The fast and the furious: The role of entrainment in controlled inter-organizational relationship transformation

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ABSTRACT

Drawing on theories of relational exchange and strategic change, this paper studies the role of entrainment in controlled, accelerated inter-organizational relationship transformation. By entrainment is understood the managed pacing, timing and sequencing of change initiatives. A longitudinal study of a retail buyer's attempts to control the transformation of three arm's length supplier relationships into more collaborative relationships is performed. These largely thwarted attempts are characterized by three paradoxes: (1) Attempts to force the pace of change leads to clashes when change subjects are unable to acquaint themselves with their counterparts or develop capabilities needed to collaborate. Reducing the pace, however, may lead to loss of momentum and enthusiasm. (2) Sequencing of change activities is a challenge to change agents as attempts to change relationship structures rely on developments in relationship atmosphere, which in turn may not materialize without a clear path towards new structures. (3) A focus on quick gains to generate short-term change momentum means that the relationship is not challenged by demanding activities yielding more substantial rewards and change momentum in the long run. These paradoxes lead us to conclude that accelerated, controlled relationship transformation is subject to diseconomies of time compression as well as diseconomies of time expansion.

1. Introduction

A large number of studies on inter-organizational control find that certain forms of control are a better strategic fit with certain types of buyer-supplier relationships (e.g., van der Meer-Kooistra and Vosselman, 2000; Anderson and Dekker, 2005; Cooper and Slagmulder, 2004). Such cross-sectional comparisons of equilibrium states, however, offer little explanation for how forms of control change as relationships develop. A second set of studies addresses this issue, examining how management control practices change as relationships become increasingly collaborative (e.g., Langfield-Smith and Smith, 2003; Langfield-Smith, 2008; Vélez et al., 2008; Vosselman and van der Meer-Kooistra, 2009). Particular emphasis is placed on the formation of a trusting atmosphere (Emsley and Kidon, 2007; Caglio and Ditillo, 2008; Minnaar et al., 2017), allowing buyers to dispense with the market-based controls associated with more remote relationships (Anderson et al., 2017). Studies in the relationship/control interface emphasize the cumulative nature of this process; as mutually beneficial control mechanisms are implemented, firms gradually develop confidence in one another's capabilities and behaviours, enabling new

forms of control (Tomkins, 2001; Vélez et al., 2008; Coletti et al., 2005; Caglio and Ditillo, 2012).

The management control literature is fairly silent on how the process of purposefully creating a collaborative buyer-supplier relationship is *controlled* (cf., Varoutsa and Scapens, 2015), however, and the question of which initiatives managers take to direct relationship development is left largely unanswered. Indeed, in much of the control literature, relationship development is implicitly presented as an evolutionary process of emergent interaction rather than a process with strategic direction. This contrasts with a small body of literature in the business marketing field focused on planned buyer-supplier relationship transformation (Spekman and Carraway, 2006). In such a process, parties set a goal to transform their existing relationship within a certain timeframe. A planned, or controlled, transformation process thus implies change accelerated beyond the pace at which the relationship may naturally evolve (cf., Garcia-Canal et al., 2002). Accelerating change may, however, spur conflicts as perceptions of the appropriate pace and timing of change activities may differ between parties whose goals, capabilities, resources and organizational structures do not necessarily align. Therefore, the ability to manage the temporal dimension
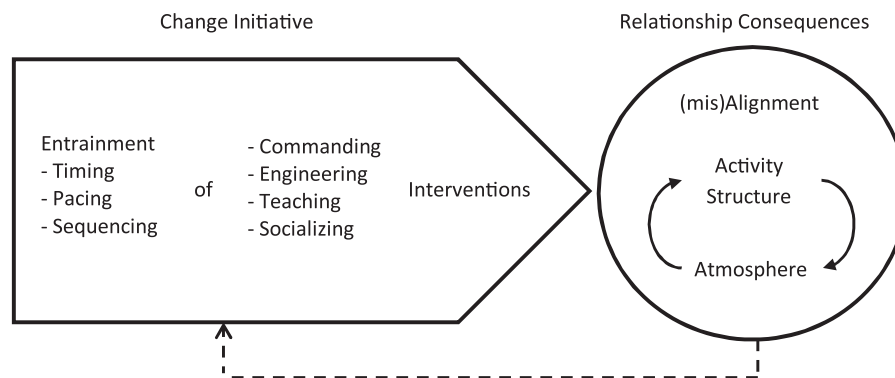

Fig. 1. Conceptual model.

of change – often termed entrainment (e.g., Ancona and Chong, 1996; Standifer and Bluedorn, 2006) – may be central to the success of controlled relationship transformation. Entrainment is, however, given little attention in inter-organizational control research. Even when lifecycle or process models illustrate relationship changes (e.g., Tomkins, 2001; Vélez et al., 2008), attempts to manage the time scales of change processes and their constituent activities are not examined. Therefore, the purpose of our research is *to study challenges to the entrainment of change activities involved in controlled buyer-supplier relationship transformation*.

By pursuing this purpose, we address Burns' (2014:74) concern that "*Temporality matters significantly in organisational life, including management accounting, yet the literature continues to be dominated by 'static' approaches*". We also follow Burns and Scapens' (2000) suggestion that management control research should investigate how organizations move between states rather than merely focusing on equilibrium states. More specifically, we address these concerns by identifying central paradoxes in the management of time during controlled relationship transformation processes. Extant research on inter-organizational control also mainly examines cases in which relationships and corresponding control systems are in equilibrium (e.g., Cooper and Slagmulder, 2004; Langfield-Smith and Smith, 2003; Langfield-Smith, 2008; Vélez et al., 2008). In combination with the presumption that firms should collaborate (Free, 2008; Mouritsen and Thrane, 2006), this bias may be responsible for a somewhat rose-tinted image of inter-organizational relationships and control in some studies. Adopting a contrary approach, we investigate a retail buyer's partly thwarted attempts to transform three relationships, cases where entrainment is a source of conflict. This empirically grounded research illustrates how inter-organizational change processes can simultaneously be characterized by positive and negative developments in different arenas. In contrast to extant research in the control/relationship interface, we also do not primarily examine the introduction of control mechanisms. Instead, we explore attempts made to control relationship *development* (cf., Varoutsa and Scapens, 2015), thereby adopting a broader approach to control than the administrative tools often studied in management accounting research (cf., van der Meer-Kooistra and Scapens, 2008). In doing so, we illustrate how traditional administrative tools can complement other mechanisms for controlling change.

In the following section we present a framework of entrainment in relationship transformation. Our research method is addressed in section three and we describe and analyse case findings in sections four and five. The findings of a cumulative case analysis are discussed in section six while contributions are presented in section seven.

2. Frame of reference – Entrainment and relationship transformation

With its earliest known use in 1568, entrainment is an established concept in the fields of biology and physics where it denotes efforts "*to*

determine or modify the phase or period of [a phenomenon]" (Merriam Webster). The term is also widely used in the social sciences, in which it commonly represents the "*synchronization of the tempo and/or two or more activities in a system*" (Pérez-Nordtvedt et al., 2008:1). In a management context, entrainment represents a strategic choice to accelerate, decelerate, postpone or advance change activities to align with the abilities of an organization to undergo change (cf., Zajac et al., 2000). Such efforts to achieve "temporal fit" are central to controlled change, as "*most of the predictive qualities associated with entrainment seem to assume some loss of efficiency or effectiveness when cycles are "out of synch*" (Pérez-Nordtvedt et al., 2008:5).

Following the Relevance Lost debate and Hopwood's (1987:207) often-cited observation that "*very little is known of the processes of accounting change*", management accounting and change has been the subject of extensive research (Modell, 2007; Burns and Vaivio, 2001), particularly the implementation of new management accounting practices (e.g., Shields and Young, 1989; Gosselin, 1997). Although some studies are concerned with transitions between equilibrium states (e.g., Bromwich and Bhimani, 1989; Burns and Scapens, 2000) and stages in implementation processes (e.g., Innes and Mitchell, 1990; Krumwiede, 1998), they examine intra-organizational change rather than relationship development. In developing a framework of inter-organizational relationship transformation we therefore look outside of the accounting field at relational exchange theory (RET), which focuses on processes of interaction occurring between organizations (Dyer and Singh, 1998). Management accounting research also does not engage with entrainment. Although some research on accounting and change does address temporality (e.g., Burns and Scapens, 2000) and in particular what accelerates and decelerates implementation processes (e.g., Kasurinen, 2002; Cobb et al., 1995), time *management* is not a primary concern. We therefore combine the RET framework with insights drawn from the intra-organizational strategy literature, in which controlled change and entrainment have received considerable attention (e.g., Ancona et al., 2001). These frameworks generate a conceptual model (Fig. 1).

