

# PROCESS RESEARCH IN BUSINESS NETWORKS – AN EVENT-BASED METHOD FOR QUALITATIVE ANALYSIS

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By

Maria N. K. Elo  
*Fachhochschule der Wirtschaft (FHDW)*  
*Bergisch Gladbach, Germany*  
*MNKElo@arcor.de*

Aino Halinen  
*Turku School of Economics*  
*Department of Marketing*  
*Rehtorinpellonkatu 3,*  
*20500 Turku, Finland*  
*aino.halinen-kaila@tse.fi*

Jan-Åke Törnroos  
*Åbo Akademi University, Finland*  
*jtornroo@abo.fi*

## Abstract

The purpose of the paper is to propose an event-based method for qualitative process analysis in business networks. Innovative methods that comply with the concept and phenomenon of inter-firm networks are urgently needed to create understanding of networks as processes. The paper develops an inductive, sensemaking approach to the study of process using the event concept as the key analytical device. A longitudinal case study on an internationalization process in a network context is presented and used as a laboratory for using and elaborating the event-based method. On the basis of the study findings, we put forward a number of methodological tools for conducting process analysis. A steering wheel of research that combines both retrospective and real-time analysis is suggested to identify key events in the process. An analytical scheme of three elements: influencing factors, critical events and consequent change, is put forward to create an understanding of network processes. And finally, the idea of an event trajectory is proposed for highlighting processual patterns of network change.

The paper portrays an alternative way to study development in a business network context and offers new analytical tools for conducting process research by using the event concept as a starting point. The method allows for the identification of events and intertwined processes from different levels of the network and the economy. We evaluate the advantages and disadvantages of the proposed method and draw implications for future network research.

**Keywords:** Process research, longitudinal methods, business networks, critical events, event trajectory

## INTRODUCTION

Business networks form a methodologically challenging object for research. The business network approach describes business markets through structures formed by inter-organizational relationships and processes that occur within that structure and ultimately create it (Ford & Håkansson, 2006). Various characteristics of networks increase complexity and thereby methodological difficulty: networks are *temporally and socially embedded structures* that always entail more than two actors (Halinen & Törnroos, 2005); they are formed of actors connected to each other through *direct and indirect relationships* (Easton, 1995); and as a result of interaction between business actors *networks are continuously evolving and changing* (Ford & Håkansson 2006). Moreover, processes that underlie network development are interconnected and take place at *multiple levels* where business actors, i.e. individuals, departments and firms as well as diverse organisations interact in connection to each other (Håkansson & Snehota, 1995; Ford, 2002). Hence, business network development involves *many intertwined processes*, which creates a further challenge for research.

Methodological tools that would be suitable for qualitative analysis of network processes are scarce. Organization and management researchers (Pettigrew, 1990; 1997; Van de Ven 1992; Langley, 1999), have made a significant contribution into the methodology of processual research in organizations, but it could be questioned whether the methods developed for the study of organizational processes can be directly applied to the study of networks of several organizations and relationships between them. Both the unit of analysis (organization vs. a network of organizations) and the unit of observation (individuals from a focal organization vs. individuals from several organizations) are potentially mistaken. The Industrial Network Approach (Håkansson & Snehota, 1995; Håkansson & Henders, 1995) has developed a strong process-laden theory of business networks, but has put forward only a few methodological tools for conducting empirical process research: Easton (1995) scrutinizes various types of longitudinal research in networks; Halinen and Törnroos (1995) distinguish between different longitudinal data collection methods and put forward the relational time concept to be used in developing theory; Hedaa and Törnroos (2008) offer an extensive analysis of events both as a theoretical and methodological tool for the study of network processes; and recently the network picture concept (Henneberg, Mouzas & Naudé, 2006; Ford & Redwood 2005) and related methodological tools, for instance, dottograms (Abrahamsen, Naudé & Henneberg, 2009) have been proposed to make sense of network change by both managers and researchers. Besides these contributions, there has been limited methodological support available for network researchers. It thus seems legitimate to argue that research on business networks is suffering from methodological weaknesses that potentially hinder its development and prevent researchers from tackling processes.

Researchers from a broad front have paid attention to an evident research gap related to network processes (Ford & Håkansson, 2006; Knoblen et al., 2006; Parkhe et al. 2006) and called for further research on the dynamics across different intra- and interorganizational levels in order to create understanding of network change (Brass et al. 2004; Provan et al 2007). For conducting multi-level process research in business networks researchers would need effective methods to trace and analyse processes. In order to create valid and reliable knowledge the methods should take into account the interconnected nature of business networks and investigate them longitudinally. They should also be flexible to enable identification of the various change forces at play in the multiple layers of networks. The way how methodological choices comply with the phenomenon under study, the chosen theoretical perspective and the assumptions of time has a crucial effect on the validity of the entire study and the relevance of its findings (Brinberg & McGrath, 1985; Halinen, 1998).

*In this paper we will propose an event-based method for the qualitative analysis of network processes.* A qualitative process research approach is adopted (e.g. Alasuutari, 1995;

Hinings, 1997; Langley, 1999) where the process is defined, according to Van de Ven (1992, 169) and Pettigrew (1997, 338) as “a sequence of individual and collective events, actions, and activities unfolding over time in context”. Qualitative process research provides an in-depth view of the process, inserting the research into a rich spatio-temporal setting (e.g. Perry, 1998). It also puts emphasis on the agency of individuals and organizations in creating the process and to events as descriptors of how things change, and are changed, over time.

