship interaction (Medlin, 2004). We did this by stressing that time perceptions can be inherently stable and are also apparently necessary to enable exchange interaction in everyday business relationships. We have also shown how actors engage in the re-construction of time in business relationships once exposed to critical events in their relationship. In addition, we contribute to conceptualizations of how time work in business relationships. For instance, Halinen & Törnroos, (1995) and Halinen (1998) propose a horizontal and a vertical dimension of time in business relationship. The horizontal dimension consists of the past, present, and future of a business relationships whereas the vertical dimension the different cultural understanding of time and managerial challenges in the present. Though we had focused mainly on the actors’ perceptions of the past, present, and future in light of the critical events that had occurred in
the case, our research also give rise to the idea how different cultural understandings work in a business relationship dynamically. For instance, Orlikowski & Yates (2002) conceptualized time in objective terms (Chronos, clock time) and in subjective terms (Kairos, event time) (see also Adam, 1995 and Hedaa & Törnroos, 2002). From the case study, it can be argued that Dutch Leader typically adhered to an objective understanding of time by emphasizing speed and efficiency whereas Yankee Leather proposed create time and make space to implement the new activity properly. Including the different cultural meanings of time in business relationship development research at the level of the partern firms involved, may inform our understanding of how different meanings of time shape the level to which events are experienced as critical as well as how actors understand the past, present, and future of their business relationship.

Furthermore, we can make contributions to the scholarship concerned with buyer-seller relationships development (Dwyer et al., 1987), interaction episodes in buyer-seller relationships (Schurr, 2007), and interaction episodes as engines of change (Schurr et al., 2008). This stream of scholarship has argued that relationships develop dynamically, rather than through the fixed successive stages proposed by Rosson & Ford (1982). We contributed to this stream of literature by showing that interaction episodes are shaped by critical events that mediated a shift from exchange interaction to adaptive interaction. In addition, we contribute to an emerging stream of literature concerned with the processes of business relationship ending (Halinen & Täthinen, 2002; Tidström & Ahman, 2006; Tahtinen & Halinen, 2002). Our study shows that relationship development is also a matter of actors being able to jointly re-construct the past, present, and future of their relationship. However, this is not always necessarily the case. The processes that lead to adaptive interaction may equally well entail a process of relationship ending, especially when actors are not able to re-establish the time perceptions.

Contributions are also made to the literature concerned with resource and technology development in business relationships and networks (e.g., Baraldi et al., 2012; Finch et al., 2011; Håkansson & Waluszewski, 2002). Scholars have argued that human actors and resource dimensions are inextricably interwoven (e.g., Cantų, et al., 2011) and that the alignment in a business relationship is linked to the parties’ perceptions of the available resources and how these resources are combined, alongside the parties’ interpretations of critical events (Corsaro & Snehota, 2011). We contribute by showing how the perceptions of the resources available vary when actors experience a practice breakdown. In this regard, we specifically contribute the literature concerned with the role of frictions and human agency in the development of resources (Baraldi et al., 2012; Håkansson & Waluszewski, 2011). Frictions are considered as an important source of change that drives both the de-stabilization of existing resource structures and the processes of technological development through ongoing resource combinations (Håkansson & Waluszewski, 2011). Yet, it remains poorly understood how friction works in the mind of human actors (Olsen, 2013) and in relation to this, the role of human agency and power in the development of resource combinations (Baraldi, et al, 2012). We developed a framework that allowed us to see how and when actors
consider resources as objects-in-use or as subjects-of-concern when confronted with practice breakdowns. We conceptualized the notion of friction as the lived-experience of frictions on behalf of human actors. Through a refinement of practice breakdowns in terms of different degrees of experience, we showed that each degree has a different impact on both stability and change. Particular minor practice breakdowns lead actors to continue considering resources as objects-in-use; consequently, no change occurs. On the other hand, persistent and total practice breakdowns lead actors to take resources as subject-of-concern now that they are forced to pay attention and to change them. We have labeled such kinds of practice breakdowns as significant.

Furthermore, in the resource interaction approach, it is commonly accepted that resources and human actor dimensions exist in two separate realms namely in activated structures as objects-in-use for the former, and in cognitive structures as subjects-of-concern for the latter (Baraldi et al., 2011; Håkansson et al., 2009; Håkansson & Waluszewski, 2002). This implies that this approach acknowledges the co-existence of resources and cognitions as two analytically and ontological distinct entities. Moreover, we propose that that there is ontologically no difference between the two; it is only how resources are experienced by actors that makes the difference between an unreflective use of resources or a reflective and change-oriented position. Also Håkansson et al., (2009:85) remarks that “if the discussion on the image [cognitive] level are always firmly rooted in the activated level, there is unlikely to be significant difference between the two”. Our framework thus suggests that such discussions are always firmly rooted in the activated level, that is, in the practices of everyday business interaction but that some interaction episodes underlying business relationship and network development require more intensive cognitive elaborations of actors than others. Furthermore, our study also sheds an alternative light on the concepts of ‘heaviness’ and ‘variety’ in resource development as restricting or facilitating features of technological change (Håkansson and Waluszewski, 2002). Heaviness refers to the physical and intangible resources including the interfaces which are defined and imposed on them through previous interaction. For instance, heaviness can be understood as what Håkansson and Snehota (1995a) termed, “the burden of a relationship”. Variety, in turn, indicates the many opportunities that actors have to combine the values of resources in new ways and thus help to create new technological paths (Håkansson & Waluszewski, 2002). We contribute to this idea by showing how the heaviness of resources is imposed by the taken-for-granted assumptions that actors have about resources, and thus as long actors take them as objects-in-use. Variety, in turn, is shaped by practice breakdowns and allows actors to identify and re-define the economic, social, and technical features of resources once they are uncovered as subjects-of-concern. Hence, the idea that networks may appear stable over time may not only result from actors deliberately maintaining the status quo due to economic commitments and motives, but also because many feasible variations remain unnoticed as long interactions proceed in a rather undisturbed fashion.

We also wish to contribute to the Strategy-as-Practice (S-as-P) scholarship. This stream of literature is primarily concerned with the question of what actors do during strategy making
The S-as-P operates within a framework consisting of three dimensions: practices, praxis, and practitioners (Whittington, 2006). Practices refer to the social practices that have become accepted and legitimated over time by those who perform a practice. Praxis resembles “all the various activities involved in the deliberate formulation and implementation of strategy” (Whittington, 2006:619). Finally, the practitioners are those actors involved in strategy making. Yet while primary focusing on the social practices of strategy making, it has also been argued that the S-as-P research tends to focus on the individual actors rather than the practice itself (Chia & MacKay, 2007; Sandberg & Dall’Alba, 2009). In other words, S-as-P research predominantly considers human actors as being in charge of strategy practices instead of seeing them subordinated to them (Chia & MacKay, 2007). In identifying this apparent ontological inadequacy, Vaara and Whittington (2012) and Jarzabkowski (2012) propose to take social practice more seriously by looking at emergence, socio-materiality, and agency. Such approaches would enlarge the S-as-P agenda with taller and flatter ontologies (Seidl & Whittington, 2014). We contribute to this stream of literature by showing how practice breakdowns cause actors to engage in the “praxis” of strategy making, a shift that we illuminated by using Chia & Holt’s (2006) notion of dwelling and building modes of existence. Extended through Kaplan & Orlikowski’s (2013) concept of temporal work, we demonstrated how strategic change and practice innovation emerge simultaneously on the basis of the temporal engagement of practitioners in everyday socio-material practices.

We also contribute to the literature on path creation. Path creation literature addresses how new paths and innovations come into existence by actors’ ability to mindfully deviate from existing structures (Garud & Karnøe, 2001; Garud et al., 2010). In doing this, the path creation literature redirects attention to human agency and flux, and considers structures as only provisional stabilizations in the development of innovations and new paths. In doing so, this perspective is able to highlight how “Actors mobilize the past not necessarily to repeat or avoid what happened but instead, to generate new options” and that actors have the “capacity to formulate options and visions” (Garud et al., 2010:770). In other words, the departure from existing structures seems to be a choice made by actors and one in which they themselves determine which parts of the past are mobilized in the emergent structures of new paths. Yet our perspective redirected attention to the past structures first in understanding how new ones are created. We have shown how and why structures are persistent in the development of new paths and requires practice breakdown to make actors aware of these structures. In other words, our approach requires an appreciation of past structures in innovation processes (see Nooteboom, 1997). Yet we do not suggest that actors mindlessly cope with structures but rather that they themselves are for most of the part immersed in the very same structures that they wish to change, a human condition also known as the paradox of embedded agency (Battilana & D’Aunno, 2009). Therefore, it is the interruption of the logic of taken-for-granted practices that open a window for what is termed, “path-breaking activities” (Sydow et al., 2009:702). In brief, we propose to see mindful deviation as an elaborated mode of agency (similar to a building mode) in innovation processes rather than as a default mode through which actors experience the world at all times. The consequence of this approach is accepting
that actors are sensitive to tensions, disruptions or breakdowns as an inherent part of the development of new paths.