2.1. Relational exchange theory

Relational exchange theory stresses that inter-organizational exchanges must be understood in the context of the buyer-supplier relationships where they occur (Johanson and Mattsson, 1987; Morgan and Hunt, 1994). It also emphasizes that relationships are developed differently depending on the exchange activities they are intended to enable (Lambe et al., 2001; Spekman and Carraway, 2006). When supply chain efficiencies can be achieved through joint cost management, when products or processes involve substantial investment specificities or when product shortages and poor quality levels may have severe consequences, buyers often seek to develop collaborative relationships (Wilson, 1995). Such arrangements tend to be long-term-oriented and characterized by synergetic rewards that emerge over time (Anderson and Narus, 1990). When exchange risk and the potential for

synergy are low, on the other hand, buying firms may prefer transactional relationships through which vendors are subjected to stronger market pressure, representing a short-term orientation (Agndal and Nilsson, 2010).

An inter-organizational relationship can be analysed by considering its *activity structure* (cf., Hakansson and Snehota, 1995) and *atmosphere* (Hakansson, 1982). *Activity structure* refers to the allocation and integration of activities between parties. By answering the question of "who does what?", it effectively defines the purpose of a given relationship (Christopher, 2000). In the development of a collaborative relationship, parties strive to achieve synergy by adapting to one another's processes and resources (Hakansson and Snehota, 1995; Styles et al., 2008; Wilson, 1995). Integration represents more profound adaptations such as closely linking or transferring activities between buyers and sellers (Schoenherr et al., 2015). While adaptations often represent sunk costs, the dis-integration of activities may involve making additional investments (Geyskens et al., 1996). In a transactional relationship, parties strive to avoid such lock-in effects.

Atmosphere refers to parties' postures towards one another and serves to enable a particular activity structure. Trust is a central concept in these discussions (Anderson & Narus, 1990; Styles et al., 2008) and RET scholars contend that trust is fundamental to organizational interaction (Hakansson, 1982; Morgan and Hunt, 1994; Lambe et al., 2001). In this context, trust is commonly understood as positive expectations regarding the integrity (goodwill) and abilities (competence) of a counterpart under conditions of risk (Zaheer et al., 1998). Organizational trust is, however, different from personal trust (Zaheer and Zaheer, 2006) and trust in an inter-organizational context denotes relational norms that govern interaction (Macneil, 1980). When both parties can confidently rely on one another to act in the interests of the relationship rather than behaving opportunistically or exploiting power asymmetries, this represents a high trust inter-organizational relationship based on norms of trust reciprocity (Anderson and Weitz, 1989). Some studies in the management control field caution against overstating organizational trust, however (Donada and Nogatchewsky, 2006; Free, 2008), arguing that firm interactions are often characterized by tensions between opportunism and benevolence.

Commitment is a second key aspect of atmosphere and represents the intent to maintain a relationship (Morgan and Hunt, 1994; Lambe et al., 2001). Commitment has "calculative" and "affective" components (Geyskens et al., 1996). While calculative commitment relates to direct economic benefits derived from a relationship, e.g., costs that may be incurred through termination, affective commitment is more difficult to express in monetary terms (Styles et al., 2008) and may involve aspirations for firms to grow together over the long term (Lambe et al., 2001). While a purely transactional relationship relies primarily on calculative commitment, enduring only when there are no apparent benefits to changing partners, a collaborative relationship is characterized by higher levels of affective commitment (Lambe et al., 2001).

We may expect a relationship's activity structure to be a close reflection of its atmosphere (Wilson, 1995), i.e., a highly adapted or integrated activity structure is unlikely in a low-trust and low-commitment relationship (Hallén et al., 1991). Rather, for firms to undertake adaptations and integration, a certain amount of a priori trust may be necessary. Adaptation and integration in themselves also signal commitment and can serve as important facets of trust-building (Morgan and Hunt, 1994; Schoenherr et al., 2015). The successful transformation of a transactional relationship into a collaborative one may consequently depend on the management of change activities such that they *align* integration, adaptation, trust, and commitment. In other words, initiatives to implement an activity structure associated with a collaborative relationship may fail unless the relationship's transactional atmosphere is simultaneously transformed, placing significant demands on entrainment, as the activity structure and atmosphere may partly rely on the execution of different change activities and paces of change (cf., Mintzberg and Westley, 1992).

2.2. Entrainment and intervention modes of controlled change

While RET is relatively silent on activities involved in controlled change and on associated concerns regarding entrainment, these are central themes in the *intra*-organizational strategic management field (Mintzberg et al., 1998). This literature broadly distinguishes between changes in formal structures and changes in intangible systems of shared beliefs, arguing that different mechanisms may be required to change different organizational elements (Beer and Nohria, 2000; Mintzberg and Westley, 1992; Romanelli and Tushman, 1994). In a central contribution – also underlying work on accounting and change (Lukka and Partanen, 2014) – Huy (2001) argues that four intervention mechanisms can accomplish organizational change. These are commanding, engineering, teaching, and socializing mechanisms. Each intervention relies on different temporal assumptions and is associated with changes in different organizational elements.

A *commanding* intervention has the nature of a traditional strategic planning and implementation process (Mintzberg et al., 1998; Van de Ven and Poole, 1995) where upper management initiates changes by issuing directives. Commanding interventions are implemented through the overt use of power, regulative processes and coercive pressure (DiMaggio and Powell, 1983). However, given the agency of subjects in the change process (cf., Clegg, 1989; Pfeffer, 1981), the ability to apply power may rely on negotiations occurring between key stakeholders (Lawrence et al., 2001). This approach is primarily effective to change structures and is applied when fast, quantifiable results are needed (Beer and Nohria, 2000). It can, however, generate resistance and veiled resentment when those whose contexts are subjected to change have limited say (Langley and Denis, 2006). External consultants may play a leading role in situational analysis and in designing change procedures (De Caluwé and Vermaak, 2002).

The main change agents in *engineering* interventions are task analysts and the main objects of change are work processes (Orlikowski, 1996; Weick and Quinn, 1999). Examples include the implementation of total quality management and business process re-engineering. Analysts play an important role in developing an understanding of current processes and may guide development. Changes can take some time to effectuate, however, and cognitive changes in individuals may not spur sustained or corporate-wide behavioural changes (Huy, 2001).

The purpose of intervention through *teaching* is to develop organizational capabilities rather than changing a particular practice (Goldstein, 1993; Kotter, 1996) and involves a gradual change of beliefs. The key change agent, e.g., a consultant, is also a participant in this guided learning approach, which is likely to show results in what Huy (2001) refers to as the moderately long term. Personal backgrounds and experiences are central to the process of making sense of and applying changes, and it may be difficult to undertake corporate-wide teaching interventions. This may in part be the case because teaching is often site-specific and may be rejected in other parts of an organization due to perceptions of uniqueness (Huy, 2001).

The *socializing* intervention involves attempts made to achieve organizational goals by changing social relationships and interaction patterns (Thompson, 2001). Socializing may constitute an integral part of other intervention mechanisms; as employees engage in problem-solving engineering activities, they also produce their social contexts (Powell et al., 2005). The aim is to develop organizational capabilities rather than to change structures or work processes. Improvements may take a long time to materialize and may emerge gradually (Huy, 2001). The change agent is a facilitator of this process, which may be difficult to monitor (Burgelman, 1996). Socializing may also generate fragmented organizations and subsequent struggles for resources between sub-groups. Like teaching interventions, its effects may be local in nature.

Entrainment takes centre stage in this framework and studies suggest that the mode by which change should be effected depends on the rate at which change must be achieved (Ancona et al., 2001; Pettigrew et al., 2001). As organizations possess a limited capacity to implement

simultaneous or extensive change initiatives, change may be associated with significant diseconomies of time compression (De Caluwé and Vermaak, 2002) where a forced pace falls short of an outcome that may be achieved with a more moderate pace (Eisenhardt and Martin, 2000; Shi and Prescott, 2012). At the same time, change processes that do not maintain a certain momentum or fulfil "*the expectation of continuing change*" (Kasurinen, 2002:324) risk experiencing inertia (Kelly and Amburgey, 1991; Ancona and Chong, 1996; Amburgey and Miner, 1992), Cobb et al. (1995) and Kasurinen (2002) arguing that the longer change takes to occur, the less successful it will be. Before passing the threshold at which an organization is overwhelmed by change initiatives, the likelihood of success may therefore decrease as the amount of time between change activities increases (Turner et al., 2013).