The analysis of data is the most challenging phase of qualitative process research (Hinings, 1997). Only a few methods are available and a certain degree of creativity is always needed to conduct the analysis (Langley, 1999). For developing the event-based method we will examine two key issues: *firstly, how events can be used to detect and trace network processes over time and, secondly, how they can be used to create understanding of these processes.*

The study elaborates on a sense-making approach to events, where events are detected and defined along the empirical research process based on individual managers’ perceptions (see e.g. Hertz, 1998; Medlin, 2004). This view can be contrasted with a more deductive approach used for instance by Madhavan, Koka & Prescott (1998) or Dahlin (2007), who define the events of interest *a priori* and concentrate on events that are known to have an impact on the entire industry structure i.e. at the meso-level of the economy. The proposed approach takes a social constructionist view on network processes looking them as enacted reality from the perspective of individual managers (Weick, 1979). It examines the process from the micro perspective of an individual company and its key partners detecting events, however, from multiple levels of the economy. Instead of studying the change of cognitive structures represented by network pictures (Henneberg et al., 2006), the proposed approach concentrates on the events as the constituent parts of change process. The paper makes a methodological contribution to qualitative process research on business networks by proposing a new method for making sense of process data (cf. Langley, 1999).

The paper is organised as follows. First, it provides a literature review of the event concept and its use in qualitative analysis. Secondly, an empirical case study is presented in which the event-based method is tried out and developed. Thirdly, an event-based method including a number of tools for data analysis is proposed on the basis of the case study and existing methodological literature. The proposed tools concern the identification of events, their use in understanding change process and in describing patterns of process. In the last part the applicability of the method is critically evaluated and implications for its use in future research are put forward.

## **EVENTS AS ANALYTICAL TOOLS IN PROCESS RESEARCH**

Events (or incidents) have been used in various fields of research as an analytical tool to study social processes. Historians have traditionally constructed reality in terms of events (Abrams, 1982; Dunkerley, 1988). In business research, events have been used to make sense of the development of supplier and buyer-seller relationships (e.g. Kamp, 2005; Halinen 1997), strategic alliance networks (Madhavan et al., 1998), and business networks (Hertz, 1998; Dahlin, 2007). The critical incident technique (Flanagan, 1954) has been used extensively in service quality and relationship research (e.g. Bitner, Booms & Tetreault, 1990; Edvardsson, 1992; Edvardsson & Roos, 2001). Yet, empirical research that would describe events taking place in business triads or larger networks are rare.

In the business network context an event can simply be seen as an empirical occurrence and an element of network process. Easton (2009) offers the critical realist view on events (or outcomes) as study objects and defines them as “external and visible behaviours

of people, systems and things as they occur, or as they have happened”. Our view, in contrast, follows the social constructionist logic and *defines events based on Hedaa and Törnroos (2008) as temporally specific outcomes of performed acts by human actors that the actor itself discerns and perceives influential*. It has to be noted, however, that also events of nature (e.g. hurricanes, droughts, earthquakes) may have a major influence on the fundamentally social processes of business networks (Hedaa & Törnroos, 2008).

Events are “our principal points of access to the structuring of social action in time” (Halinen & Törnroos, 1995, 512), and thereby a powerful methodological device. Events offer checkpoints, or “windows” into network development assisting for instance in delimiting the time period of investigation (Madhavan et al. 1998) or in defining the starting point of studied change process (Hertz, 1998). For a process analyst events and chronology form the key building blocks not only for creating a narrative or case history but also in constructing an analysis of the case (Pettigrew 1997, 339; see also Elliot, 1995; Polkinghorne, 1995). “An event is capable both of analysis in its own right and capable of understanding process” (Dunkerley, 1988, 84). Events are particularly useful in seeking patterns and mechanisms of change (Pettigrew 1997, 339). Easton (1995, 482) puts forward the idea of using events as a sampling frame and for studying only selected events in order to reveal what happens and why.

Events have been defined as an expression of how humans note social time (Websters Collegiate Dictionary 1997). People create understanding of both chronology and change through different types of events that give them signs that something has changed in relation to the previous situation. *Events are thus fundamentally linked to change and thereby to processes of change*. Researchers have felt a need to separate between critical and “normal”, everyday events. Since networks are continuously changing it has been common to select critical events under study to make a case of change and to make it visible. In a business network context, critical events have been defined as triggers of radical, structure-breaking change (Halinen et al., 1999) (see Figure 1).

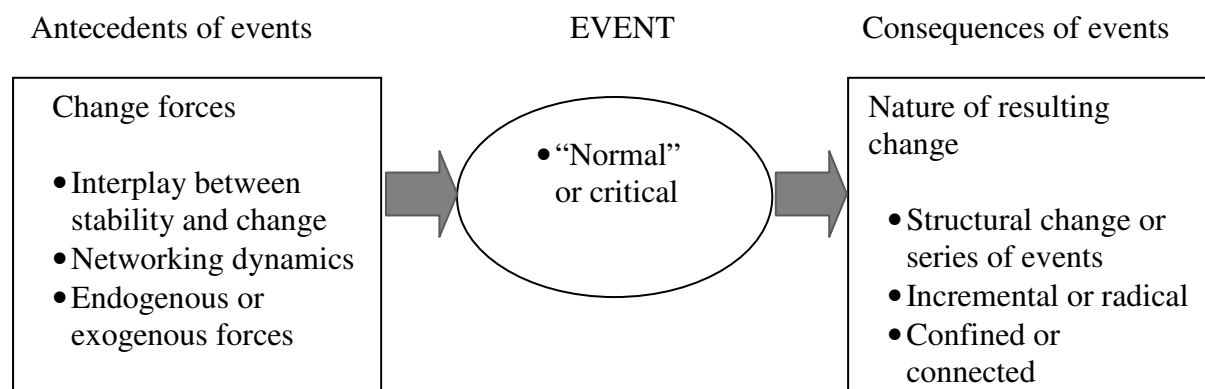


Figure 1 Events and their relationship to change as expressed in business literature

While using events in the analysis of network processes, two key issues need be addressed: the causes or underlying forces that make events to occur and the nature of change the event produces. The use of events as an analytical tool is partly based on their capacity to connect change to certain contextual levels and to time. These issues will be discussed shortly in the following.