Some further contributions can be made to the literature concerned with sociology and human agency in general. In sociological discourse, structure and processes are assumed to be ‘two sides of the same coin’ (Parson, 1977). However, we deliberately separated them to help understand how actors are situated in existing structures but also when actors depart from these structures and engage in the process of changing them. In doing so, we were able to grasp the various kinds of agency pertaining to both structure and process dimensions. We have argued that in structural dimensions, actors routinely engage in realizing business goals on the basis of their taken-for-granted assumptions. This reflects Giddens (1977) structuration theory in which actors are routinely engaged in social practices. In process dimensions, actors depart from existing structures in the sense that they disclose these structures and make them subject to change. Of course, this must all occur within the temporarily disturbed confines of established structures. In each dimension, actors draw on a specific type of agency. These specific types of agency are reflected in the work of Swidler (1986) that describes her distinction between ‘settled’ and ‘unsettled’ times from a cultural perspective. According to Swidler (1986), actors usually unproblematically employ established cultural competences by drawing on habits and cultural toolkits during settled times. However, during periods of upheaval and unsettled times, actors become more explicitly aware of their habits and may start to re-orient their temporal orientation in response to emerging situations.

The difference between structure and process, as we have defined it, is also present in Emirbayer & Mische’s (1989) concept of agency. Structure can be found in the habitual component of agency, and process dimensions in its practical evaluative dimensions; that is, when actors de-contextualize past habits, re-imagine the future in the face of present contingencies. In this regard, Ehrenhard (2009), using a practice driven approach, show how managers responsible for the transformation of a Dutch governmental organization towards a more effective one, overcome past oriented -and change inhibiting- institutionalized responses by shifting the focus to the present in relation to future goals. It was found that particular mindfulness and bricolage are considered important aspects for implementing change. With our study, we have shown how -and particularly when- actors engage in reorienting their habits developed from the past and their future while confronted with practice breakdowns in the present. Thereby we essentially show how the process of de-contextualization comes about followed by concrete changes of existing structures by the actions of situated actors.

This idea of settled times is also reflected in Bourdieu’s (1990) notion of ‘habitus’ and Giddens’ (1979) conception of ‘practical consciousness’ in routine practices which lies at the heart of his structuration theory. Such conceptions of agency share the idea that actors structure their tendencies unconsciously. However, Bourdieu never explicated any other mode of agency than habitus, so it remained unclear how he considers change is produced by the human actor trough a different mode of agency. Giddens, in turn, explicated other and more reflective forms of agency that enable actors to engage in the actions necessary to change the structures (Giddens, 1979). In his later work, he tends to move to another viewpoint by seeing
agents, although still constrained or enabled by structures, as sufficiently reflexive to ‘choose to do otherwise’ (Giddens, 1984).

As an early practice scholar, Heidegger (1962) unwittingly developed his own concept of agency that he, in the language of a phenomenologists, termed intentionality. His writings were therefore invaluable for the present work because it allowed us to understand that there are two modes of agency underlying both structure and process dimensions. Rather than seeing humans as reflective agents who operate as ‘subjects’ who know ‘objects’ (as in the Cartesian tradition), Heidegger holds that humans are first and foremost “doing” subjects who routinely deal with objects such as tools, equipment, resources but also cope with other people in practices without the need for awareness (Dreyfus, 1991; Schatzki, 2000). This primary way of ‘being’ is also termed ‘absorbed coping’ (Dreyfus, 1991) and indeed resembles the idea of ‘habitus’ (Bourdieu, 1990), and Giddens’ (1984) conception of ‘practical consciousness’ in routine practices. In other words, there is agency, in a sense that there is some ‘room for maneuverability’ but only within the range of what actors hold physically and logically possible (Dreyfus, 1991). However, Heidegger's core argument is that a reflexive kind of intentionality arises when difficulty is encountered in everyday situations. Therefore, Heidegger left open a place for traditional intentionality (seeing humans as reflexive, knowing subjects) at the point where there is a breakdown in ongoing practice (Dreyfus, 1991). Heidegger held that this mode can only be a deficit mode of existence, and not one that actors are usually related to the world. Our research has shown that this deficit mode of existence enabled actors to change the concrete aspects of the existing structures in which they were previously absorbed. Rather than seeing the reflective moments and change efforts of actors as a random and uncontrolled process, we provide the argument that there is an elaborated structure in the process dimension that can be systematically studied by looking at the actor responses and actions in relation to the various degrees of practice breakdowns.

There is a growing interest the application of Heidegger’ work among organizational scholars. Explicit applications of Heideggers notion of practice breakdowns have been offered by Chia and Holt (2006) who conceptualized how strategy emerges through breakdowns, rather than through planned action and foresight. Others have used Heidegger’s phenomenological framework to conceptualize how actors reflect in action, rather than reflect about action retrospectively (Yanow & Tsoukas, 2009). In addition, Sandberg & Tsoukas (2011) developed a framework to theorize from the ‘logic of practice’, rather than through a framework of scientific rationality. This framework help scholars to understand how practices are constituted and how breakdowns help to disclose the ‘logic of practice’. Nonetheless, the term breakdown as a metaphor of change is not entirely new. System theorists such as Dewey and Parsons, have also pointed to the importance of breakdowns as a source of change in systems. For Dewey, breakdowns in organic systems form the precursor for the formation of new habits, including enriched technologies of all types (Koschmann, Kuutti, & Hickman, 1998). From a sociological point of view, Parsons (1951) was interested in understanding how structural change in a society follows from strains in the value and expectation systems that triggers re-equilibrium processes as we discussed earlier in this chapter. Yet it can safely be
argued that that Heidegger, and especially the interpretations of his work by Dreyfus (1991) brought the notion of breakdowns back to the level of life itself, and thus primarily concerned with the experience of a practice breakdown by humans in the structures of everyday practices.

Nevertheless, neither Heidegger nor any of his followers theorized in detail how changing of existing structures comes about once actors are confronted with practice breakdowns. In other words, we know that practice breakdowns disclose practices but we do not know what actors do in such moments in relation to change efforts to adjust their practice or engage in the development of a new practice. A noteworthy exception is Patriotta’s (2003) study in a Fiat car manufacturing plant in Italy in which he studied how new knowledge is created and established after the occurrence of practice breakdowns. In this dissertation, we have shown how actors come to innovate their business practice once confronted with a significant level of practice breakdowns.

6.4 Implications for practice

Most management studies offer recipes to practitioners about how to perform better, for instance through increasing foresight and environmental awareness (see Barker & Smith, 1995; Hines & Bishop, 2006; Major, Asch, & Cordey-Hayes, 2001). The idea that practice breakdowns can be a source for the creation of new knowledge and alternative routes of actions would certainly be an attractive one for most practitioners especially for its outcomes. However, practitioners are usually conditioned to avoid practice breakdowns because they are considered to obstruct practices and the realization of business goals. So, while there is clear need for an improved reflection, practitioners would naturally not be in favor to deliberately create practice breakdowns to develop sufficient awareness. Consequently, practitioners also missed out, or at least limit, the opportunity to create new knowledge and develop their practice to meet new goals and respond to environmental changes adequately. A more harmless alternative to practice breakdowns and also increasingly popular concept these days to improve situational awareness is managerial mindfulness. Mindfulness is defined as a mental state that helps practitioners to generate a reflexive awareness that allows them to transcend from the burden of everyday practice. Following Levinthal & Rerup (2006), the term mindfulness was initially developed in the psychology literature (Langer, 1989; Langer & Moldoveanu, 2000). Scholars especially advocate the importance of mindfulness for practitioners in so-called high reliability organizations, for instance the organization of complex flight operations on navy flightdecks as described by Weick & Roberts (1993). Mindfulness deals with: “(1) a greater sensitivity to one’s environment; (2) more openness to new information; (3) the creation of new categories for structuring perception; and (4) enhanced awareness of multiple perspectives in problem solving” (Langer & Moldoveanu (2000:2). A mindful state of being can be prompted by thought experiments (Folger & Turillo, 1999), critical reflection (Cunliffe, 2004; Schön, 1983), and so-called second-order breakdowns (Sandberg & Tsoukas, 2011), all intended to prompt a critical reflection on
existing practices and identify new business opportunities while these practices at the same
time undisturbingly continue to be maintained. Yet we argue that the creation of a mindful
state through these methods would surely disclose existing practices but only to some extent
because it happens on the basis of a practitioners’ existence in structural dimensions.