Entrainment is, however, not simply a question of managing the more obvious temporal element of *pace*. As large-scale change may involve several or all intervention mechanisms (Beer and Nohria, 2000; De Caluwé and Vermaak, 2002), the *sequencing* of interventions is critical (Huy, 2001). Sequencing can range from pure sequencing as one intervention mechanism is enacted at a time to parallel implementation whereby mechanisms are deployed simultaneously. Between these extremes, two or three mechanisms can be partly employed in parallel (Munck af Rosenschöld et al., 2014). *Timing*, i.e., the point in time at which a mechanism is deployed, is also a central issue for change agents (Albert, 1995; Munck af Rosenschöld et al., 2014). Managing timing and sequencing intervention mechanisms are therefore critical in creating a "rhythm" of change – "tempo entrainment" (McGrath et al., 1984) – whereby the process does not alienate change participants. In this vein, Burns and Scapens (2000:19) suggest that a mismatch between formal and informal change processes may spur "*tensions* [...] *in the form of anxiety and resistance, possibly leading to the failure of the implementation.*"

By offering a broad understanding of control mechanisms, the framework of intervention mechanisms and entrainment aligns with Varoutsa and Scapens' (2015:70) argument that in the study of inter-organizational relationships, "*broader forms of governance are likely to be required*" than the tools and techniques traditionally emphasized in management control research. When applying this framework to large-scale intra-organizational change processes, Chenhall and Euske (2007) found that simultaneously deploying different intervention modes did indeed cause conflicts. For one change process, information needed from the slower-paced but complex engineering intervention was unavailable to support the faster paced commanding mode, meaning that change was not successfully effectuated. For another change process, a teaching intervention was incompatible with an engineering mechanism, and thus the intended outcome also failed to materialize. Overall, values proved the most difficult to change and the results of Chenhall and Euske's (2007:630) study indicate that "*personal predispositions to the change initiative*" are central to success. In another application of Huy's (2001) framework, Lukka and Partanen (2014) argue that managerial interventions may face resistance from existing organizational ideologies. Unless managerial interventions simultaneously focus on weakening them, interventions may fail to implement new ideologies.

2.3. Linking change in intra- and inter-organizational contexts

Insights from intra-organizational change studies must be applied to an inter-organizational setting with some reservations. When a commanding approach is exercised to control a relationship rather than being enforced in a top-down manner, this is dependent on the buy-in of management in two organizations (Spekman and Carraway, 2006). Further, an engineering approach may rely on high levels of transparency. This may not create much concern in a hierarchical structure, but it can serve as a source of contention in buyer-supplier relationships (Agndal and Nilsson, 2010; Kajüter and Kulmala, 2005). A learning approach may need to mediate between different organizational ideologies (cf., Lukka and Partanen, 2014) and a socializing approach relies on interactions occurring between individuals whose personal

agendas may contradict, e.g., between sales and sourcing employees (Spekman and Carraway, 2006).

Despite these reservations, inter- and intra-organizational change processes may still exhibit similarities. From RET we conclude that a relationship has its own activity structure and atmosphere, which can be regarded as inter-organizational parallels to formal and informal systems described in the intra-organizational change literature (Beer and Nohria, 2000; Mintzberg and Westley, 1992). In an inter-organizational setting we may therefore expect to mainly find commanding and engineering interventions deployed in the design and implementation of adapted and integrated activity structures. Developments of relationship atmosphere, on the other hand, may be more closely tied to teaching and socializing interventions (Beer and Nohria, 2000). To exemplify, in intra-organizational change projects the capacity to apply power is partly dependent on negotiations held between key stakeholders. A "negotiated commanding" phase in which parties establish basic rules of interaction, incentive systems and other governance structures may in many ways resemble early stages of intra-organizational change. Further, engineering interventions involve the implementation of joint projects; teaching mechanisms allow parties to learn about capabilities and to develop trust in one another's competencies; socializing interventions may be important for building good-will trust, which tends to be closely tied to inter-personal relationships (Emsley and Kidon, 2007); affective commitment may be achieved as belief systems are impacted and as social relationships develop through teaching and socializing interventions. In many ways, the controlled development of inter-organizational relationships may thus resemble intra-organizational change.

2.4. Entrainment during controlled relationship transformation

Change initiatives in controlled relationship transformation can be expressed as commanding, engineering, teaching and socializing interventions (cf., Huy, 2001). We suggest that the entrainment, i.e., the timing, pacing and sequencing, of such interventions may have significant relationship consequences. We illustrate this general dynamic in a model (see Fig. 1).

Activity structures and atmospheres are closely linked (Hallén et al., 1991) and must develop in synchrony. This may occur naturally in emerging relationships that develop slowly in probing steps (Mahama and Chua, 2016). In accelerated, controlled transformation, however, tensions may arise as various intervention modes are deployed to affect different facets of a relationship. For example, time compression diseconomies (Dierickx and Cool, 1989) in trust formation may pose a threat to relationship transformation when rapidly needed changes in activity structures clash with slower changes in relationship atmospheres (cf., Dyer and Singh, 1998; Garcia-Canal et al., 2002). We therefore suggest that entrainment is a question of pacing a change initiative to not overwhelm organizational members while still maintaining change momentum. The likelihood of the success of an inter-organizational change initiative therefore perhaps best resembles an inverted U-shaped curve (cf., Shi and Prescott, 2012) with a relatively narrow window of opportunity available to effectuate change. As the nature of a relationship is transformed, we may also expect to find feedback loops to subsequent change initiatives (cf., Vélez et al., 2008). In other words, which intervention mechanisms are feasible, how they should be ordered and when they should be initiated are determined by the state of the relationship, which is in turn partly determined by the outcomes of earlier change initiatives (Amburgey and Miner, 1992). Entrainment decisions are thus as much a question of sequencing and timing as a question of pacing.

While existing research thus provides indications of the role of entrainment in controlled relationship change, especially regarding challenges potentially leading to "temporal misfit", our framework must still be considered tentative. We therefore perform empirical research that investigates the relevance of this general framework and that provides

Table 1
Interviewees, duration and number of interviews.

Position	Topics	Interview time	Interviews	Date
Interviews at JJ				
Former CPO	Background	1.5 h	1 + short telephone interview	2008-02
Current CPO	Background and project goals	1 h	1	2008-02
Process analyst	Design of tools and techniques	1.5 h	1 (joint)	2008-03
Analyst				
Analyst				
Supply chain development specialist	Design of tools and techniques	1 h	1	2008-09
Project manager/process analyst	Design of tools and techniques	1 h	1	2008-09
Private label manager	General industry background	30 m	1	2008-02
Private label purchaser	General industry background	1 h	1	2008-03
Sourcing manager Europe	Introduction to project	1 h	1	2008-09
Category expert/supply chain manager	Introduction to project	30 m	1	2009-06
Manager/not-for-sale products	Involved early in the project	45 m	1	2008-09
Project assistant	General information	15 m	1	2008-02
Project manager and category managers for categories of Kappa and Omega	Regular updates on project progress	10 h	6 + follow-up telephone interview	2008-02×2 2008-02 2009-02 2009-06 2010-02 2011-01
Manager for category of Sigma	Regular updates		3 (incl. above)	2008-09 2009-02 2010-02
Manager for category of Kappa	Updates	1 h	1	2009-02
Interviews with suppliers				
Sigma: Marketing manager	Project progress	1,5 h	2	2008-09 2009-06
Omega: Key account manager	Regular updates	2,5 h	3	2008-09 2009-06 2010-02
Omega: Project coordinator	Specific project	15 m	1	2009-06
Omega: Project coordinator	Specific project	15 m	1	2009-06
Kappa: CEO	Project progress	1,5 h	2	2008-09 2009-02
Kappa: Key account manager	Project progress	1,5 h	1	2009-06

illustrations that may help us better understand entrainment occurring during controlled inter-organizational relationship transformation.

3. Method

This study examines multiple cases where the relationship rather than the buyer or supplier is the unit of analysis. We therefore employed a research design that allowed us to investigate both parties' perspectives. We employed a multi-site approach by investigating relationships between one buyer and three of its suppliers, allowing us to maintain constancy with regard to the buyer's strategy while at the same time examining different implementation processes. We also employed a longitudinal approach (Powell et al., 2005), in particular for two purposes: "the existence interval" and "the observation interval". First, following the natural time-scale of change (Nelson and Winter, 1982) reveals central developments of the object of study (e.g., how trust changes over time). Second, how experiences of an event are communicated may depend on when an informant is questioned. While we initiated data collection six months to one year after the start of each relationship transformation we then followed developments for two and a half years in real time. This longitudinal approach is also tied to our conceptualization of the role of entrainment in relationship change. Effects of intervention mechanisms and their timing, pacing and sequencing may only materialize or be meaningfully observable after a period of time; e.g., while individual mechanisms may appear to quickly generate results, their long-term effects may be quite different particularly when observed in light of their interactions with other mechanisms.

Interviews provided our main primary data, and were complemented by internal documents (e.g., PowerPoint presentations and meeting agendas) and public information. We performed 26 interviews spanning approximately 30 h in total (see Table 1). All but three interviews were digitally recorded and transcribed. We guaranteed the anonymity of our respondents to ensure that important information was not withheld. Therefore, firm names are fictional and details regarding product categories and supply chain projects are left highly generalized in our case descriptions.