Events (particularly critical events) have been considered as manifestations of various *change forces* inherent in networks (Halinen et al. 1999). Events may emerge as a result of interplay between forces of stability and change (ibid) or the dynamics of networks put into motion at some point, representing a force of its own (Håkansson & Henders, 1995). Change may originate from both exogenous and/or endogenous stimuli with respect to the studied entity. It either stems from inside of the focal unit (e.g. business relationship or a net), or is caused by actors and the environment that are external to the unit of analysis (e.g. Hertz 1998; Håkansson and Henders 1995). Both strategic action and environmental forces have explicitly been named as engines for network change (Koka et al. 2006).

As Figure 1 indicates, events have a particular role in creating change and the nature of resulting change may also vary. Most writers view *events as triggers for structural change in networks* (Halinen et. al. 1999; Hertz, 1998; Håkansson & Snehota, 1995; Madhavan et al. 1998). To characterize the structural effects of an event it is important to ask whether the event's impact conforms the existing business network structure, or whether it challenges and alters it. Håkansson and Snehota (1995, 276–277) discuss “restructuring” or “structuring” of a network and Madhavan et. al. (1998, 440) “structure-reinforcing” or “structure-loosening” patterns of change. Gadde and Håkansson (1992) make a distinction between changes that have a stabilizing effect and those that lead to a new network structure. The effects of events could be regarded accordingly as stabilizing or instabilizing.

Another view to the effects of events is to look at their *ramifications for the process itself*. In order to create a structural change in a network an event has to evoke company actions towards or against the structural change that potentially lead to other discernible events. This perspective becomes manifested in the idea of event sequences (Van de Ven, 1992; Dahlin 2007), in the accumulation of events that ultimately lead to major structural change (Halinen et al., 1999) and in the notion of event networks (Hedaa & Törnroos, 2008). The event network refers to the idea of viewing a network as a flow of potentially interconnected events.

The change that events create can further be characterized as evolutionary or revolutionary (Håkansson and Henders 1995) or, respectively, as incremental or radical, where incremental change can be described as adjustments within the ongoing structure and radical change as a break or emergence of it (Gersick, 1991; Halinen et al. 1999; Kamp 2005). Another way to dichotomize change is to define it as confined – remaining within a dyad – or, connected – influencing other dyads in the network (Halinen et. al. 1999).

Processes only become comprehensible if connected to some spatial and temporal setting (e.g. Halinen & Törnroos, 2005). This also accounts for events as elements of process. Events may *emerge from different organizational or network levels*, from a business unit, company, dyad, net, network, or from broader environment (Brass et al. 2004; Halinen et al. 1999). Company level events refer for instance to changes in an organisational structure, business model, personnel or marketing/purchasing strategy, and dyad level events to closing a long-term contract, acquiring a partner or switching it. Events may also refer to major changes in the industry or broader business environment, for instance, an economic recession, or changes in technology or business legislation (e.g. Elo, 2005; Halinen et al. 1999). To put it in another way, events may emerge from micro-, meso- or macro-level processes of an economy (e.g. Mattsson, 1997).

Finally, *time is a crucial dimension* along which events can be organised and against which they need to be analysed (Halinen & Törnroos, 1995; Anderson & Mattsson, 2006). Chronological order per se is a factor that helps to create some logic in the analysis and it also forms a basis for explanations. The temporal orientation to the studied event, whether in the past, present or in anticipated future, represents a crucial categorization for process analysis too.

## METHODOLOGY FOR DEVELOPING AN EVENT-BASED METHOD

The empirical study draws on existing literature on qualitative process research in the fields of business marketing and organisational research. In developing the event-based method the experience and understanding the authors have gained through their own longitudinal research efforts have been decisive. The initial ideas were tried and elaborated in a case study that explored a Finnish paper trader's internationalisation to the Greek markets using a network perspective (Elo, 2005).

The purpose of the study was to analyse the internationalisation process of a small firm using a network approach. A single, embedded case study (see Yin 1994) was conducted, where the focal company and its business network related to the internationalisation process was studied. The key units of analysis were: the focal firm (a seller), its immediate business partners and the relationships between them. Thus, a focal firm perspective to network development was adopted (see Halinen & Törnroos, 2005). The focal actor was a Finnish paper and paperboard-trading unit (seller) and the focal net included the group behind it (the owner of the seller), the Greek buyer (converter), the partner in Greece (the owner of the converter), and the agent (the researcher) (see Figure 2). The target market was Greece and Greek publishers, printers, converters, industrial units and wholesalers.

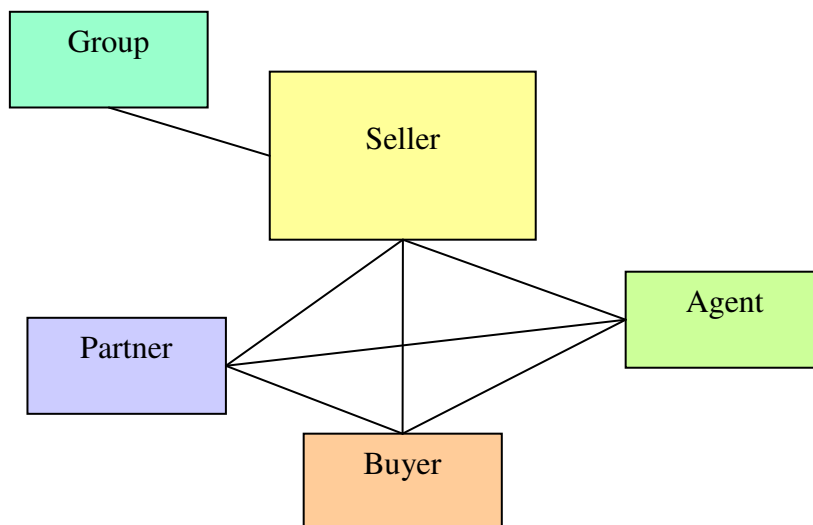


Figure 2. The focal business net – the studied actors and relationships

The objective of the study was twofold: first to describe the development of a firm into a new market area and the internationalisation process relating to this market, and second, to explore critical events during the internationalisation process. The study described the evolution of the seller firm and its business net during the internationalisation process and examined changes taking place within the firm itself as well as with its business relationships. Critical events that had a decisive impact on internationalisation were identified along the