Therefore, we suggest that practitioners can take even more advantage of the
opportunities provided by the practice breakdowns while they happen in the execution of
everyday business practices, and thus disclose a practice while they are engaged in the process
dimension. In this regard, Sandberg & Tsoukas (2011), refer to so-called first order practice
breakdowns which are those that occur in everyday practice and require practitioner’s to
respond to a unique situation. This approach requires practitioners to accept that they
themselves are or most of the time routinely engaged in practices without being consciously
aware of that practice. This idea is in line with Levinthal & Rerup’s (2006) conception of
mindfulness. They suggest considering two complementary thought words in which actors are
engaged: one is mindful and the other less mindful. In their view, learning occurs in practice
through the interplay between these two thought worlds and it is this interplay that contributes
to the development of new organizational knowledge. Although Levinthal & Rerup (2006)
left unexplored how this interplay exactly is generated, we suggest that practice breakdowns
form a good candidate for that. Learning thus also would imply that practitioners would
accept that it are breakdowns, irregularities, or when things go wrong that informs their
puts it. “it is failure and not success in the daily performing of a function that alerts our
consciousness and attention and causes us to stand back and survey our circumstance”

In Chapter 2, we also reserved some space to a discussion of the implications for
consultants involved in setting up business relationship or alliances activities. We showed
how consultants can benefit from understanding the structure of the partner organizations
before starting to advise on the relationship process. The analytical framework we used
(AGIL scheme) is useful to capture the structural characteristics of each partner firm in four
dimension terms and also to consider how such differences can be considered as
complementary features. Although this approach appears to be static, it is necessary to
understand how these dimensions come into play during new activity processes and also how
tensions can be dealt with once they arise. This approach is different to that taken by typical
diagnostic consultants who use their expert knowledge to address problems, since our
approach requires a more process-oriented approach, which implies that consultants
themselves are part of the same challenges that they wish to advise on (Hicks et al., 2009).

6.5 Limitations and future research

Like any study, this dissertation also has several limitations. First, a general remark can
be made about the choice of tensions, critical events, or practice breakdowns as central
triggers of change since change can also be planned without the existence of such triggers (see
Greenwood & Hinings, 1996). Nevertheless, the theory that problems, rather than success, provoke adaptation and change is widely accepted in the organizational change and innovation literature (e.g. Anheier, 1999; Staudenmayer, Tyre, & Perlow, 2002; Van De Ven & Polley, 1992). Moreover, the literature indicates that small failures or red flag signals are often ignored or remain unnoticed by actors in innovation processes (Van de Ven, 1986; Van de Ven & Polley, 1992). Therefore, the decision to look at such triggers is provided by our desire to understand how and when problems are fully exposed to actors and how they engage in solving them while changing existing structures.

A second limitation deals with the methods used especially in the single case study presented in the Chapters 2, 3 and 4. Real time data can only be collected at one point in time for a specific purpose because otherwise one would become overwhelmed by the complexity of the data produced during business relationship interaction. For this study, we benefited from a participant-observation study of eight months and as such, we were able to collect rich in-depth data. However, the data collected in this single case study was composed and analyzed for the purpose of chapter 2. As a consequence, the chapters 3 and 4 are reconstructed versions based on a different theoretical approach. This might be considered as a limitation because the data collected was not congruent with the approach taken immediately from the start of our observations. Nevertheless, the field notes that we maintained and the interviews that we conducted during the development of the new activity provided sufficient basis for a process narrative and a reconstruction of the entire process that was stretching over the period of eight months. In appendix B, we provide a visual map of the entire process and sequential order of the events that occurred in this business relationship. This supportive tool is commonly used as a strategy for theorizing from process data (Langley, 1999). To further weaken this limitation, we discussed and refined the reconstructions of the approaches in chapter 3 and 4 based on interviews with involved actors of both parties in the years that these papers were presented at conferences. This procedure helped in improving the credibility of the findings as well as the possibility of triangulation of different theoretical approaches applied in one single case study.

A third limitation deals with the choice of data collection techniques. Although our approach was based on a participant-observation study, we did not deliberately intervene and helped to induce critical reflection. Although still concerned as a participant-observer, we were able to grasp the way actors disclose the structures underlying their practices by the empirical situation itself. Yet, there are also other methods and techniques that would improve our understanding of how actors disclose structures. Thought experiments, as we have mentioned them earlier, would probably be useful in combination with an action research approach to help innovate organizational (Coughlan & Coghlan, 2002), as well as to innovate practices in collaborative business relationships (Middel, Coghlan, Coughlan, & Brennan, 2006). In an action research setting, researchers could prompt critical reflection among organizational participants by creating so-called second order breakdowns as discussed (see Sandberg & Tsoukas, 2011) and using the knowledge derived from it for further implementation in the following stage.
A fourth limitation is that we focused on the case of practice breakdowns as a single event in time. In the first case study, we focused on how this shift happened through various levels of practice breakdowns in the pursuit of a new business relationship activity. In the second case study, we focused on how an anticipated external event caused a practice breakdown in ongoing practices at six agricultural non-profit associations. This approach was useful to meet the aims of this research because it allowed us to explore and understand the micro-processes of change from the perspective of situated actors. However, we did not examine the processes of the recent changes in these practices and how they became taken-for-granted over time. Nevertheless, it might be interesting for future research to examine how practices evolve through multiple episodes of practice breakdowns stretching over longer time periods.

A final limitation of the study deals with the choice of the two empirical cases. Due to our interests in the persistency of existing structures, we deliberately chose to conduct research in long-standing business practices. However, studying practice breakdowns in relation to practice innovation is not only restricted to this kind of research setting. There are various other contexts in which the concept of practice breakdowns can be used for future research. Some of such contexts have already been proposed in the empirical chapters but we will briefly discuss a few. For instance, the role of practice breakdowns can be studied in start-up firms or smaller firms in highly innovative environments introducing disruptive technologies (Linton & Walsh, 2004). It is especially in the development of emergent structures that actors will most probably encounter practice breakdowns. Practice breakdowns will occur as a result of an absence of structures and of a lack of shared understandings. In other words, there is likely much to negotiate and to align, and so the emergence of new practices results from the setbacks, trials and errors encountered by actors. In addition to this, we also see merit to use the notion of practice breakdowns in the study of entrepreneurial processes. For instance, Beckert (1999), following Schumpeter (1934), argues that entrepreneurs are engaged in the process of “disembedding” and have “the capability to take a reflective position towards institutionalized practices and can envision alternative modes of getting things done” (Beckert, 1999:786). This is in line with Spinosa, Flores, & Dreyfus (1997) who note that innovative entrepreneurs are mainly occupied with changing the taken-for-granted believes tight to the everyday practices in some domain of their culture. More than by control and planning of means end relationships, their view maintains that entrepreneurs are considered as world-disclosers who strive to change to pervasive ways of thinking about the use of technology, products and services. Similar is argued by Sarasvathy (2001) who propose the concept of effectuation and causation as two modes of entrepreneurial logic. Although the very concept of Sarasvathy’s (2001) idea rests on an individualist ontology, the idea of causation and effectuation parallels our framework in which we suggested the two modes of agency: dwelling and building. In dwelling, action is guided by the logic of practice, whereas in a building mode, action is guided by purposeful action and causal logic. Therefore, we propose to study how entrepreneurs can be besides being world-disclosers who challenge taken-for-granted believes- at the same time exposed to practice breakdowns which are brought about by their own actions or those of others in their pursuit to disembed existing
structures. As a result, we propose that future research might inform literature on how entrepreneurial outcomes result from moments of causation and effectuation depending on the number of cycles and the degrees of practice breakdowns that entrepreneurs themselves and those that hold taken-for-granted believes experience in the pursued of realizing new combinations.
6.6 Summary (in Dutch)