The analysis process was closely tied to the conceptualization of impacts of entrainment on the performance of controlled relationship transformation (Fig. 1). As is common of qualitative research, several iterative stages of analysis were performed (cf., Ahrens and Chapman, 2006). The chronology of each relationship was first established and deployments of intervention mechanisms and relationship effects (changes in atmospheres and activity structures or a lack thereof) were subsequently identified. Change performance in each case was then analysed in terms of entrainment, i.e., effects of the timing, pacing and sequencing of intervention mechanisms were related to relationship effects. In a cumulative case analysis, insights drawn from all three cases provided the basis for theory generation, which focused on entrainment paradoxes related to the timing, pacing and sequencing of intervention mechanisms.

To avoid repeating the change plan (largely similar across cases), intervention mechanisms are presented in Section 4. Summaries of the case descriptions and within-case analyses with a particular emphasis on intervention mechanisms and relationship effects are presented in Section 5. Section 6 presents cumulative case analyses and discussions of entrainment paradoxes.

Scapens (2004) argues that case research should be evaluated according to procedural reliability, contextual validity and transferability. Procedural reliability relates to methods of data collection, contextual validity concerns whether a study captures the phenomena examined, and transferability relates to the applicability of findings in other contexts. We

Table 2

Relationship transformation mechanisms.

Intervention mechanism	Actions	Purposes
Negotiated commanding	Top management meetings	-Generate understanding of aims -Establish joint organization -Establish resource commitment -Establish basis for incentive structures -Establish principles for sharing data
	Letter of intent	-Establish long-term commitment
Commanding	Assignment of roles	Establish new hierarchy by: -Assigning tasks and objectives -Clarifying accountability -Assigning mandate
	Design of general plan	-Clarify intended outcomes -Clarify overall time plan -Clarify expected interaction patterns -Communicate importance of project
Engineering	Brainstorming meetings Joint value chain analyses and planning meetings	-Identify joint projects -Evaluate feasibility of projects -Determine order of implementation -Develop detailed time plan -Determine outcome evaluation factors
	Joint development and implementation of projects	Achieve cost reduction by: -Integrating logistics -Adapting packaging and product features -Adapting production processes -Joint sourcing Increase revenue by: -Strategic category planning (new products, volumes) -Campaign coordination Further specify: -Time plan -Staffing -Adapt incentive model
	Development of processes and functions	-Adaptation of accounting systems for cost transparency -Develop new functions with specialized staff
Teaching	Staff education	-Consultants and dedicated JJ staff educated suppliers about work processes, analysis techniques etc. -Workshops at JJ to learn new work processes, analysis techniques, etc. -Development of collaboration-oriented mindset
	Brainstorming sessions Firm analyses under supervision of consultants	-Mutual learning about each other's goals -Guided learning about key processes and cost drivers -Guided learning about strengths and weaknesses, opportunities and threats
	Plant visits	-Hands-on understanding of production and logistics -Understanding of organizational culture
Socializing	Brainstorming sessions, workshops, project meetings Team-building exercises	-Create new, functional social relationships -Build social trust

safeguarded for procedural reliability by utilizing a semi-structured interview guide, although with adjustments made depending on respondents' roles. Most interviews were carried out by two researchers, limiting risks of oversight and misunderstanding. To ensure contextual (internal) validity, the study primarily dealt with events occurring relatively close in time (cf., Miles and Huberman, 1994). Extensive attempts were also made to verify second-hand accounts and we consistently strove to interview those involved in making decisions during real-time and retrospective periods of the study. This involved, e.g., interviewing a former vice president. Multiple respondents were interviewed on the same issues (i.e., interviews were held with buyers and suppliers but also with buyer representatives occupying different positions) to limit our reliance on single accounts. Key respondents subsequently commented on case descriptions. During analysis, two researchers performed initial analyses individually and then compared their findings to limit bias. Regarding the applicability of our findings to other contexts, we primarily strove to extend research by adopting a new perspective rather than pursuing literal transferability (Lukka and Kasanen, 1995).

4. Case findings part I – Relationship transformation mechanisms

In response to increasing levels of competition, Swedish retail chain

"JJ" decided to implement principles of retail category management.[1] This involved shifting purchasing volumes to suppliers where unit costs could be lowered through collaborative cost management projects. At JJ it was determined that such projects would primarily involve logistics (transportation, stocking), campaign coordination and other marketing activities, product development, packaging adaptation, and joint sourcing. Performing cost management projects together with suppliers, however, would involve forging closer and more transparent relationships than those fostered by the transactional orientation traditionally adopted by JJ in relation to its suppliers. A detailed plan for transforming relationships was therefore created with the help of external consultants. The plan's change activities can be understood in terms of commanding, engineering, teaching and socializing interventions (see Table 2).

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[1] Retail category management involves the identification of categories of products that share key characteristics, e.g., products that fulfill similar consumer needs. Each category is subsequently managed as a business unit with its own sales and profit targets. As a retailer strives to increase the profitability of a category, closer collaboration with key suppliers is often initiated.

4.1. Negotiated commanding interventions: Setting the stage

A first step towards enlisting the cooperation of a supplier would involve organising a series of upper management meetings to forge a joint understanding of project aims, to establish basic organizational mechanisms, to identify resource requirements and to determine adaptations to firms' internal organization. JJ also designed an incentive package to motivate suppliers. It was to be presented in written form and it specified a long-term orientation (including a 2–5 year contract), joint efforts to increase the supplier's volumes, openness from JJ's side regarding market information, and joint strategy development for the supplier's product category. In return, JJ expected the supplier to participate in "*joint planning - from objectives to follow up; common objectives – clear definitions and time frames for target goals; open discussions and commitment from all parties involved*" (Internal document). From its tool box, JJ had access to a number of accounting-related techniques such as cost breakdowns/open book accounting, value chain analysis, cost driver analysis and CVP analysis, which were to be performed jointly with suppliers. The incentive package and related expectations can be understood as a negotiated form of commanding intervention.

4.2. Commanding interventions: Relationship structures

Based on a generic organizational chart designed by JJ's consultants, a hierarchy was subsequently to be established for relationships whereby objectives, tasks, mandates and accountability were assigned to staff appointed by the two parties. Each relationship would involve a steering committee overseeing the work of a core team. The core team would in turn assign staff to a range of project groups. Project group staff would subsequently be complemented by sourcing, logistics, marketing, and category specialists as needed. According to JJ's main document, members of the work groups should offer "*competence*" and "*business sense*" and should "*be authorized to make decisions*". A process document would also be presented to staff members clarifying ways to work across firm boundaries to map cost drivers and how to identify, select and implement projects. Members of the two organizations were also to be presented with a general time plan.

4.3. Engineering interventions: Identifying, designing and implementing projects

Engineering interventions would be central to the relationship transformation project and would involve three main stages. First, a series of joint brainstorming sessions would identify projects through which there was potential to reduce costs and increase revenues. In a second phase, the feasibility and priority of these projects would be evaluated based on expected returns and difficulties of implementation. Joint value chain analyses based on shared cost (and related) data would be central to this work. An implementation plan would then be jointly produced where the order of individual projects and time allocated were specified. Allowances were made for the potential of earlier projects to lead to the identification of new projects, for changes in time schedules, and for the re-evaluation of the potential value of scheduled projects. The general model for sharing results of joint projects would also be adapted when necessary. As the exchange of cost data would be important in the analysis stage, it was also expected that JJ would assist suppliers in developing their accounting systems. Both organizations were also expected to adapt internal functions and to hire specialized staff when justified by the needs of individual projects.

4.4. Teaching interventions: Education and mutual learning

Staff at JJ and suppliers would be instructed in the new work processes. To educate suppliers, however, JJ needed to develop new competencies. According to the purchasing manager at the time, experienced process controllers, analysts and purchasers from industries with more developed relationship management practices were hired to "*support competence improvements* […] *and cross-functional cooperation*" and to "*provide fact-based decision support*". Complementing educational elements, it was expected that joint work would entail significant mutual learning. JJ's presentation material even stressed that "*cooperation will develop gradually in order to learn from one another's experiences*" and a category manager stressed that "[b]*y learning about one another's business practices, we find smarter ways to cooperate*". Consultants and newly hired analysts would also support guided learning processes whereby each firm's cost drivers would be scrutinized and SWOT analyses would be performed. Several respondents raised entrainment-related concerns, however, emphasizing that transformation may be slow to occur. One purchasing manager argued: "*This involves a change of mindset for people not only from our side but also among the suppliers. You cannot change that instantly*".

4.5. Socializing interventions: Ongoing social interaction

Although an important part of the intervention package, socialization was primarily built into commanding, engineering and teaching mechanisms. It was expected that during joint workshops and implementation projects, people of various levels would get to know and trust one another's competencies and intentions while developing commitment to the new mode of interaction. Dedicated team-building exercises were also planned for staff to socialize in non-work settings.