research process and analysed, together with the influential factors that lay behind the events. The study used spatio-temporal mapping that assisted in illustrating the changes that took place concerning business actors and their relationships (the “what-question”) and the critical events and influence factors (“why/ and how-questions”) that helped in revealing the internationalisation process.

Data collection was continuous and took place both in real time and retrospectively, following partly inductive and partly abductive reasoning (cf. Järvensivu & Törnroos, 2009). During the research process the relevant top managers from all companies of the focal net were interviewed (normally the Managing Director/owner and export/sales manager), and in those companies where operational business took place also additional personnel were used as informants (export assistants or equivalent). For each business relationship within the focal net both parties were interviewed. Altogether 42 documented interviews took place. In addition the data includes numerous informal discussions. Data collection extended over a period of ten years from 1994 to 2004. The focal firm was analysed regularly: interviews and discussions were carried out several times per year. As the connections expanded over time, also the number of interviewed companies increased.

The researcher, due to her participating status, had close access to the companies, as she functioned as an agent for paper and paperboard products in the focal net. It was therefore possible to collect data at a continuous basis, over a long time period and also to utilise daily business communication (faxes, memos, listings, correspondence, e-mails and other notes) as research evidence. It was considerably easier to get access to people and information that was considered internal or even confidential. Being personally involved as an agent brought a suitable middleman-position where both sides – sellers and buyers – could be convinced of the possible positive implications of the research (see e.g. Sarah et al. 2007).

The study used triangulation as an attempt to reach valid research results (see Denzin 1978; Silverman 2001). Triangulation was carried out at a source level, using several types and data sources, at the method level, combining the use of different methods, and also at the theory level, utilizing two overlapping theoretical views – industrial network and internationalisation theories (cf. Denzin 1978). In this case the combining of methods meant that two temporal orientations in data collection and analysis were used: the retrospective and real-time.

In the retrospective approach, changes and events were tracked after they had taken place, historical reconstruction being the method. In the real-time approach (or follow-up approach see e.g. Halinen & Törnroos 1995, 510) changes and events were traced over time, either by observing change at certain time intervals (so called snapshot studies) or by following the emergence of events at a more continuous basis (i.e. progressive studies) (ibid. 1995). In both cases the researcher investigated the events in the existing present time, which necessarily influenced her interpretations.

The exploration of the vast data required a systematic approach, therefore structural changes in the business relationships within the focal business net (such as new relationships, dissolved relationships, temporarily halted relationships) were chosen as a starting point in the analysis. These changes could be fairly easily explored and verified. Later the type and scope of tracked changes expanded to cover different kinds of market-, business- and company-internal changes. Interviews took place specifically after some generally perceived changes at these levels (retrospective orientation: what happened and why), but also when some changes were expected to happen (present and future orientation: what could happen and why). When significant changes were detected and analysed more than one manager were always interviewed and the information was triangulated with other supporting data to check its validity. Triangulation offered deeper information and improved the quality of findings.

The analysis advanced at three levels. First, the major and most apparent changes were sorted out, such as establishment of an export unit, merger or changes in ownership. The second explorative level went beyond the apparent change by identifying and analysing those events that potentially created these changes. Here the complexity of analysis increased and some definitional problems arose. It occurred that an event was not equally critical to both parties of a dyad and there were often more than one critical event present parallel to each other. Also the difference between a critical event and a resulting change was not always easy to define. To solve controversies and diffuse situations the focal firm perspective served as a reflective basis, i.e. the criticality of each event was judged ultimately from the seller's perspective. For instance finding a suitable business partner, changes in supplier relationships, strategic adaptations, and investment decisions were considered as critical events in the case.

Concerning the third level of analysis the influencing factors (or change forces) behind a critical event were examined using various data. Retrospective analysis revealed the diverse and multiple roles of influence factors. They seemed to be more the parts of a certain sum that stimulated a critical event, developing trajectories that created a "tipping point" or evoked an event to materialise. The influence factors were organised into categories in accordance with their "level" of origin in the macro level (macro environment), meso level (industry or market) or micro-level (interaction in a business dyad or company).

During the ten-year long research period, variable types of events at various contextual levels and in relation to different actors and relationships were identified. Several events had already become analysed in-depth and retrospectively. However, in the last phase of the research process, a final contextual and retrospective analysis was conducted in a form of a historical reconstruction inserting the "pieces of the puzzle" into an overall picture in a chronological order. In this phase the researcher's interpretation of the course of events was obviously decisive. Individual relationships and events detected and analysed within them were organised as chronological development lines as notes on paper. Thereafter, individual development lines were amalgamated having the focal firm as a base but using the network perspective.

## **METHODOLOGICAL TOOLS FOR EVENT-BASED ANALYSIS**

In studying the empirical case, various aspects of the event-based method were elaborated and a lot was learned of the method's usability. The main results of the study culminate into three specific issues: identification of key events, the role of events in understanding the process, and event trajectories as descriptors of processual patterns in networks. The results can be seen as methodological tools to conduct qualitative data analysis on network processes. These tools will be presented in the following.