Innoveren wordt vaak gezien als een op de toekomst gericht proces. Echter, of het nu om een ontwikkeling en implementatie van een nieuwe technologie, product of een andere bedrijfsstrategie gaat, actoren moeten innoveren binnen bestaande praktijken en onderliggende sociale structuren die zijn ontwikkeld in en tussen organisaties (Garud et al., 2013; Håkansson et al., 2009; Löwik et al., 2012; Van de Ven, 1999). Het is algemeen bekend dat deze sociale structuren de handelingsvrijheid van actoren beïnvloeden (Granovetter, 1985). Een belangrijke vraag binnen de innovatieliteratuur is daarom hoe actoren afwijken van bestaande structuren en nieuwe ontwikkelingen (Garud & Karnøe, 2001; Garud et al., 2013). Succesvol innoveren veronderstelt namelijk dat actoren in staat moeten zijn om de bedrijfspraktijken en haar onderliggende structuren dusdanig aan te passen, zodat er daadwerkelijk ruimte voor vernieuwing wordt gecreëerd (Abernathy & Clark, 1985; Nooteboom, 1999; Rip 2010). De centrale stelling van dit proefschrift is dat het afwijken en aanpassen van bestaande structuren juist een ontwrichting van deze structuren veronderstelt die onderliggend zijn aan bestaande bedrijfs- en samenwerkingspraktijken. Aan innoveren zitten daarom zowel structurele dimensies die wijzen op het verleden en heden, als procesdimensies die wijzen op de toekomst en die beiden relevant zijn voor vernieuwing. Een voor dit proefschrift belangrijke aannames is dat actoren een dubbelzijdige relatie tot structuur hebben (Farjoun, 2010; Glasmeier, 1991). Aan de ene kant biedt structuur de nodige stabiliteit en dit is belangrijk voor innovatie want zonder structuur zal dit alleen maar leiden tot chaos (Håkansson& Lundgren, 1997; Raesfeld et al., 2012). Aan de andere kant nemen actoren bestaande business praktijken en haar onderliggende structuren als vanzelfsprekend aan en wel op een dusdanige wijze dat actoren er niet meer op reflecteren (Barley & Tolbert, 1997; Czarniawska, 2009; Ranson et al., 1980; Zucker, 1977). Dit geldt niet alleen voor bedrijfspraktijken maar ook voor samenwerkingspraktijken ontwikkeld in business relaties en netwerken (Ford et al., 2003; Ring & Van de Ven, 1992, 1994; Zollo et al., 2002). Dit betekent dat ondanks het idee dat actoren doelbewust of reflectief lijken te handelen, ze geen volledig inzicht hebben in de onderliggende structuur van de praktijken waarin ze zich bevinden (Sewell, 1992; Sydow et al., 2009). De vanzelfsprekendheid van bestaande bedrijfspraktijken kan daarom een belemmering vormen voor de aanpassing ervan en daarmee het innoveren van deze praktijken in de weg staan. Onder structuurdimensie wordt in dit proefschrift verstaan de bestaande bedrijfs- en samenwerkingspraktijken en haar onderliggende structuren, die actoren als vanzelfsprekend zien en nodig zijn om vanuit een stabiele basis bestaande doelen te realiseren en nieuwe te bedenken. De procesdimensie bestaat uit de concrete acties van actoren die nodig zijn om inzicht te krijgen in bestaande bedrijfs- of samenwerkingspraktijken en haar onderliggende structuren zodat er ruimte ontstaat voor aanpassing en die zal leiden tot het innoveren van bestaande praktijken.

Het doel van dit proefschrift is daarom een antwoord te vinden op de volgende vraag: Wat zorgt ervoor dat actoren afwijken van bestaande structuren om ruimte te creëren voor praktijkinnovatie door bestaande structuren aan te passen?
De empirische focus van dit proefschrift ligt op samenwerkende organisaties. Innoveren vindt namelijk steeds vaker plaats in reeds lang bestaande klant-leverancier relaties, allianties of in innovatienetwerken (Ahuja, 2000; Araujo & Easton, 2012; Faems et al., 2008; Löwik et al., 2012; Powell et al., 1996; Webster, 1992).

Aan dit proefschrift liggen twee empirische studies ten grondslag. De eerste studie betreft een studie naar de ontwikkeling van een nieuwe gezamenlijke activiteit in de commerciële luchtvaartindustrie door een Nederlandse en Amerikaanse lederproducent. Deze typische klant-leverancier relatie kent een lange samenwerkingsgeschiedenis. De focus in deze studie ligt op de problemen die ontstonden tijdens de gezamenlijke productontwikkeling van ledermonsters, die nodig waren om te kwalificeren als leverancier van leder voor stoelhoezen. Deze studie is gebaseerd op een zogenaamde participant-observatieonderzoek (Czarniawska, 2004) van 8 maanden. De tweede studie bestaat uit een multiple case studie (Miles & Huberman, 1994), die gedurende 3,5 jaar heeft plaatsgevonden rondom de activiteiten van zes samenwerkende agrarische natuurverenigingen (ANV’s) in de achterhoek. Actoren van deze non-profit verenigingen worden geconfronteerd met een naderende drastische verandering in de EU en nationale regelgeving voor subsidies die beschikbaar zijn voor landschapsonderhoud. Deze verandering dwingt hen om subsidieonafhankelijker te worden en ondernemerschapspraktijken te ontwikkelen en op regionaal niveau te gaan samenwerken om hun toekomst zeker te stellen.

Het gaat bij deze studies steeds om de vraag welke triggers er toe leiden dat actoren reflecteren op bestaande structuren en het proces van het aanpassen van deze structuren. Het onderstaande conceptueel model wordt daarvoor gebruikt.

![Figuur 6-1: conceptueel model van het onderzoek](image-url)
Een kenmerk van dit proefschrift is dat er vanuit verschillende theoretische perspectieven naar bovengenoemde relaties is gekeken. De toegepaste perspectieven zijn: een sociaal systeem, een temporeel, een socio-materieel en een practice-based perspectief. Elk theoretisch perspectief heeft haar eigen horizon en specifieke focus op genoemde elementen van het conceptuele model. De vier gebruikte perspectieven overlappen wetenschapsfilosofisch gezien het functionalisme en het interpretivisme. Volgens Burrell & Morgan (1979) worden structuur en proces vanuit het functionalisme benaderd in objectieve en statische termen en het interpretivisme vanuit de gedachte dat structuur en proces subjectief zijn en veranderbaar door actoren. Om die reden is dit proefschrift gepositioneerd binnen het z.g. “Interpretivist-functionalist Transition Zone” (Gioia & Pitre, 1990:592), omdat we structuur net zo goed willen begrijpen als verandering van structuren door actoren (o.a. Barley, 1986; Ehrenhard, 2009; Giddens, 1979; Ranson et al., 1980). Het ene perspectief bouwt wat meer voort op het functionalisme en het andere op het interpretivisme. Verder is de keuze voor het gebruik voor meerdere perspectieven gebaseerd op de mogelijkheid om deze in combinatie met de empirische bevindingen te vergelijken. Deze benadering is met name zinvol in onderzoek naar bedrijfsrelaties en netwerken vanwege haar complexiteit (Olsen, 2013). De eerste drie perspectieven zijn toegepast in de eerste case studie en worden beschreven in de hoofdstukken 2, 3 en 4. Het laatste perspectief is toegepast in hoofdstuk 5.

Hieronder volgt een samenvatting van elk hoofdstuk waarbij als eerste een korte inleiding op het perspectief wordt gegeven en daarna de resultaten, waarbij de beperkingen van elk perspectief de inleiding vormen van het volgende hoofdstuk.