5. Case findings part II – Analyses of three relationship processes

As described by informants from both JJ and suppliers SIGMA, OMEGA and KAPPA, at the outset of the transformation project relations between the buying and supplying organizations were primarily transactional in nature with low levels of adaptation, integration and goodwill trust. This was partly a result of JJ's traditionally heavy-handed approach to price negotiations, through which JJ would exploit its position as one of the largest actors in its market. Simultaneously, SIGMA and OMEGA had been suppliers to JJ for decades and JJ's customers expected to see their brands in JJ's stores, to some extent balancing JJ's bargaining power. Supplier representatives still described price negotiations as "tough", and KAPPA, a more recently recruited supplier with a less influential brand name, had experienced the full force of JJ's price negotiators. In the hope of overcoming this legacy of transactional interactions, JJ recruited new purchasing staff with experience in developing collaborative buyer-supplier relationships in other industries. This proved central to the relationship transformation project, as neither JJ nor the three suppliers had much experience working in collaborative settings.

In the following three subsections we describe JJ's attempts to transform their relationships with SIGMA, OMEGA and KAPPA using the mechanisms outlined in the previous section. We break the transformation processes into episodes whereby case developments are described chronologically and are then analysed with an emphasis on intervention mechanisms, entrainment and relationship consequences.

5.1. The relationship with SIGMA

5.1.1. Initiation: Commanding interventions facilitated by social relationships and incentives

Employees of JJ and SIGMA had for some time discussed the benefits of coordinating logistics and campaigns, and once JJ had defined its new purchasing strategy, category staff suggested that SIGMA be one of the first suppliers to approach. Interviewees from both firms described initial negotiations as generating high expectations, and as a result a letter of intent was signed. Organizational structures, time plans and incentive schemes were discussed, and it was decided that profits generated from sales-driving activities performed by JJ would largely

benefit JJ while benefits from cost reduction activities, particularly when adding complementary competencies, would be shared equally. JJ would also share market information and one category manager explained that, *"Since a project like this is a long-term investment […], [w]e told them that 'we believe so much in this that we are giving you a three-year contract'."* Interviewees emphasized the importance of a relationship structure. *"The goal structure is the single most important factor to achieve success in this work since it clarifies what both parties want and expect from the collaboration"*, SIGMA's marketing manager commented. One category manager at JJ echoed this: *"We have to make joint plans and structures so that we know before we start investing where we are heading and that both agree"*. The analysis/workshop stage subsequently opened with team-building and joint brainstorming. Staff from JJ, the supplier and external analysts dissected manufacturing processes, product designs, purchasing activities, components and materials, space management schemes, administration, and logistics to determine the potential of proposed improvements.

Analysis. At this stage we can observe a mutual signalling of commitment to develop a more collaborative relationship. From the initial commanding intervention a governance structure was created and was likely facilitated by a pre-existing relationship between two mid-managers in roles central to the collaboration. Some socialization, which may otherwise have been more time-consuming, had thus taken place before plans were made to develop a governance structure. JJ's incentives, representing part of the governance structure implemented through the commanding intervention, may have played an important role in the commitment to accelerate relationship building, not least by creating enthusiasm.

5.1.2. The first projects: Simple interventions made at a fast pace

One supply chain manager noted that while several tempting projects could be pursued, they initially needed to focus on a few, as resources were limited and upper management expected to achieve quick results. One category manager at JJ stressed that projects should also focus on areas *"[…] where both I and my counterpart have an interest and competence"*. In particular, SIGMA's marketing manager argued that campaign coordination was central to collaboration, as substantial results – particularly increasing volumes – would materialize quickly with limited investments. It was therefore decided that the firms would initially focus on logistical processes and campaign coordination while projects requiring hiring and training new staff were postponed. Logistical coordination began with a single plant. One interviewee from JJ described this as *"a testing ground for the collaboration"* rather than just as a technical pilot project. This also served as a test of the organizational structure, involving planning and feedback sessions. Once the pilot project had been implemented, increasing numbers of plants were involved and interviewees commented that this greatly increased efficiency levels.

Analysis. To achieve quick results that may increase commitment, projects relying on relatively simple engineering interventions and not involving extensive teaching and socializing beyond the functional needs of each project were chosen. While a process of competence trust-building may have been initiated, projects requiring more goodwill trust were thus scheduled for later implementation, and while some adaptations were made in the realms of logistics and marketing, activity structures remained largely disintegrated. The potential for entrainment-related conflicts was thus limited by the scope of collaboration.

5.1.3. Deepening collaboration: Difficulties with managing parallel interventions

Initial successes with logistics projects and campaign coordination generated enthusiasm in both firms and the supplier's marketing manager noted that she could now show upper management that SIGMA was not wasting its resources. Although the two firms planned new joint projects, and specifically the adaptation of SIGMA's packaging and joint display design, one of JJ's category managers noted that

"there was still a certain cautious attitude among both parties". The supplier's marketing manager likewise commented that she was uncomfortable disclosing some information and that JJ would still need to *"earn my trust"* by delivering on promises. The joint development of product packaging also meant involving staff members described by a JJ representative as *"perhaps not always so informed about what we want to achieve"*. Problems therefore emerged, particularly as more demanding projects required SIGMA to disclose sensitive information. *"We have worked well together […], but we do find it frustrating that they do not want to* [be] *totally open"*, as one representative of JJ noted, arguing that by now the relationship should be ready to sustain more sensitive joint work. Supplier staff involved in price negotiations objected to cost data disclosure, however, which meant that some projects relating to product development needed to be abandoned. The Marketing Manager at SIGMA commented: *"It is not realistic to share everything; you never do that"*. One JJ category manager argued that this prevented the relationship from developing further and even disrupted ongoing projects: *"When we want to talk prices* [costs]*, they just close the door* [and] *the relationship in many areas returns to traditional roles and to a more cautious attitude"*. In spite of reservations regarding data sharing, senior staff at JJ and SIGMA's marketing manager emphasized that communication had continuously improved and that they now felt more familiar with one another's organizations. As the number of projects increased, however, SIGMA's marketing manager commented that cooperation was becoming more complex and she was no longer sure who was communicating with whom and what plans were being made. As more people became engaged in the collaboration, she also noted that *"we see consequences of people in our own organization who have goals that […] do not match what we want to achieve together* [with JJ]. *Then, there is a clash."*

Analysis. Implementing projects with quickly realizable outcomes may have created the positive momentum responsible for enthusiasm expressed by the interviewees. As attempts were made to continue implementing a more integrated activity structure, differences in perceptions regarding the atmosphere of the relationship became apparent, however. While buyer representatives argued that the relationship was ready for engineering interventions relying on data disclosure, supplier representatives did not yet feel that this was the case. Simultaneously, the increasing number of ongoing projects meant involving people who had not yet been part of teaching and socializing interventions. In other words, emerging activity structures "forced" unprepared individuals to cooperate. We can thus at this stage observe that, with an increasing number of parallel engineering interventions, there followed mounting barriers to entrain other interventions.

5.1.4. An end to collaboration: Effects of teaching and socializing interventions remained local

While individuals engaged in specific projects had participated in general orientations and project management education, other staff members had not, and interviewees from JJ expressed frustration with the actions of some of SIGMA's staff. As annual price revisions were initiated, SIGMA's marketing manager was also growing increasingly critical of JJ, arguing that their price negotiators acted against preserving the relationship. *"It's very difficult to anchor this way of thinking in a large organization like JJ"*, she commented. Simultaneously, category staff at JJ argued that SIGMA was becoming increasingly reluctant to participate in projects that did not clearly favour them. *"They only went in for their own benefit […]. There has to be give and take from both sides"*, one manager commented, arguing that SIGMA also only pursued projects with short-term results. The supplier's marketing manager presented a diverging account, arguing that JJ over-emphasized the potential of certain cost management projects. *"Let's just say that we have not seen all those gains they were talking about in the beginning"*, she commented, arguing that the firms would primarily benefit from sales driving activities. Increasingly hostile price negotiations culminated in a confrontation brought on by what JJ's category manager described as

an attempt to defraud JJ. In his words, *"We now are in full conflict with them […]"*. SIGMA's representatives declined further interviews, so we cannot present their views. Cooperation was, however, halted and JJ suspended SIGMA's preferred supplier status.

Analysis. In addition to frustration associated with managing multiple projects, price negotiations involving staff without experience from teaching and socializing interventions led both parties to further question one another's commitment and competence. Although governance structures established through commanding interventions created a framework for cooperation, a sufficiently collaborative atmosphere apparently had not formed to support joint work beyond less sensitive engineering interventions, and goodwill trust remained, for all appearances, low. Any positive momentum was thus not strong enough to overcome SIGMA's hesitation to engage in cost data sharing. At this stage, SIGMA's commitment can perhaps best be understood as calculative. JJ's attempts to continue the transformation process may even have reduced trust, another indication that relationship-wide changes in atmosphere had not materialized to support the activity structure established through commanding and engineering interventions. Apparently, the benefits of teaching and socializing – quite possibly even competence trust developed in engineering interventions – remained largely local with limited effects observed outside particular projects. The local and relatively slow nature of socializing and teaching interventions also meant that with growing levels of relationship complexity, these were increasingly out of pace and sequence with commanding and engineering interventions, and such failures of entrainment clearly challenged attempts made to transform the relationship.