### **Identification of events through retrospective and real time analyses**

The study confirmed that events are important *organising elements* for a process researcher and form *a vital part of sensemaking* in business networks. For the identification of events, a tracing method that combines both retrospective and real-time analysis is proposed (see Figures 3 and 4).

In the tracing method, the identification of events starts with some basic view and questions (see Figure 3 area A), expanding later into collection and analysis of a wide variety of potential key events, (see area B). After the researcher has developed a general understanding to the process the inductive type of research may alter its nature to more

abductive approach. When the material starts to get saturated (or replicates itself) it may be assumed that events that are relevant for the studied process and giving answers to the research questions are found.

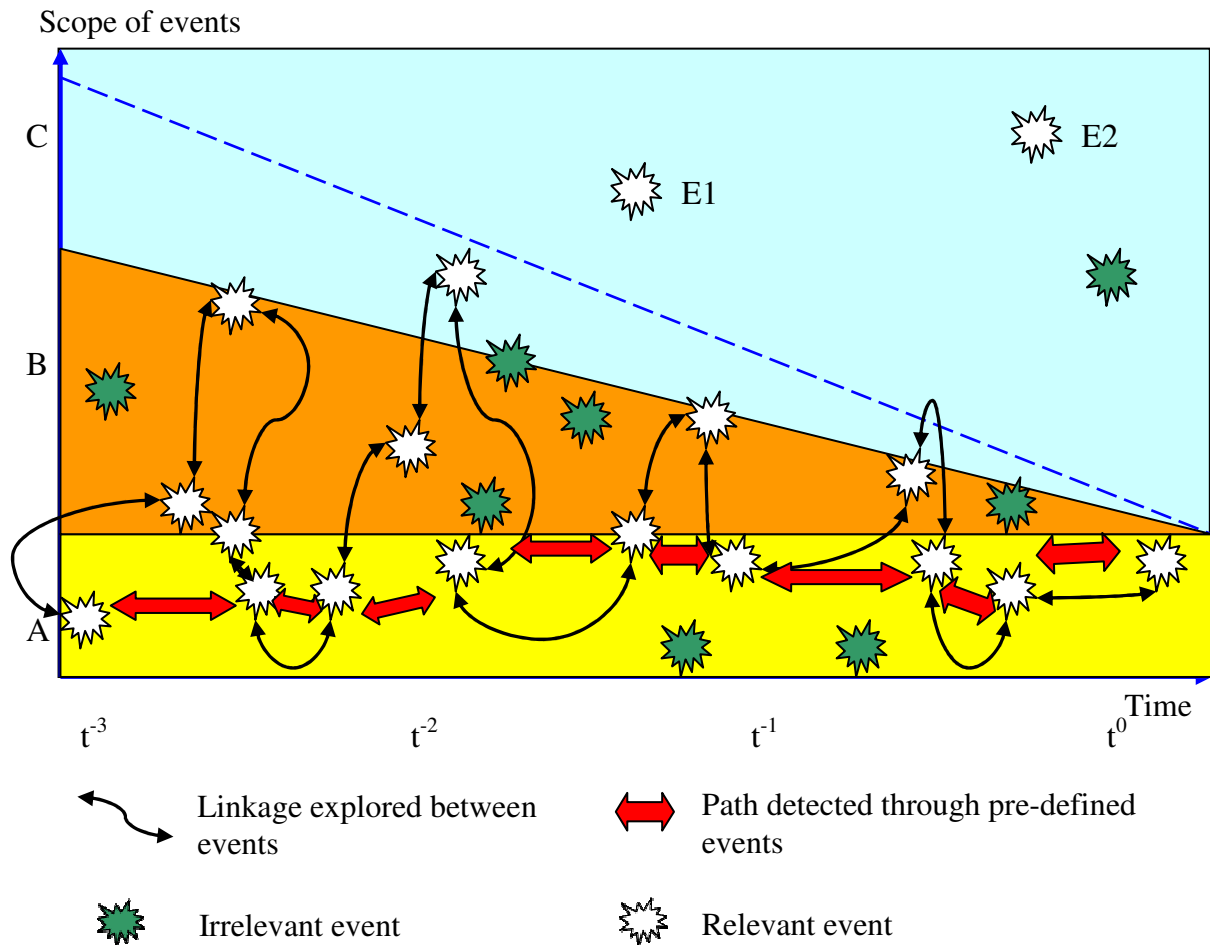


Figure 3. Tracing events through retrospective and real-time analysis

Along the analysis one view of the events and the emerging process is being created which can be, in the next stage retrospectively “tested” or reconstructed (see the thin arrows in Figure 3). Events remaining outside the areas A and B (e.g. E1 and E2), indicate events that have been identified as relevant for the studied process but have been excluded due to access problems. Their impact to the process therefore remains unspecified. The thin arrows imply that there is a linkage between events, based on time and some other connecting factor. It has to be noted, however, that the arrows do not indicate causality, but temporal and potential logical connections manifested in the data. Finally, the thick arrows indicate the route that the research would have had if the collected material had been limited only to cover the *a priori* defined key events and the pre-planned data collection.

Literature on qualitative methods stress that people’s memories and interpretations of events are always dependent on the moment of interpretation and the person’s opportunity to observe (Van Maanen, 1979). We therefore emphasise the combination of different temporal orientations in data collection and analysis. The temporal orientation (past, present, or future) and the time distance to the event studied might influence essentially how difficult or easy it is to identify a discernible event. Minor acts and changes may manifest themselves as major

ones when followed in real time, while events that once were perceived as relatively minor (or were not perceived at all) may turn out to be major turning points in a longer term retrospective analysis. Events in the future may be difficult to anticipate and they may occur unexpectedly, or they may be highly expected, but never materialise. Individual sensemaking of events is framed by other events that have occurred since, occur at present or are expected to occur in the future, which makes individual interpretations continuously evolving. Hence, we suggest that the researcher should follow the processes in real time but also run a kind of historical reconstruction (or loop) to understand and re-test previous event-related assumptions and their validity.