De overgang van structuur naar proces wordt in hoofdstuk 2 geëxplooreerd vanuit een sociaal systeem perspectief (Groen et al., 2008; Parsons, 1951;1964). Vanuit een sociaal systeem perspectief betekent innoveren dat steeds opnieuw nieuwe spanningen ontstaan in een sociaal systeem, waarop actoren vervolgens moeten handelen (Groen et al., 2008). In dit hoofdstuk is er gekeken naar hoe actoren omgaan met structurele verschillen in de sociale, strategische, economische en culturele kapitalen van de partnerorganisaties tijdens spanningen die ontstaan rondom de ontwikkeling van een nieuwe samenwerkingsactiviteit. Een belangrijke bevinding is dat actoren de verschillen tussen deze kapitalen als positief waarderen, omdat ze complementerend zijn voor de bestaande relatie. Vanuit deze basis kon de nieuwe activiteit aanvankelijk bedacht en vormgegeven worden. Hieruit blijkt dat een bestaande structuur in een samenwerkingsrelatie een fundament biedt om tot innovatieve ideeën te komen. Echter, er ontstonden spanningen tussen de beiden partners, omdat de eerste ledermonsters tijdens het productieproces mislukten bij een van de partners. Dit had tot gevolg dat de voorheen gewaardeerde verschillen in de kapitaaldimensies als problematisch werden gezien in het realiseren van het nieuwe doel. De spanningen die hieruit voortkwamen leidden er echter ook toe dat de betrokken actor van beide partijen concreet inzicht kregen in de verschillen en deze als subject voor onderhandelingen kenbaar konden maken. De verandering heeft vooral gevolg gehad voor een effectievere afstemming binnen het wederzijdse sociale, culturele en strategische kapitaal, omdat de onderhandelingen vooral
gingen over nieuwe communicatiestructuren (sociaal), interactiepatronen en kennisintegratie (cultureel), om nieuwe doelen te realiseren (strategisch), en dus in zijn totaliteit heeft geleid tot een aanpassing binnen het sociale systeem. Dit onderzoek laat zien dat spanningen belangrijk zijn om een overgang te bewerkstelligen van structuur naar proces. Echter, een sociaal systeem perspectief veronderstelt dat systemen zelf-organiserend zijn (Olsen, 2013; Schatzki, 2002) en dat aanpassing geschiedt via re-equilibrium processen (Parsons, 1951). Hoewel Parsons (1977) benadrukt dat het altijd actoren zijn die een sociaal systeem aanpassen is het vanuit een sociaal systeem perspectief niet geheel te verklaren hoe de overgang van structuur naar proces en de aanpassing van bestaande structuren werd bewerkstelligd vanuit het perspectief dat actoren ook temporeel zijn ingebed en op basis hiervan over gaan tot actie.

Om die reden is er in hoofdstuk 3 gekozen voor een procesperspectief dat gericht is om een overgang van structuur naar proces te begrijpen via een verandering van tijdspercepties van actoren. Verandering van tijdspercepties bepalen in belangrijke mate sociale actie (Emirbayer & Mische, 1998). Een procesbenadering neemt daarom de rol van tijd serieus en benadrukt tevens de rol van spanningen en tegenstelling als “drivers of change” (Langley et al., 2013). De ontwikkeling van samenwerkingsrelaties vanuit een procesperspectief is in toenemende mate een belangrijk onderzoeksgebied binnen de IMP literatuur (Industrial Marketing & Purchasing) (Halinen et al., 1999; Halinen & Tähtinen, 2002; Tidström & Hagberg-Andersson, 2012). Binnen deze stroom ligt de focus op de percepties van actoren ten aanzien van tijd inclusief de rol van kritische gebeurtenissen (Elo et al., 2010; Halinen, 1998; Halinen & Törnroos, 1995; Medlin, 2004). Met name kritische gebeurtenissen kunnen er toe leiden dat de percepties van actoren veranderen (Elo et al., 2010) en kunnen bestaande structuren in een business relatie doorbreken (Halinen et al., 1999). In dit hoofdstuk wordt voortgebouwd op het werk van Medlin (2004), die aangeeft dat interactie in samenwerkingsrelaties altijd op de toekomst zijn gericht, maar zijn gebaseerd op de percepties van actoren over het verleden en huidige omstandigheden. Volgens Medlin (2004) veronderstelt een overgang van structuur naar proces een verandering van exchange interaction naar adaptive interaction met elk een eigen object van tijd. Exchange interaction gaat over structuur vanwege het routinematige karakter van interactie met als object van tijd het verleden en heden. Adaptive interaction symboliseert de procesdimensie en is gericht op verandering en toekomstige interactie en heeft daarmee de toekomst als object van tijd. Vanuit deze literatuurstroom is nog niet duidelijk wanneer een dergelijke overgang tussen exchange interaction en adaptive interaction plaatsvindt vanuit het perspectief van de actoren. In dit hoofdstuk staat centraal de rol van kritische gebeurtenissen in het bewerkstelligen van deze overgang inclusief de veranderende tijdspercepties. Dit onderzoek laat zien dat zwaarwegende kritische gebeurtenissen belangrijk zijn voor een overgang van exchange interaction naar adaptive interaction en dat succesvolle aanpassing van een bestaande samenwerkingspraktijk tevens een reconstructie door actoren van het verleden, heden en toekomst inhoudt. Dit proces van reconstructie van tijd wordt ook wel temporeel werk genoemd (Kaplan & Orlikowski, 2013). Om tot effectieve aanpassing van bestaande structuren te komen is gebleken dat temporeel werk een proces is dat collectief moet plaatsvinden. Hiermee wordt bedoeld dat dit proces tussen de betrokken actoren van beide partnerorganisaties gelijktijdig moet
plaatsvinden. Verder is het duidelijker geworden hoe het proces van verandering verloopt vanuit het perspectief van de acteur. Met de gekozen benadering is er eveneens een vollediger antwoord op de vraag wat actoren er toe brengt om af te wijken van bestaande structuren. Het gekozen perspectief laat namelijk zien dat concrete verandering pas plaatsvond na een opeenstapeling van diverse gebeurtenissen, die ontstonden in het productontwikkelingsproces bij een van de partners. Hierdoor kon er geen ledermonster worden geleverd, die aan de eisen van de luchtvaartindustrie zou voldoen. Echter, het gebruikte perspectief was beperkt tot het analyseren van veranderende tijdspercepties en de reconstructie hiervan. Hierdoor bleven de materiële aspecten die een rol speelden in de case buiten de analyse. Enkele voorbeelden uit de gebruikte case zijn de productiefaciliteiten, het handboek, het laboratorium, de ledermonsters en de receptuur van de ledermonsters, die zowel in de structuur als in de procesdimensie een rol speelden. Ook in managementstudies is er een toenemende belangstelling voor de rol van materialiteit of resources in relatie tot de gebruikelijke sociale dimensies in het begrijpen van organisatieprocessen (Feldman, 2004; Orlikowski, 2007; Orlikowski & Scott, 2008). Met andere woorden, het zijn niet alleen de sociale aspecten die een rol spelen in zowel structuur als procesdimensies, zoals de onderliggende waarden vanuit een sociaal systeem perspectief (hoofdstuk 2) of tijdspercepties van actoren (hoofdstuk 3), maar ook de relatie tussen sociale en materiële aspecten.

Daarom wordt de eerste case studie in hoofdstuk 4 opnieuw geanalyseerd, maar nu vanuit een socio-materiaal perspectief. In dit hoofdstuk wordt er specifiek gekeken naar hoe actoren overgaan tot het aanpassen van resources, nadat ze worden geconfronteerd met verschillende gradaties van problemen in hun relatie tijdens de ontwikkeling van de nieuwe activiteit. Dit hoofdstuk is eveneens gepositioneerd binnen de IMP literatuur en met name de stroom die zich bezighoudt met resource interactie in relatie tot dyadische relatie en netwerkontwikkeling (Baraldi et al., 2012; Cantų et al., 2011; Håkansson & Waluszewski, 2002). Resources zijn functioneel en creëren waarde in gebruik (Penrose, 1959; Vargo & Lusch, 2004) en kunnen variëren van producten, technologie, systemen, kennis, mensen, maar ook een business relatie in zijn geheel (Baraldi et al., 2012). Verder wordt er binnen deze literatuurstroom een onderscheid gemaakt tussen resources als objects-in-use en subject-of concern (Håkansson et al., 2009) en staat de rol van fricties of spanningen, die ontstaan in resourcestructuren centraal als kiem van technologieverandering in netwerken (Håkansson & Waluszewski, 2011). Echter, tot dusver lag de focus binnen deze stroom op verandering van materiële structuren door fricties en spanningen, maar bleef de rol van de menselijke actor en dus de sociale dimensie van structuur en proces onderbelicht (Abrahamsen et al., 2011; Baraldi et al., 2012; Olsen, 2013). De inspiratie voor het socio-materiële perspectief in dit hoofdstuk is gevonden in het werk van Heidegger, (1962) en met name in de interpretaties rondom zijn concept van practice breakdowns, ofwel ontwrichtingen van praktijken door Dreyfus (1991). Heidegger vertrok vanuit het idee dat mensen niet afhankelijk zijn van een bewuste reflectie op de interacties, de middelen, normen en de doelen die gerealiseerd moeten worden om iets gedaan te krijgen. Reflectie treedt pas op tijdens een verstoring of ontwrichting van een bestaande praktijk tijdens de uitvoering. Er staat bijvoorbeeld iets in de weg, ontbreekt of er is iets kapot waardoor men niet verder komt (Chia & Holt, 2006; Sandberg & Tsoukas,
Op zulke momenten komen de tot dusver verborgen aspecten van een praktijk, inclusief haar onderliggende structuur, tijdelijk ‘bloot’ te liggen en worden onderwerp van gesprek, omdat er op gereflecteerd moet worden. In Heidegger’s termen; wat voorheen transparant ready-at-hand was, wordt nu present-at-hand en daarbij onderwerp van kritische beschouwing, de-contextualisatie van middelen en wellicht aanpassing hiervan. Op basis van dit perspectief kon er vat gekregen worden op zowel de structuurdimensie in de vorm van resources als objects-in-use en de overgang naar procesdimensie in de vorm van resources als subject-of-concern, indien actoren worden geconfronteerd met een bepaalde mate van een ontwrichting in hun samenwerkingspraktijk in genoemde casus.