5.2. The relationships with OMEGA

5.2.1. Initiation: Low trust and adapted commanding interventions

Prior to the relationship transformation project, OMEGA had been preferred supplier in its category for two years. Collaboration was limited to campaign coordination, however, and representatives of both parties expressed dissatisfaction with results. The supplier's key account manager commented that he nonetheless saw great potential in expanding collaboration to other areas but that OMEGA's upper management was apprehensive about the data disclosure that might follow. Aware of these reservations, at an initial meeting JJ offered written guarantees to not use any data against the supplier and proposed a renewed three-year contract. The meeting resulted in a letter of intent and the two management teams agreed on a governance structure.

Analysis. Early steps to integrate activity structures through campaign coordination had apparently not led to changes in relationship atmosphere and it appears as if goodwill trust was low at the outset. The governance structure created through the initial commanding intervention therefore included formal safeguards against opportunistic behaviours to enable relationship development.

5.2.2. The first projects: Interventions out of pace

Initial brainstorming sessions yielded many potential joint projects. An interviewee from JJ commented that the supplier's proposals were sometimes slightly naïve, however, and argued that OMEGA did not really understand JJ's operations. He therefore observed a challenge in educating the supplier's sales-focused staff on how to jointly perform projects. Problems subsequently arose in the earliest workshops; upper management staff at OMEGA did not participate and lower level staff were apprehensive about data sharing. According to a supply chain manager from JJ, this made it difficult to perform meaningful value chain analyses. A category manager at JJ then proposed a different approach: *"Demanding too much too early just blocks everything; then they say 'no' to everything […]. We realized that this is largely about building trust, and that has to be built in small steps"*. JJ's initial plan was therefore partly abandoned, and as a few simple campaign and logistics coordination projects were launched, revisions to the transformation plan

and governance structure were considered. In response to lingering reservations among OMEGA's upper management staff, the supplier's key account manager argued for projects that would generate quick results and that would involve low levels of risk. JJ agreed and as one category manager argued, *"[F]or us it was an opportunity to show that we had good intentions with this proposal"*. JJ also disclosed some of their plans for the supplier's category. *"[I] think that it was an important insight for them that we could be so open and talk about things we don't normally talk about",* he noted, also arguing that OMEGA had little experience collaborating with customers. JJ's internal analysts at this stage therefore engaged in renewed attempts to educate supplier representatives, an initiative welcomed by OMEGA's key account manager who expressed hopes that this would ensure greater internal understanding.

Analysis. While initial socialization and teaching interventions were well received, contractual safeguards concerning data usage were apparently not a substitute for goodwill trust, indicating that commanding interventions were out of pace with socializing and teaching interventions. In spite of commanding interventions failing to establish an enduring governance structure, engineering interventions were launched to legitimize OMEGA's participation in the project, but they generated confusion among operative staff. Initial commanding interventions were thus neither very successful in establishing supplier employees' mandates nor purposefully employed to support the formation of a collaborative atmosphere through engineering, teaching and socializing interventions. Rather than creating positive momentum in the integration of activity structures, initial commanding interventions appear to have had the opposite effect. Attempts were, however, made by JJ to better entrain seemingly out-of-pace intervention mechanisms by agreeing not to pursue projects requiring data sharing – i.e., projects requiring a more collaborative and trusting atmosphere – and by renewing teaching interventions to overcome what both parties regarded as OMEGA's lack of experience.

5.2.3. Deepening collaboration: Local progress with simple engineering interventions

As projects involving logistics and marketing campaigns were launched, the supplier's key account manager described the collaboration as highly disjointed with *"small tangible projects and products and people very focused on that particular task"*. Coordination across projects was limited and two interviewees commented that they did not know what was occurring outside of their particular projects. Several projects also suffered from staff turnover at the supplier's end. A category manager at JJ commented, *"In a way it means that we have to start all over again with the projects where staff have left"*. JJ's representatives also expressed dissatisfaction with the competence levels of certain supplier personnel, with one interviewee arguing for the allocation of more resources to training before employees joined project teams. Staff focused on campaign coordination and logistics reported that projects progressed well, however, even if the supplier's profitability remained poor. This was a cause for concern for individuals at OMEGA who had promoted the project internally, not least when the purposefulness of the collaboration was questioned by the foreign parent firm, which expected quick results to justify further investments. At this time, price negotiations also generated some tension, as noted by representatives of both parties. OMEGA's key account manager expressed that in these negotiations, his firm was not treated as a preferred supplier and questioned JJ's commitment.

Analysis. As collaboration progressed, low-risk projects in which OMEGA already possessed sufficient competence and for which only local socialization was required were launched. Relatively simple engineering interventions with quick payoffs involving low levels of adaption and integration of activity structures were also prioritized at the expense of engineering interventions involving matching with slower socializing and teaching interventions. The positive effects of existing engineering, teaching and socializing interventions also

apparently remained local. In other words, even if the atmosphere of individual projects may have become increasingly characterized by goodwill and competence trust, there appears to have been limited progress in transforming the relationship atmosphere as a whole, not least indicated by the continuing impatience of OMEGA's upper management team and by price negotiations where individuals from both JJ and OMEGA may have acted counter to long-term intentions for the relationship.

5.2.4. Renewed efforts: Matching intervention mechanisms and positive momentum

Aware of coordination problems arising from tentative plans and structures, the parties decided to clarify the roles of individual staff members and projects. Initiatives were made to involve experienced staff in each project and a new profit-sharing model was developed. A category manager at JJ reflected, "*[T]he fact that all projects have common goals and are followed up in a structured manner* [now] *means that we all know what to do, and that has built trust*". Early projects now also began to show results, which generated enthusiasm. "*It is much easier to start working on new activities now that we have all proven that we keep our word*", commented JJ's category manager. Tensions surrounding price negotiations were also easing. "*Pricing is always there just under the surface […] but it's not so confrontational now*", commented a project manager from JJ, arguing that the firms' representatives now knew each other better, were more experienced with collaboration, and could therefore manage such sensitive issues. New projects were subsequently initiated in areas of transportation equipment, product development, and customer research. These coincided with improved levels of profitability for the supplier as volumes increased, and the supplier's key account manager described how he was treated with more respect by JJ's staff. He also noted that "*JJ is very good at pushing us, and that's very good because it drives results. […] Now they also listen more to us and try to help us*".

Analysis. Re-defined governance structures, renewed teaching interventions and the allocation of more experienced staff to new projects to some extent enabled the firms to better utilize local advances made in engineering and socializing interventions. This matching of intervention mechanisms may have contributed to positive momentum in atmosphere development in contrast to earlier, more negative responses to JJ's initiatives. Price discussions also became less conflict-laden as staff had gained more experience, a consequence of teaching interventions and of more informal learning as indicated by one JJ interviewee. With increasing experience derived from socialization and teaching interventions, OMEGA was also at this time more receptive to commanding interventions. At this stage, intended changes in activity structures thus appear to have been better matched by developments in the relationship's atmosphere.

5.2.5. End to further collaboration: Little change momentum from local interventions

While positive momentum was generated within individual projects, in a later interview one JJ category manager commented that once the potential of low-risk projects had been realized and once JJ tried to proceed to projects requiring cost data sharing, the supplier remained reluctant. JJ's repeated requests to undertake joint value chain analyses subsequently resulted in a statement from OMEGA that its employees were not allowed to share cost data, fuelling perceptions at JJ that little potential remained as most uncontroversial projects had already been implemented. This loss of momentum and emerging disagreements led JJ to consider replacing OMEGA as preferred supplier in its category.

Analysis. A preference for quick pay-offs may have left little space for slower and more complex engineering interventions that could have provided greater returns in the long run. As indicated by one JJ interviewee, this meant that earlier momentum was not maintained. In this case, early attempts made to develop the relationship were seemingly

too challenging given the needs of slower engineering, teaching and socialization interventions to catch up with the structures implemented through the commanding mode. The more cautious attitude subsequently adopted may on the other hand not have been challenging enough, as goodwill trust that developed in individual projects failed to develop into relationship-wide behavioural norms.