Studying a complex process requires deep and rich data and an analysis reflected in its context. For achieving this, we created a so-called *steering wheel of research for the identification of events* (see Figure 4).

The steering wheel illustrates the logic of sensemaking that builds on events and applies both real-time analysis (Figure 5. left to the right) to construct the process and retrospective analysis (Figure 5. right to the left) that attempts to reconstruct it. The steering wheel shows how the researcher moves back and forth in time while investigating the network process.

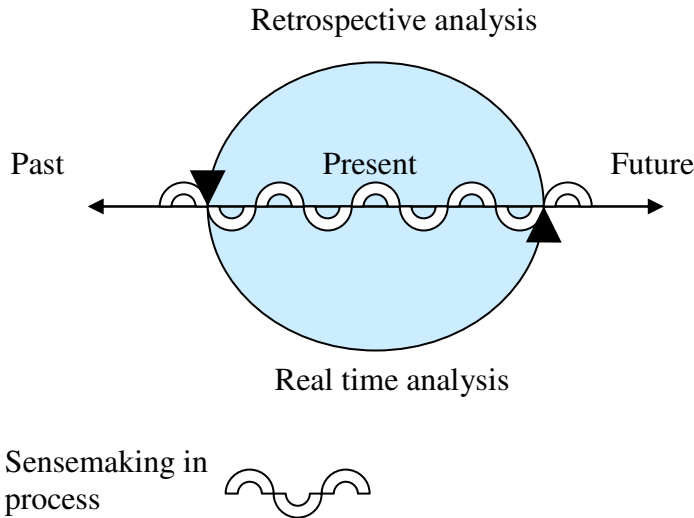


Figure 4. The steering wheel for event identification

For extracting the relevant events from the potentially messy multi-level processes, it is crucial to define the studied process properly. The interest in the process may lie in the change of network structure or the process of actions and events. In this particular case the events were considered as relevant if they were linked to the seller’s internationalisation process over the period of 1994–2004. Events referring to structural change as well as the process of actions were detected.

The findings also indicated the importance of flexibility in conducting data collection and analysis. It is common that the research setting decided in time  $t_2$  is not fully applicable after a while, in time  $t_1$ . The researcher should be able to follow indications and clues, even to

the less focal area C in Figure 3, and simultaneously concentrate on essential events. The dynamics involved in the research object and the multiple levels it encompasses make the event-based analysis a challenging endeavour but still a viable approach for revealing the connections across different levels.

Various types of events could be detected in the studied process. On one hand, events could be generally perceived being macro-level events, like Finland's EU membership in 1995, which was then logically followed by a major meso-level event, the dissolution of the major marketing organization of the Finnish paper industry, Finnmap. On the other hand, some seemingly minor looking events at the micro-level of business interaction could evoke severe problems over time, like disagreement between two individuals. Several *structural changes* in the networks could be interpreted as key events, of which the dissolution of Finnmap, establishment of business relationships with Russian suppliers and the rearrangement of Myllykoski and M-Real sales networks offer good examples. The introduction of an e-commerce platform in the late 90's illustrates *an act as an event* to which business actors loaded lots of expectations. However, in Greece the customers were not yet at that level in terms of technology and the application failed. This illustrates a non-occurrence of an event, which nevertheless, had a significant effect on several Greek business relationships in the studied net.

### Events in understanding the process of change

Understanding network processes requires a rich and deep view on the changes themselves, to the events that pave way for the change and the stimuli that evoke the events to materialise. When events are treated as the key elements of process, a few logical questions arise: Why do these events occur (what makes them to emerge?) and what are the changes they trigger in the business network?

As a result of the study and existing literature (see Figure 1) we suggest the following logic to be used as an analytical scheme for making sense of network processes: *the influence factors, the critical event and the resulting change* (see Figure 5).

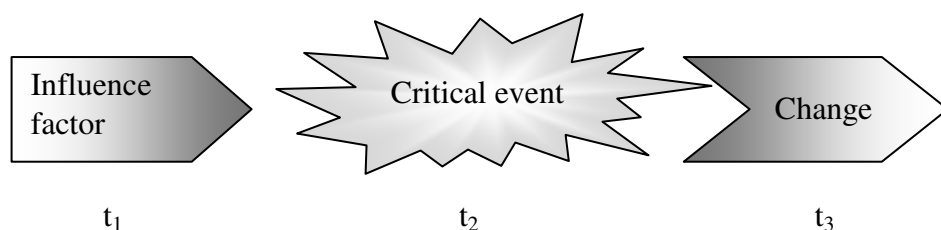


Figure 5. An analytical scheme for processual analysis

The proposed analytical scheme comes close to the ideas of Tsoukas (1989) on idiographic explanatory research, which we prefer to call understanding. Tsoukas claims (p. 559): "To produce explanatory knowledge the researchers re-describe their object of explanation in a theory-important way, postulate the existence of multiple generative

mechanisms that are potentially responsible for the occurrence of the events under study... The researchers look for the contingent ways in which the postulated mechanisms are intertwined, which will generate the flow of experienced events.”

The scheme offers a seemingly simple tool for asking important questions along the study process. The scheme can be applied both during the real time and retrospective analysis, and during the whole research process, not only at the final analysis phase. The study however indicated that influencing factors are typically several, the events to which they lead are potentially multiple – occurring both simultaneously and one after the other at various relevant levels of the economy – and also that the changes the event(s) create are of various types.