Een belangrijke bevinding is dat milde ontwrichtingen leiden tot het benadrukken van het juist functioneren van resources door actoren als objects-in-use en daarmee bestaande structuren en praktijken in stand worden gehouden. Indien er voor een ontwrichting geen oplossing gevonden kan worden, dan beschouwen actoren resources als subject-of-concern (men kan er niet langer omheen, resources zijn problematisch en vallen op) en daarmee is het proces van verandering ingeleid. Concrete aanpassing van bestaande praktijken gebeurt echter bij een complete ontwrichting, omdat actoren resources dan volledig uit de context halen en zodoende geanalyseerd en concreet veranderd kunnen worden. Deze studie geeft een accurater antwoord op de vraag wanneer en hoe er een overgang van structuur naar proces plaatsvindt vanuit het perspectief dat actoren zijn ingebed in socio-materiële structuren. Net zoals in hoofdstuk 3 blijkt dat zowel reflectie op bestaande structuren en een concrete verandering hiervan een gezamenlijke inspanning moet zijn. De analytische focus in dit hoofdstuk lag op actuele concrete aanpassingen in een bestaande socio-materiële structuur van een samenwerkingspraktijk tussen twee organisaties in de lederindustrie, waarin een toenemend mate van ontwrichting een belangrijke rol heeft gespeeld voor verandering. Echter, vanwege de specifieke focus op alleen socio-materiële structuren, bleef de factor tijd zoals beschreven in hoofdstuk 3 onderbelicht. Zoals we echter daaruit al concludeerden, bleken de percepties over het verleden, heden en toekomst –en met name een verandering hiervan- een belangrijke rol te hebben in de overgang van structuur naar proces. Om die reden zou een integrale benadering, waarin zowel socio-materiële als temporele dimensies gelijktijdig een rol spelen in zowel structuur als procesdimensies beter zicht kunnen geven op de overgang van structuur naar proces. Een dergelijke benadering vertrekt vanuit het principe dat actoren naast hun inbedding in business praktijken met een onderliggende socio-materiële structuur ook hiermee samenhangende tijdspercepties hebben over het verleden, heden en toekomst (Emirbayer & Mische, 1998).

Daarom is er in hoofdstuk 5 gekozen voor een practice-based perspectief (Chia & Holt, 2006; Schatzki, 2002; Schatzki, 2006 Schatzki et al., 2001). Dit perspectief maakt het mogelijk om de samenhang van zowel socio-materiële als temporele aspecten in zowel structuur als procesdimensies te begrijpen en te analyseren. Dit hoofdstuk is gepositioneerd en draagt bij aan de zogenaamde Strategy-as-Practice (S-as-P), een literatuurstroom die als primaire focus heeft het bestuderen wat actoren doen tijdens het formuleren en implementeren van strategie (Whittington, 1996, 2006). Binnen deze stroom is er een toenemende
belangstelling voor de rol van emergentie, de invloed van structuur op de handelingsruimte van actoren en socio-materialiteit tijdens strategieontwikkeling (Chia & Holt, 2006; Chia & MacKay, 2007; Orlikowski, 2007; Vaara & Whittington, 2012). In dit hoofdstuk wordt onder socio-materialiteit de samenhang tussen technologie, werkstandaarden en sociale inbedding van een bestaande praktijk verstaan (Schatzki, 2002). Onder tijdsaspecten wordt verstaan de historie van een praktijk en de doelen die met een bepaalde praktijk worden gerealiseerd of nagestreefd in het heden (Schatzki, 2006). Het verschil tussen beide dimensies wordt aangeduid met de Heideggeriaanse begrippen dwelling mode en building mode en de overgang hiervan door practice breakdowns (Chia & Holt 2006). In een dwelling mode reflecteren actoren niet als zodanig op de genoemde aspecten van bestaande praktijken om doelen te realiseren. Ze vormen een coherent geheel juist omdat bestaande doelen ermee gerealiseerd worden en niet conflicteren met de historie van een praktijk. Naar gelang actoren worden geconfronteerd met een bepaalde mate van een ontwrichting zullen ze in een building mode reflecteren op zowel de socio-materiële aspecten (technologie in gebruik, standaarden, etc.) als tijdsaspecten (verleden, heden toekomst van hun praktijk) en overgaan tot het veranderen van hun praktijk. Omdat reflectie dus ook over percepties en een reconstructie van tijd gaat is net zoals in hoofdstuk 3 gebruik gemaakt van het concept temporeel werk van Kaplan & Orlikowski (2013).

Uit het onderzoek blijkt dat er verschillende gradaties van ontwrichtingen door actoren van de ANV’s zijn ervaren en dat de mate hiervan wordt beïnvloed door de praktijkhistorie, lokale sociale inbedding, variaties in technologie, beschikbare materialen en standaarden. Twee van de zes ANV’s ervaren de opkomende verandering in de subsidieregelgeving als een milde vorm van temporeel werk. Hierdoor bleef een aanpassing van de bestaande praktijk uit, omdat de relatie tussen verleden en toekomst in relatie tot de ervaren verandering in het heden niet als bedreigend werd gezien voor de bestaande praktijk. Twee andere ANV’s willen hun praktijk opheffen door te gaan fuseren met andere ANV’s. Zij konden het verleden niet rijmen met de gepercipieerde toekomst en ervoeren de opkomende verandering als ronduit bedreigend. Er was sprake van substantieel temporeel werk. De laatste twee ANV’s konden al veranderend hun bestaande praktijk combineren met de ontwikkeling van een nieuwe, op ondernemerschap gerichte praktijk, die hen minder afhankelijk maakt van subsidies. Er was sprake van significant temporeel werk, omdat er ondanks de ervaren druk in het heden er nog wel een reconstructie kon plaatsvinden tussen praktijkhistorie en de gepercipieerde toekomst. Dit onderzoek laat tevens zien dat netwerkpartners, die gewend zijn om samen te werken ronddom een gemeenschappelijk doel (landschapsbeheer) en actief zijn in dezelfde institutionele omgeving, significant verschillend kunnen reageren op een radicaal veranderende regelgeving die objectief gesproken elke ANV aan gaat.

Door het toepassen en trianguleren van de verschillende theoretische perspectieven en toepassing hiervan in de twee case studies is de centrale vraag te beantwoorden. Het sociale systeem perspectief behandeld in hoofdstuk 2 droeg bij om zicht te krijgen op de relatiestructuur en proces inclusief de rol van spanningen. Het temporeel perspectief in hoofdstuk 3 om zicht te krijgen op veranderende tijdspercepties van actoren in relatie tot
kritische gebeurtenissen. Een socio-materiaal perspectief in hoofdstuk 4 om zicht te krijgen op het veranderende karakter van resources in relatie tot verschillende niveaus van ontwrichtingen. Tot slot het practice-based perspectief in hoofdstuk 5 om de relatie tussen socio-materiële en temporale aspecten in zowel structuur als procesdimensies te begrijpen en te analyseren. Dit proefschrift laat zien dat de mate van reflectie en bereidheid bij actoren om praktijken te innoveren afhangt van de mate van de ervaren ontwrichting. Actoren lijken eerder vast te houden aan bestaande praktijken indien ze geconfronteerd worden met milde ontwrichtingen. Een totale ontwrichting is kritisch gebleken, omdat ze gepaard gaan met conflict en de kans op het beëindigen van een business relatie (studie 1) of een radicale maar onuitvoerbare verandering (studie 2). Het is gebleken dat actoren betrokken bij activiteiten in business relaties dezelfde ontwrichtingservaring moeten hebben om tot effectieve aanpassing van bestaande structuren te komen. Een succesvolle reconstructie van het verleden, heden en toekomst in de vorm van temporeel werk is daarbij belangrijk gebleken. Het onderzoek laat tevens zien dat significante ontwrichtingen kunnen bijdragen bij het integreren van op ondernemerschap gerichte praktijken in non-profit organisaties zonder afstand te doen aan bestaande praktijken. Daarvoor is echter wel een zekere mate van een ontwrichting nodig om voldoende reflectie te genereren en dat actoren in staat zijn om het verleden, heden en toekomst succesvol te reconstrueren en te integreren in de dagelijkse praktijk.