5.3. The relationship with KAPPA

5.3.1. Initiation and initial projects: Interventions out of pace

According to a category manager at JJ, the smaller firm KAPPA was "*very fast, entrepreneurial and well managed*" and adept at cost management and logistics. When JJ proposed that KAPPA should participate in the transformation project, KAPPA's CEO was enthusiastic and the initial presentation resulted in the creation of a letter of intent. The CEO noted that JJ's approach involving external consultants and hiring new staff "*[…] felt very serious and we wanted to show a serious approach also*". He therefore decided that KAPPA would provide detailed cost data to support joint value chain analyses following from initial brainstorming sessions. Representatives of the firms subsequently decided to initiate the collaboration with uncomplicated projects involving joint sourcing and better logistical coordination. KAPPA's CEO in particular argued that this would allow the firms to get to know one another before attempting more comprehensive projects involving higher levels of integration, even if they were to yield greater results. KAPPA's decentralized organizational structure and quick decision-making style delegated to operative staff soon clashed with JJ's formal structures and hierarchical decision-making patterns, however. In the words of one JJ category manager, "*They are small and entrepreneurial and we are large and systematic and that has been a bit problematic. […] They have to learn that things take a bit more time at JJ […]*". Some staff members at KAPPA even saw the initial formal structures as counter-productive to efficient collaboration and expressed frustration with what they perceived as a slow and bureaucratic model.

Analysis. The initial commanding intervention was seemingly not very effective in establishing a long-term structure partly due to the inability of teaching and socializing interventions to bridge gaps in knowledge on one another's operations and differences in organizational culture. As employees began implementing engineering interventions, disagreements subsequently arose in spite of the relatively simple projects employed, generating seemingly unfavourable effects on the relationship atmosphere. JJ's general model for relationship transformation may thus not have been well suited to KAPPA's culture. The emphasis on simple engineering interventions also apparently failed to bridge this cultural gap.

5.3.2. Attempts made to deepen collaboration: Renewed efforts to match interventions

Aware of emerging problems, KAPPA's upper management team and purchasing managers at JJ met and decided to implement a 50/50 profit sharing model for efficiency improvements. This reflected a substantial shift from the initial incentive scheme. One category manager at JJ described this as "*very generous from our side*" but noted that it was important to "*get the relationship going*" as an incentive for KAPPA staff who were discouraged with what they perceived as slow progress. KAPPA in turn appointed a key account manager to facilitate interactions. He noted that the collaboration "*required more resources and man hours than expected*" and argued that while KAPPA did not have employees for all the projects proposed by JJ, KAPPA could also not risk hiring new staff. One JJ category manager similarly observed, "*it's their workload that holds us back more than any unwillingness to share data or to cooperate*". KAPPA's CEO responded by reducing the number of staff members involved in the collaboration with JJ to develop "*very good* [personal] *relations and fast cooperation*". The prioritization of a few projects through which better results could be achieve more quickly rather than assigning more staff to the collaboration would also place

less demands on KAPPA, the CEO argued. He also noted that JJ's formalities were still not fully accepted internally, but JJ had learnt that at KAPPA people were "*action-oriented*". Due to KAPPA's limited resources, this meant that some larger and slower projects were further postponed. At JJ this generated frustration and one category manager argued that KAPPA assigning so few staff members unnecessarily delayed projects in spite of KAPPA's desire to move quickly. He also noted that little could be gained from placing more pressure on KAPPA, however. "*We don't want to push them to do more even if* we [respondent's emphasis] *can see the potential*", he argued.

Analysis. To increase the pace of relationship transformation, the initial governance structure was modified through a negotiated commanding intervention and a new incentive structure was implemented, representing an attempt made to harmonize activity structures and the relationship atmosphere. At KAPPA, however, it was argued that acceptance and understanding of commanding interventions and the increasing pace of engineering interventions could best be achieved by reducing the number of people involved in teaching and socializing interventions. JJ's representatives, however, interpreted this as a reduced level of commitment. At this stage, the case thus exemplifies how rapid adaptations in governance structures achieved through commanding interventions may be insufficient to bridge organizational cultures, a process that may instead need to be matched with slower teaching and socializing interventions.

5.3.3. An end to further development: Effects of interventions remain local

Notwithstanding cultural clashes and frustrations with slow progress, some projects began to bear fruit. One JJ category manager described how logistics were better coordinated and how KAPPA's sourcing costs were reduced. KAPPA's key account manager argued that increasing sales and product range rationalization had also increased profitability. The small number of KAPPA staff members assigned to the project, however, meant that the CEO personally oversaw several projects. When he unexpectedly left KAPPA, one JJ category manager noted that "*a vacuum*" arose in the relationship. KAPPA's key account manager explained that they "*lost drive*" and that plans for more comprehensive projects were postponed. He also described how staff members became uncertain of what mandate they had to pursue projects. Therefore, collaboration in several ongoing projects slowed. Soon after the CEO left, KAPPA's key account manager also resigned and JJ's category manager commented that the relationship was hardly developing any longer. He even questioned the purpose of pursuing ongoing projects, as "[t]*here is no one there who makes any decisions right now*". Soon thereafter, KAPPA was sold, leading to internal reorganization. Some of KAPPA's employees involved in the relationship were reassigned and according to JJ's category manager the collaboration was halted.

Analysis. Structures established through commanding interventions were dependent on key individuals and had apparently not been anchored throughout KAPPA through teaching and socialization interventions; much of the socialization undertaken was also largely undone when key individuals left the supplier. The limited engineering interventions that had taken place also meant that activity structures had not been significantly integrated. Engineering interventions also involved relatively few staff members, and their effects remained largely local. It can thus be questioned whether any fundamental change in the atmosphere of the relationship had actually taken place; at the organizational level, commitment to the relationship remained low and trust was apparently tied to only a few individuals.

6. Cumulative case analysis and discussion

Relationship transformation involves the integration of activity structures and the concurrent development of a collaborative atmosphere. Such changes are controlled through the implementation of commanding, engineering, teaching and socializing intervention

mechanisms (cf., Huy, 2001). From an entrainment perspective, the challenges of balancing forces that propel and restrain the implementation of such interventions emerge clearly from our data. Cumulative insights derived from the three cases illustrate how the pacing, sequencing and timing of intervention mechanisms are characterized by inherent tensions or "paradoxes". By showing what entrainment means in practice, these insights extend the general understanding of entrainment provided by our conceptual model (Fig. 1).

Pacing refers to the speed with which transformation mechanisms are implemented (Standifer and Bluedorn, 2006; Huy, 2001). In all three cases, negotiated commanding interventions quickly established structures for cooperation. However, this in itself had a limited impact on the relationship atmosphere. Even when upper management committed their firms, the development of trust among individuals and units charged with performing change-related activities lagged behind. A collaborative relationship also presumes that one party considers the interests of the counterpart. This clearly involves a challenging and time-consuming change in mindset as demonstrated by the cases of SIGMA and OMEGA. Attempts made to accelerate change beyond the reallocation of relatively low-risk activities therefore backfired when changes in perceptions did not develop in parallel. This dynamic is recognized in strategic change studies (Huy, 2001; Eisenhardt and Martin, 2000) and to some extent in control studies (cf., Chenhall and Euske, 2007; Kajüter and Kulmala, 2005). We found that effects of socializing interventions not only emerged slowly, however, but were also largely localized to specific activities (cf., Mesquita, 2007) and were therefore not necessarily cumulative at the relationship level. The mismatch between the pace of commanding and socialization mechanisms was also accompanied with other temporal misfits. We particularly observed in the case of OMEGA how attempts made to force the pace of change backfired. Learning about the counterpart's operations, abilities and weaknesses, as well as the development of skills to engage in new forms of cooperation largely relied on combinations of time-consuming engineering and teaching interventions. Accelerating changes beyond the pace at which slower mechanisms can catch up with and support faster commanding interventions may thus be counterproductive to relationship transformation, which consequently appears to be associated with significant diseconomies of time compression. However, it may be similarly detrimental to proceed at too slow of a pace. As few examples of relationship transformation in the industry were available, this represented a situation characterized by relatively high levels of uncertainty. Therefore, the suppliers particularly wished to achieve results as fast as possible. In the case of SIGMA and OMEGA, this served to legitimize the collaboration in the eyes of impatient stakeholders. In the case of KAPPA, it was a concession to an action-oriented culture that generated a focus on quick results. In later stages in all three cases, operative staff similarly tired when results failed to materialize, and without momentum enthusiasm was difficult to maintain (cf., Turner et al., 2013; Kelly and Amburgey, 1991). In other words, while controlled relationship transformation appears to be subject to diseconomies of time compression relating to change subjects' abilities to absorb change initiatives, to develop capabilities needed to collaborate and to understand their counterparts (cf., Beer and Nohria, 2000; Pérez-Nordtvedt et al., 2008), diseconomies of time *expansion* mean that transformation may also stall when change initiatives are delayed or when results take too long to manifest. Controlled relationship transformation may therefore be characterized by an inherent paradox where the longer time required to match fast and slow intervention mechanisms so that they support the concurrent development of a collaborative atmosphere and adapted activity structure contrasts to a "need for speed".