The influence factors were organised into categories in accordance with their “level” of origin, i.e. macro, meso and micro level factors. Macro-level factors were typically economic fluctuations. For example when the Greek market did not get enough paper that lead to very high prices and conflict situations at the time. International trade regulations and US-Dollar development also influenced strongly the developments in the paper market. The threat of Asian paper was not taken seriously, although it was clear that this would have an impact. The ecological orientation in paper business, was not an issue for the Greek paper business at that time. Meso level factors were, for example, strikes, local industrial systems, such as a machine-park, and product-related preferences. Technology applications, such as the usage of the Internet, were also relevant influence factors. Micro level factors were often product and price-related modifications, trust and communication issues, failed business processes or disagreements between persons.

Managers could not always discern the influencing factors. Some of the factors were “visible”, that is they could be perceived or even anticipated by management but some other remained unnoticed. Informants preferred to avoid surprises and unexpected changes in the business environment. The longitudinal sensemaking approach offered here makes it possible that less visible or even hidden factors, if relevant, will potentially be detected and taken into account in creating understanding of the process.

The identified critical events gave rise to various changes. For example the dissolution of Finnpap itself was a logical event of change due to Finland’s EU membership in 1995. It accumulated a plethora of changes for instance in paper distribution in the studied net. It was clear that the landscape of distribution had to be changed and adapted to the new reality.

### **Event trajectories as descriptors of processual patterns**

A third methodological tool we suggest is an event trajectory that can be used to describe processual patterns in network development. An event is a portentous outcome, a transmission device between past and future. This means that events are temporally embedded. An event that takes place at present is temporally connected to past events and expected future events (see e.g. Halinen & Törnroos 1995; Hedaa & Törnroos 2008). Events thus have a potential to form networks of events (Hedaa & Törnroos, 2008) or what we prefer to call them trajectories of events. Past events make companies to respond and to create potential new events, and current events are also created in the expectation of some future events.

When conducting an event-focused data analysis, it is not enough just to identify events; they should also be connected in time and context to create understanding of the process. For showing that events are interrelated and that they form meaningful event sequences two key questions need to be posed: first, whether the events are temporally ordered so that one event could have affected the other; and second, whether there is both a

logical and empirically verified link between the preceding and the forthcoming event (or was it more of a coincidence).

The connections between the events found did not represent any deterministic path of development or general causality. Similar events did not necessarily create similar outcomes or changes and the event trajectory did not indicate any path dependence. Instead the context-specific nature of events was clearly notable. It, however, became clear that certain events logically followed each other in a certain chronological order, for example Event 1 preceded Event 2 and also a logical connection between the events could be established (see Figure 6). For example, the cartel law that came into force along the EU membership (Event at  $time_0$ ) put pressure to the dissolution of the joint marketing organization Finnpap (Event at  $time_1$ ) and later lead to the chance of distributor in the studied net (Event at  $time_2$ ).

Other temporal and logical links between the events could also be verified. For example, an availability problem of Agent 1 (event at  $time_0$ ) created a lack of material (resulting incremental change at  $time_1$ ) which was naturally exploited by another supplier, which lead to a creation of a new, third relationship (event at  $time_2$ ). However, the pressure set by this new supplier towards the customer (change force at  $time_3$ ) actually motivated the customer to return to Agent 1 soon after (event at  $time_4$ ) which strengthened this relationship (resulting incremental change) and led for instance to new product tests (event at  $time_5$ ). There was both a chronological and a logical connection between the events, which means that idiographic explanations could be produced (cf. Tsoukas, 1989).

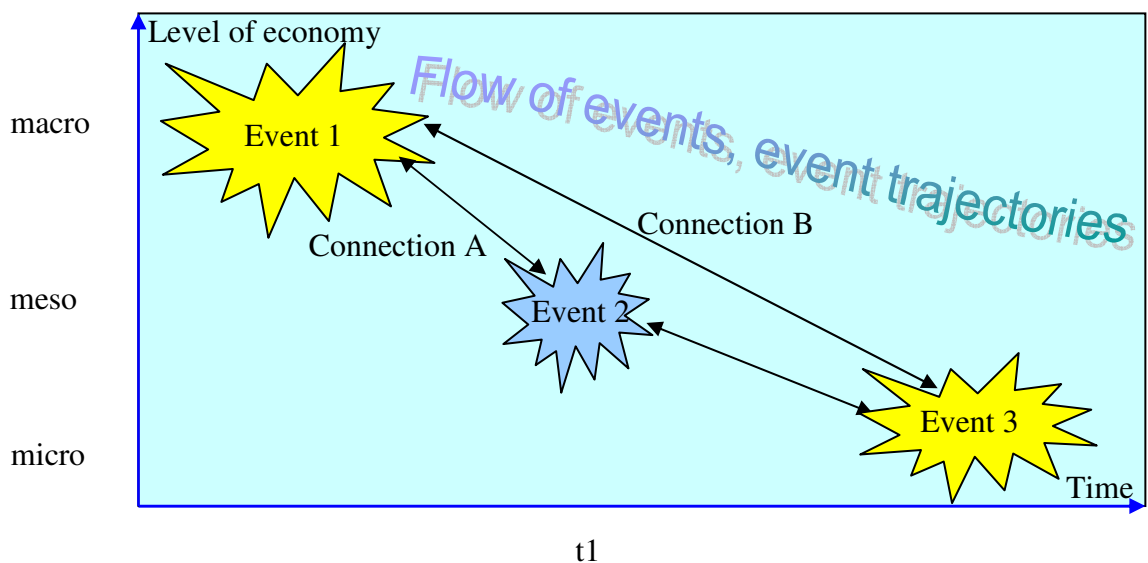


Figure 6. An event trajectory as a descriptor of processual patterns

It became clear from the study that important events may occur at several levels of the network and economy. In accordance with the inductive, sensemaking perspective, the business actor's (manager's) perceptions were used to define those events that were relevant for the internationalization process and therefore important enough to be traced. Key events of the studied network process took place both on the macro environmental level but also on the micro level processes in between managers and business firms.