Op basis van deze resultaten en gebruikte perspectieven wordt bijgedragen aan de innovatie- en in het bijzondere de IMP en S-as-P literatuur. Binnen de innovatiefliteratuur, omdat innoveren niet alleen uit bewust vooruitkijken en creativiteit bestaat, maar ook een ontwrichtingen impliceert van en werken aan bestaande structuren. De IMP, omdat de gekozen perspectieven en onderzoeken laten zien dat structurele en procesbenadering op relatie- en netwerkontwikkeling elkaar niet hoeven uit te sluiten zolang ze vanuit eenzelfde ontologische basis bestudeerd worden. Hierdoor kunnen zowel stabilité als ook de processen van verandering van business relaties en technologieontwikkeling binnen netwerken mogelijk beter begrepen en verklaard worden. De S-as-P, omdat strategieontwikkeling en de aanzet hiertoe niet alleen ‘des actors’ is, maar plaats heeft in concrete socio-materiële structuren en waarbij de reconstructie van tijd in relatie tot deze structuren essentieel is gebleken. Tot slot wordt er aandacht geschonken aan de managementimplicaties van het onderzoek. Een belangrijk implicatie is dat het geen zin heeft voor managers om ontwrichtingen te vermijden, maar dat het beter is adequaat te reageren, indien ze voorvallen, nu we weten welke cognitieve processen zich dan afspelen en de kansen die het biedt voor aanpassing van bestaande structuren en dus praktijkinnovatie. Een belangrijke beperking van dit onderzoek is dat het zich bij de keuze om structuur goed te begrijpen heeft toegespitst op actoren die ingebed zijn in reeds lang bestaande praktijken. Toekomstig onderzoek zou zich echter ook kunnen richten op hoe ondernemers, start-ups of innovatienetwerken zelf deze ontwrichtingen ondergaan in het ontwikkelen van nieuw praktijken in combinatie met het creëren van ontwrichtingen bij actoren in de markt als proces van creatieve destructie (Beckert, 1999).
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Appendices

Appendix A
Example of a questionnaire on level of the four capitals to key actors in each partner organization used for Chapter 2.

Appendix B
List of key actors and experts interviewed for Chapters 2, 3 and 4.

Appendix C
Visual map of the process supporting the case narrative for Chapter 3 and 4.

Appendix D
List of key actors and experts interviewed for Chapter 5

Appendix E
Interview protocol for understanding the practices of each ANV (agricultural association) used for Chapter 5

Appendix F
Interview protocol for understanding temporal work in light of the expected changes in the subsidy regime used for Chapter 5

Appendix G
Causal model of experiencing the degree of temporal work used for Chapter 5
## Appendix A

### 4S Questionnaire

<table>
<thead>
<tr>
<th>Name</th>
<th>BOB SNELL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function</td>
<td>TECHNICAL DIRECTOR / TOWNSEND LEATHER</td>
</tr>
</tbody>
</table>

### Scope / Strategy

#### Orientation towards Innovations

1. **Superiority in our organization prefer marketing from existing and successful introduced products and services**
   - SD: 1, D: 2, N: 3, A: 4, SA: 5

2. **Superiority in our organization prefer technological leadership and the development of new products and services**
   - SD: 1, D: 2, N: 3, A: 4, SA: 5

3. **Our organization is often the first in the industry with new products and services**
   - SD: 1, D: 2, N: 3, A: 4, SA: 5

#### Orientation towards Competitors:

4. **Our organization is reactive in actions of competitors**
   - SD: 1, D: 2, N: 3, A: 4, SA: 5

5. **Our organization stays out rivalry with competitors**
   - SD: 1, D: 2, N: 3, A: 4, SA: 5

6. **We know a lot of competitors and their strategies and keep this information up to date**
   - SD: 1, D: 2, N: 3, A: 4, SA: 5

7. **Our strategy is also based on information about competitors**
   - SD: 1, D: 2, N: 3, A: 4, SA: 5

8. **Our organization works closely with some of our competitors (benchmark, joint developments, etc.)**
   - SD: 1, D: 2, N: 3, A: 4, SA: 5

#### Orientation towards Suppliers:

9. **We know the strategic direction of our most important suppliers**
   - SD: 1, D: 2, N: 3, A: 4, SA: 5

10. **Our suppliers prefer us to develop new products with**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

#### Orientation towards Alliance Partners:

11. **We know which partners in industry (suppliers, sub contractors, customers, competitors) might be potential alliance partners**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

12. **A common vision is the most important issue in an alliance**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

13. **The goals of our firm is aligned with the goals of our alliance (s)**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

#### Orientation towards Customers:

14. **We are market oriented**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

15. **Our sales philosophy is based on relationship and relation instead of transaction of goods and services**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

16. **Our sales goals are based on relational performance indicators instead of transactional indicators**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

17. **We know the strategic direction of our most important customers**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

18. **We know how satisfied our customers are about products and services**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

19. **We involve customers in our organizational changes when it might affect them**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

20. **We defined clear product market combinations**
    - SD: 1, D: 2, N: 3, A: 4, SA: 5

**Legend:**
- SD = strongly disagree
- D = disagree
- N = neutral
- A = agree
- SA = strongly agree
<p>| | | | | | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>1. On department level, we stress department goals instead of organisation goals</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>2. Organization strategy is aligned with strategies of department</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>3. Every manager understands how every organization member can contribute to customer value</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>4. Knowledge and information sharing between departments take place on regular basis</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>5. Departments working closely to fulfill customer needs (e.g., marketing – sales / research and development / operations / controlling)</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>6. Difficulties in alignment between marketing and sales and other departments occur in our organization on regular basis</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>7. Different departments in our organization working closely in NPD projects (new product development)</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>8. We share positive and negative experiences with customers in our organization</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>9. Customer data is accessible for every organization member</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>10. Members of our organization know which product characteristics contribute to customer value</td>
<td>SD</td>
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<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>11. The information systems provide sufficient customer data to base marketing decisions on</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>12. We organize teams prior to important customer requests or changes</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>13. We have systems to ensure competencies on organisation, department, and member level</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>14. Our competencies are sufficient to meet customer requirements</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>15. Our competencies are aligned with the purpose and goals of our alliance partners</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
<tr>
<td>16. Members of the organization know the organisation’s vision and can explain the direction the organisation is heading</td>
<td>SD</td>
<td>1</td>
<td>D</td>
<td>2</td>
<td>N</td>
</tr>
</tbody>
</table>

SD = strongly disagree
D = disagree
N = neutral
A = agree
SA = strongly agree
### 4S QUESTIONNAIRE

**Name:** Bob Snell  
**Function:** Technical Director / Townsend Leather

<table>
<thead>
<tr>
<th>Scale / economic</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. we know which customer contributes to the highest gross margin</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. we know which product groups perform well and which one not in terms of profit</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. we know how customer financial (margins) performance has developed</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. we are always informed about price changes of raw material, chemical supplies, and money (Interest)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. we know our failure costs and what causes them (in operations)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. we maintain systems to observe profit/loss impact of specific investments</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. we have a detailed operations plan (sales and production plan) and manage this plan throughout the year</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. we set performance indicators on every department process and sub-processes</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. we have a balanced product/service portfolio related to product life cycle to assure future and profitable business</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>10. we know the effect of corrective measures after failure (Internal) or rejection (External)</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>11. we execute internal quality audits on regular bases</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>12. we have quality improvements plans installed as a result of the plan/go check/set circle</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>13. we audit our suppliers on regular bases and discuss the results and require for corrective measures if necessary</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>14. our primary processes are connected with customer processes (e.g., electronic data interchange, E-Invoicing, warehousing) to improve efficiency</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