Sequencing refers to the order in which intervention mechanisms are deployed (Munck af Rosenschöld et al., 2014; Huy, 2001). Previous studies point to risks inherent of attempting to change activity structures, i.e., entering new modes and realms of exchange, before the atmosphere permits (cf., Garcia-Canal et al., 2002; Dyer and Singh,

1998). Particularly in the cases of SIGMA and OMEGA, collaboration began with the initiation of relatively simple and uncontroversial projects in areas in which both parties possessed the required competencies and where values were less likely to clash. This allowed staff members to get to know one another under conditions of low risk. Some engineering interventions were thus implemented before others that would rely to a greater extent on prior teaching and socializing interventions. Projects perceived as too risky were also explicitly postponed and early on the parties engaged in few parallel projects to avoid draining resources, delaying returns and implementing overly complex control structures. As some structures also could not be forced, especially when high levels of cost data transparency were needed, it was argued in the case of OMEGA that their implementation would occur only when the need arose. Undertaking engineering interventions to jointly develop new activity structures also did not mean that all forms of interaction had changed as evidenced by discord observed between joint projects and price negotiations in two cases (OMEGA and SIGMA). Such frictions may have rested on a failure to teach new values to staff not directly involved in the engineering interventions. Attempting commanding and engineering interventions to change relationship activity structures before the atmosphere had developed sufficiently through socializing and teaching modes thus proved detrimental to overall relationship development. However, we also observed the opposite dynamic; a relationship atmosphere may not develop unless attempts are made to change activity structures. Particularly in the cases of SIGMA and OMEGA, once the commanding approach was used to create governance structures, these served as a foundation for socializing whereby organizational members could develop purposeful social relationships (cf., Coletti et al., 2005). In the case of KAPPA, interactions were downscaled for the same reason. The establishment of goals, responsibilities and activity allocation can thus have a stabilizing effect on collaboration (cf., Nelson and Winter, 1982), e.g., by enhancing predictability and signalling commitment. Furthermore, socializing without structures may be ineffective for relationship development. Similarly, without expanding the scope of collaboration, there may be no good examples that inspire parties to enter new arenas of interaction. The desire to remain on "safe ground", i.e., where little additional trust and commitment is needed, thus contrasts with deeper interactions characteristic of collaborative relationships. Commanding and engineering mechanisms may thus be needed to create a framework for socializing and teaching; conversely, without socializing and teaching, commanding and engineering mechanisms may face resistance. While this paradox may be characteristic of many relationship development processes, it may be particularly apparent in cases of controlled and accelerated transformation.

Timing relates to when a particular change activity is initiated and performed (Huy, 2001; McGrath et al., 1984). Such an activity can be performed too early or too late in relation to a particular window of opportunity (Albert, 1995), i.e., with more or less "temporal fit" (Turner et al., 2013). In all three cases, projects with immediate and tangible payoffs were prioritized to generate enthusiasm among staff and to justify the collaboration to upper management and other stakeholders concerned with how resources were prioritized. Relatively simple engineering interventions were therefore typically implemented early on in the change process. The need for "immediate gratification" (cf., Sterman et al., 1997) may, however, contrast with the more demanding joint activities needed to develop an increasingly collaborative atmosphere and with adapted activity structures that yield more substantial returns in the long term such as capability development. In all cases we found indications of how positive momentum generated by success abated quickly when not followed by appropriate new change initiatives within a fairly narrow window of opportunity (cf., Kelly and Amburgey, 1991). Picking only "low hanging fruit" at early stages may thus not create the same long-term momentum as undertaking more demanding tasks. Timing therefore involves balancing resources between simple and demanding tasks to generate a steady stream of

success over the long term.

On a more general level, while extant research on intra-organizational change allows us to link changes in activity structures to commanding and engineering intervention mechanisms and changes in atmosphere to teaching and socializing interventions, our empirical analyses hint at higher levels of complexity. Engineering interventions generate learning about capabilities and behaviours, thereby creating the foundations of a collaborative atmosphere. In the course of socialization, synergies are discovered and trigger changes in activity structures. Structures implemented through a commanding mode also provide parties with support and opportunities for social trust to develop into inter-organizational norms. Teaching interventions that change attitudes may also be necessary for sustainable changes in activity structures to occur. Intervention mechanisms of controlled change may thus impact relationship activity structures and atmospheres in more complex ways than indicated by some earlier studies.

7. Conclusion

Entrainment significantly impacts intra-organizational change performance (Shi and Prescott, 2012; Pérez-Nordtvedt et al., 2008). We propose and illustrate a similar effect on controlled inter-organizational change. Our findings primarily contribute to management control research engaging with relationship development processes and equilibrium states of relationship control.

While existing research on *relationship development processes* is primarily concerned with probing emergent change rather than with accelerated and controlled transformation, it does indicate that inter-organizational relationships may deepen when their atmosphere gradually develops in synchrony with the implementation of control tools (e.g., Varoutsa and Scapens, 2018; Veléz et al., 2007; Mouritsen and Thrane, 2006; Minnaar et al., 2017; Zahir-ul-Hassan et al., 2016). Such control tools are in effect part of the relationship's activity structure. When an atmosphere is not synchronized with control tools, however, implementation attempts may fail (cf., Kajüter and Kulmala, 2005; Free, 2008). We add to this scholarship by showing that when change is accelerated, the entrainment of change interventions becomes central to the synchronization of the relationship atmosphere and activity structure. Our research also shows that entrainment involves balancing forces that drive and restrain change activities, and we suggest that future studies on the implementation of inter-organizational control tools, as well as studies of relationship development processes, pay greater attention to the pacing, sequencing and timing of change activities, thereby challenging assumptions of temporal fit implicit in some inter-organizational control research. To complement extant research on the successful implementation of inter-organizational management controls (e.g., Mouritsen and Thrane, 2006; Langfield-Smith and Smith, 2003), future studies should also strive to establish a deeper understanding of the conditions under which relationship transformation can be fruitfully accelerated. As evidenced by our study, however, such research must be sensitive to the time-dependent nature of success and failure. What may be understood at one point as relationship dissonance may represent a movement towards relationship development and vice-versa.

Although largely silent on strategic initiatives to transform relationships, extant studies of *relationship development processes* do indicate that the implementation of management control tools represents a mechanism of relationship development (Tomkins, 2001; Veléz et al., 2007; Langfield-Smith, 2008; Varoutsa and Scapens, 2015; Seal et al., 2004). We extend this scholarship by regarding traditional control tools as one element of a broader range of mechanisms used to control relationship transformation, and find that change mechanisms comprising commanding, engineering, teaching and socializing interventions and their temporal properties interact in various ways. Thus, to better understand the relationship between control and inter-organizational change, future research should consider management control tools as

part of a package of change mechanisms rather than observing such tools in isolation. Doing so may, e.g., help us better understand the implementation of inter-organizational control tools such as open book accounting. Rather than attributing success (e.g., Mouritsen et al., 2001; Mouritsen and Thrane, 2006; Coletti et al., 2005; Muhama & Chua, 2016; Alenius et al., 2015) or failure (Kajüter and Kulmala, 2005; Free, 2008) to relationship atmospheres, perhaps the explanation lies in parties' abilities to entrain the package of change mechanisms to develop a relationship atmosphere that matches intended controls.

Drawing mainly on transaction cost economics, extant research on *equilibrium states* of control relates management control archetypes, mechanisms and tools (cf., Caglio and Ditillo, 2008) to relationship characteristics (Agndal and Nilsson, 2010; van der Meer-Kooistra and Vosselman, 2000; Anderson and Dekker, 2005). We contribute to this research by proposing that a relationship's control structure is not only a function of transaction uncertainty or asset specificity but also one of entrainment. That is, while some forms of control may involve greater challenges relating to the timing, pacing and sequencing of change interventions, others are easier to implement (cf., Pérez-Nordtvedt et al., 2008). In this vein, Phua et al. (2011) find that due to switching costs, it is more difficult to replace partners when controls are trust-based rather than market-based. We suggest that "switching time" or "entrainment costs" may also serve as an important component of such switching costs. However, future studies are presented with the challenge of establishing the relative importance of entrainment costs for the selection of relationship control archetypes, mechanisms and tools.

Moreover, our research is in contrast with the one-dimensional view of inter-organizational relationships dominating management control research. We show how relationships can be characterized by a multiplicity of simultaneous arenas with local effects of change initiatives; while some arenas may be in equilibrium others can simultaneously be discordant. Combining this "spatial" dimension with the "temporal" aspect of relationships (i.e., where cumulative interaction leads to relationship-wide change; e.g., Varoutsa and Scapens, 2015; Tomkins, 2001; Vélez et al., 2007) may deepen our understanding of relationship transformation dynamics. Future research may, e.g., examine the relationship between entrainment and the "width" (across arenas) and "depth" (within arenas) of relationship change, addressing, for instance, questions regarding conditions under which sustained transformation can be achieved at different time scales in different arenas within an inter-organizational relationship.

To conclude, while we have explored the effect of entrainment on controlled relationship transformation, factors such as organizational culture, resource limitations, relationship history, power relations and industry culture may also influence transformation processes and outcomes. Future research should attempt to establish the relative importance of such antecedents to successful controlled relationship transformation.

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