An event trajectory view, as applied here, puts the detected events together and forms an overall understanding of the studied network process, including potentially several interconnected processes. Individual descriptions, stories, information and observations need to be analysed separately and again as an aggregate and thereafter analyse them anew by reconstructing the flow of events. The event flow analysis allows a more holistic approach since the event and its outcome, the resulting change, are perceived in a broader time frame and setting. The researcher's dual role as a participant in the process and an observer provided the opportunity to insert the informants' views and perceptions into a context, also time-wise.

## **DISCUSSION AND RESEARCH IMPLICATIONS**

In this paper we have focused on events as the key elements of process, and put forward a number of methodological tools for conducting qualitative process analysis in business networks. An inductive, sensemaking approach to event analysis is proposed, where events

- were defined as temporally specific outcomes of performed acts by human actors that the actors themselves discern and perceive influential,
- were detected and traced through an inductive rather than deductive process, and
- were distinguished at various connected levels of the network and economy.

Using events as a perspective to look into networks is a fruitful way to understand how networks change, but also to see what is taking place, and why in the network development. A steering wheel for research that combines both retrospective and real-time analysis was proposed to identify key events in the process (Figure 4). An analytical scheme of influencing factor, critical event and consequent change, was put forward to create understanding of the process (Figure 5). Finally, an idea of event trajectory was launched to assist in the description of processual patterns of network change (Figure 6). Together these tools form an event-based method that we propose for qualitative analysis on network processes.

The proposed method has several strengths but also weaknesses. Table 1 gives an overview of the evaluation from the viewpoint of time and process, network research and also more generally. Some of the strengths and weaknesses relate to the inductive, sensemaking approach itself and some others to various aspects of data collection and analysis within the approach.

Table 1. An evaluation of the proposed event-based method

<p><b>Main strengths:</b>  <b><i>In general</i></b>                  Enables a holistic view and rich descriptions                  Fits well with case studies                  A good fit with business network studies; applicable on dyads, triads and networks                  Flexible                  Adaptable to different research settings                  Suitable for participatory research by manager-researchers                  Offers the benefits of qualitative interpretation and sensemaking  <b><i>Time and process</i></b>                  A good applicability on complex dynamic processes                  Suitable for longitudinal studies                  Enables a deep understanding of processes                  Enables retrospective and real-time research parallel to each other  <b><i>Networks</i></b>                  The level of analysis is flexible and adaptable                  The validity and relevance of research findings is improved                  The limits of the network can be defined inductively to cover key actors and relationships</p>	<p><b>Potential weaknesses:</b>  <b><i>In general</i></b>                  Complex to perform                  Entails hard workload and costs                  Requires deep and wide access to data                  Needs good organising skills                  Involves overlapping elements and categorisation problems                  No established tools or criteria to be used in analysis                  No universal systems or criteria available for comparative purposes                  Idiographic to its nature  <b><i>Time and process</i></b>                  Might be difficult to keep order of key issues and events over time                  Too narrow view can result in losing the richness and essence of the study of process                  Subjective interpretation of process  <b><i>Networks</i></b>                  Lack of previous business network applications and methodological literature                  Limited in its capacity to detect root causes of events and their broader network effects</p>
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The key contribution of the study lies in the use of events as an analytical device for understanding network processes. The temporal combination model together with multiple methods of data collection and analysis put forth here assists in improving data quality, enables to identify key events of the process and produce rich descriptions of a specific case. At its best it enables both a profound understanding and a wider view on the process than a single method would have given. Tracking, analysing and constructing event trajectories assisted greatly in revealing and unfolding the internationalization process and related networking in the study context. The method conceives process specifically in the form of events that represents a social dimension of time. This fits well to business networks that are typically viewed to develop in and over time in their particular settings as a socially constructed process.

The inductive sensemaking approach to events offers a new strategy for the analysis of process data. Existing strategies from organization research investigate events statistically (quantification strategy) or map them visually (visual mapping strategy) to reveal patterns and mechanisms of change (see Langley, 1999). The proposed approach offers an alternative to the deductive view used fairly extensively in network research (Madhavan et al., 1998; Dahlin, 2007). The developed approach provides idiographic explanations for network development in the first place, but can also be used to develop process theory.

The method carries some obvious weaknesses. The longitudinal approach when connected to real-time and retrospective data in a network is a challenging issue to handle. It gives (when it is well performed) vast amounts of data and richness. In this sense it gives tools for analyzing the processes and events that unfold over time in different levels of the context. It, however, requires a careful analysis and strong determination on which events to focus, whose viewpoints to use as decisive in selecting the events and how to demonstrate the connections between events. Events become manifest in different types and forms and sometimes it is easier to see the real process and the most influential events only later on.

Identification of the root cause(s) for the processes is extremely difficult while the viewpoint to process is at micro-level.

Many problems related to interpretative, qualitative analysis in general are also present in the method presented here. There is the danger of eclecticism when a many-sided approach is taken and the complexities are given room to enter into research. We have aimed to keep the basic research question fairly clear and straightforward. Focusing on the internationalization process helped to keep the study in line and to decide which events were important. How researchers have delineated the network under study needs also to be considered. By being focused one risks of losing important events and richness of the data and by extending the view one easily falls into the complexity-trap.

The paper offers methodological tools for conducting qualitative research on network processes in the future. We suggest researchers to apply the tools either in combination with each other or separately to investigate different network processes from an event-perspective. The method should be particularly useful for manager-researchers with good access to data. It should be possible to use the method also for other types of processual studies in social and business sciences, for instance, in creating understanding of entrepreneurial development processes or those of organizational change in large MNC:s.

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