**Scale Key:**  
- SD = strongly disagree  
- D = disagree  
- N = neutral  
- A = agree  
- SA = strongly agree
<table>
<thead>
<tr>
<th>Social / interaction</th>
<th>Scale</th>
<th>SD</th>
<th>D</th>
<th>N</th>
<th>A</th>
<th>SA</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. the stability of contact persons in an alliance is a key element in preventing problems</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>2. the stability of contact persons in a customer relation is a key element in preventing problems</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>3. trust is an important threshold in the extent to which information is exchanged between customers, alliance partners and potential partners</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>4. we set up an organized interface to our important customers with some selected members of the organization</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>5. personal relations are important in customer relationships</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>6. members of our R&amp;D department have contact with suppliers and customers to sense new product/service opportunities</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>7. managers of different departments visit customers on regular basis</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>8. our CEO maintains contacts on executive level with important customers, suppliers and alliance partners</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
<tr>
<td>9. we map, discuss and address all the inter-organizational contacts with boundary spanners (the members who are functionally in contact with customers, suppliers, competitors, potential customers etc)</td>
<td></td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>

Your relevant business networks:

10. how many persons do you know in suppliers (banks, raw material, chemical, sub contractor, government authorities in total?) (e.g. purchasers, engineers, executives from hide suppliers, chemicals, bank, public institutions etc) | 100 - 300 |
11. how many persons do you know in customer organizations? (e.g. purchasers, engineers, executives, designers of furniture and aviation industry) | 100 - 300 |
12. how many persons do you know in connected alliance firms and partnerships and competitors? | 100 - 200 |
13. I maintain my business network by contacting members from time to time, even there is no particular occasion | 1  | 2 | 3 | 4 | 5  |
14. from time to time I am attending network opportunities (congresses, fairs, business meetings, symposia, trade organizations: e.g. catance) | 1  | 2 | 3 | 4 | 5  |

SD = strongly disagree
D = disagree
N = neutral
A = agree
SA = strongly agree
Appendix B

List of key research participants (interviewees) for the purpose of chapter 2, 3 and 4.

<table>
<thead>
<tr>
<th>Dutch Leather Tannery (Hulshof)</th>
<th>US Leather Tannery (Townsend USA)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name</strong></td>
<td><strong>Role</strong></td>
</tr>
<tr>
<td>Herman Hulshof</td>
<td>CEO/Owner</td>
</tr>
<tr>
<td>George</td>
<td>R&amp;D</td>
</tr>
<tr>
<td>Henk van Leussen</td>
<td>Sales manager</td>
</tr>
<tr>
<td>Andre Wolkorte</td>
<td>R&amp;D</td>
</tr>
<tr>
<td>Pim Appelman</td>
<td>Sales</td>
</tr>
<tr>
<td>Arnold Veldhuis</td>
<td>Production manager</td>
</tr>
</tbody>
</table>
Appendix C

Visual map of the process supporting the case narrative in chapter 3 and 4.
## Appendix D

List of research participants (interviewees) for the purpose of chapter 5.

<table>
<thead>
<tr>
<th>Organisatie</th>
<th>Naam</th>
<th>Rol in project</th>
<th>Tel. nr</th>
<th>e-mail</th>
<th>Locatie</th>
</tr>
</thead>
<tbody>
<tr>
<td>Projectbureau Energie Duurzaam</td>
<td>Tonny Stoltenborg</td>
<td>bedenker concept/Initiator project</td>
<td>0543-477629 / 06-108700 85</td>
<td><a href="mailto:info@energieduurzaam.nl">info@energieduurzaam.nl</a></td>
<td>Aalten, Bilderdijkstra at 37</td>
</tr>
<tr>
<td>Gemeente Berkelland</td>
<td>Carlos Huijser</td>
<td>Bemiddelaar bij aanvraag subsidie Euregio/ lid stuurgroep namens gemeenten</td>
<td>0545-250250</td>
<td><a href="mailto:c.huijser@gemeenteberkelland.nl">c.huijser@gemeenteberkelland.nl</a></td>
<td>Gemeentehuis Borculo</td>
</tr>
<tr>
<td>Natuurlijk Platteland Nederland</td>
<td>Jos Roemaat</td>
<td>lid stuurgroep</td>
<td>06-513804 35</td>
<td><a href="mailto:Jurmaatinfo@online.nl">Jurmaatinfo@online.nl</a></td>
<td>Bastille, VGZ 3</td>
</tr>
<tr>
<td>Natuurlijk Platteland Oost</td>
<td>Jacques Duivenvoorden</td>
<td>Coördinator namens cluster (samenwerkende ANV's)</td>
<td>06-499232 93</td>
<td><a href="mailto:info@natuurlijkplattelandoost.nl">info@natuurlijkplattelandoost.nl</a>; <a href="mailto:jac.duivenvoorden@hetnet.nl">jac.duivenvoorden@hetnet.nl</a></td>
<td>Enzerinkweg 10, Vorden</td>
</tr>
<tr>
<td>VAN Berkel&amp;Slinge</td>
<td>Wilfried Klein Gunnewiek</td>
<td>ANV-coördinator/projectdeelnemer</td>
<td>0545-477587</td>
<td><a href="mailto:info@vanberkelenslinge.nl">info@vanberkelenslinge.nl</a></td>
<td>donderdag 't Bredeke 10, Eibergen</td>
</tr>
<tr>
<td>ANV 't Onderholt</td>
<td>Wilfried Berendsen</td>
<td>ANV-coördinator/projectdeelnemer</td>
<td>06-532690 77</td>
<td><a href="mailto:info@onderholt.nl">info@onderholt.nl</a></td>
<td>Enzerinkweg 10, Vorden</td>
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<tr>
<td>PAN</td>
<td>Jan Stronks</td>
<td>ANV-coördinator/projectdeelnemer</td>
<td>06-224690 09</td>
<td><a href="mailto:janstronks@staringadvies.nl">janstronks@staringadvies.nl</a></td>
<td>Winterswijk-Meddo, Geldereschweg 21</td>
</tr>
<tr>
<td>Gemeente Bronckhorst</td>
<td>Erik Mol</td>
<td>Voorzitter werkgroep biomassa klimaatagenda</td>
<td>0575-750250</td>
<td>Mol, Erik <a href="mailto:E.Mol@Bronckhorst.nl">E.Mol@Bronckhorst.nl</a></td>
<td>Elderinkweg 2, Hengelo (Gld.)</td>
</tr>
<tr>
<td>Euregio</td>
<td>Peter Seitz</td>
<td>Contactpersoon/bemiddelaar bij subsidieaanvraag</td>
<td>053-460511 5</td>
<td><a href="mailto:p.seitz@euregio.de">p.seitz@euregio.de</a></td>
<td>Enschederstraas 363, Gronau</td>
</tr>
<tr>
<td>Vleeskuikenbe drijf Schieven</td>
<td>Dick Schieven</td>
<td>Afnemer houtsnippers voor cv-ketel</td>
<td>0544-352131 / 06-270830 77</td>
<td><a href="mailto:dick.schieven@hetnet.nl">dick.schieven@hetnet.nl</a></td>
<td>Grobbenweg 4, Zieuwent</td>
</tr>
</tbody>
</table>
Appendix E

Interview protocol for understanding each ANV’s practice (coordinator, chairman)

1. Practice history

When established?
Why established?
Consistent or drastic changes in the past?
Experienced with new kind of practices in the past? (i.e. commercializing wood material like biomass plant material?)

2. Today’s practice ends

What is basically realized by the practice? (good landscape work, environmental orderliness)

3. Standards of excellence

What is regarded as effective, normal or abnormal, and acceptable or unacceptable in this practice?
(Social goals or profit seeking, professional standards or amateurism, exploitation of environment or sustainable)

4. Material arrangements

What kind of technology is used? (workforces, machines, tools, knowledge)
Environmental circumstances (Level of biodiversity, scarcity of plant material)
How embedded in the community (in terms of contacts with local policy makers, schools etc.)
Appendix F

Interview protocol for understanding temporal work at each ANV (coordinator, chairmen)

Familiarity with the expected changes in the subsidy regime in 2015 (Gemeenschappelijk landbouwbeleid)

Involvement in implementing the changes in ongoing practices (role)

**Present**

Level of temporal work:

To what extent does this change impact the practice today?

(i.e., internal meetings, project groups, collaboration in cluster in order to understand the consequences of the expected changes in 2015)

**Past**

To what extent is there a reliance on past experience in coping with changes?

What worked in the past and will still work in the future?

**Future**

How should the practice change to match the expected future changes?

Considered the adoption of different practices? (i.e. entrepreneurial, adopting professional standards, collaboration)

Any great difficulties foreseen in innovating present practice to match future requirements?
Appendix G

Causal model degree of temporal work

(Practical evaluative ability of actors, Emirbayer & Mische, 1998)