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Time and process in business network research

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ABSTRACT

This Special Issue of Industrial Marketing Management brings together a range of articles by authors who have undertaken the difficult task of researching time and process in business networks. Understanding interaction processes within a business relationship and network perspective requires the elaboration of time, the central construct by which humans grasp and comprehend change. As an introduction to the articles we present the concept of human time and delineate accordingly three methodological approaches available for the study of network processes. We also introduce the authors' contributions to the special issue that broadly divide into two groups: those that deal with methodological issues concerning the study of processes in business networks and those that consider the role of time and timing for studying business processes.

1. Introduction

There has been an increase in interest about the construct of time across the social sciences (Adam, 1995; Ancona, Goodman, Lawrence, & Tushman, 2001; Bluedorn, 2002; Clark, 1985; Hassard, 1991). Time and space are central constructs, which are applied by humans in gaining an understanding of our physical and social reality. The meaning of almost every human construct relies, either explicitly or implicitly, on understandings of time. However, this role of time is forgotten in our everyday living (Adam, 1995) and as a result research that truly accounts for time is difficult (Ancona, Goodman et al., 2001). These issues are also apparent for process research in business networks, where a more pronounced understanding of time is clearly needed (Ford & Håkansson, 2006a; Ford, Gadde, Håkansson, Snehota, & Waluszewski, 2010; Andersson & Mattsson, 2010a,b).

The way *time* is conceptualized affects our understanding of business processes. Human conceptualizations of time are continuously created and re-created by managers and researchers. Thus, business relationships and networks are not "fixed and taken-for-granted structures of predetermined categories" (Medlin & Saren, 2012), but rather they are concepts that are continuously re-created over and through time. The two imperatives of the Industrial Marketing and Purchasing (IMP) approach are interaction processes (Håkansson, 1982) that denote the temporal dimension, and relationships and networks (Håkansson & Snehota, 1995) that grasp the spatio-temporal dimension. The spatio-temporal concepts also cross-fertilize each other, in the context in which they come into play. Time is a central element in understanding how the IMP-Group deals with its own reality.

Process research deals with how events come into being and unfold over time in a context. The difficulty in achieving a deeper understanding of process in empirical studies is the multi-facetted nature of time in research (Andersson & Mattsson, 2010b, 61). The notion of time that a researcher adopts affects in a crucial way the kind of process understanding that is created. Despite this fact neither time nor process have been particularly strongly discussed or developed within IMP research (Halinen & Törnroos, 1995; Medlin, 2004; Ford & Håkansson, 2006b; Håkansson et al., 2009; Quintens & Matthyssens, 2010). The scientific value of process studies in business networks would be improved if the researcher's view of time, and how that notion shapes process, were made more explicit.

This introductory article focuses on human time in process research using a constructivist approach to interaction in business networks. We aim to offer conceptual alternatives and methodological tools for conducting process research on business networks. We also introduce the articles of this special issue that contribute to current knowledge of time and process in the business network context. The contributions bring new viewpoints into the understanding of process, they instruct us on how time can be dealt with, and they offer methodological insights on how processes in business networks could be studied.

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2. A temporal view of business networks

Processes are defined, following Van De Ven and Poole (1995, 512), "as the progression (i.e., the order and sequence) of events in an organizational entity's existence over time." This definition highlights the point that time is a characteristic of the entity, rather than a value related to external *x*-axis time. Processes in business networks also progress in a spatial network (Dicken, 2007; Håkansson et al., 2009), but in this article we are concerned more with the event-based, human time view of processes. The event network view, which is defined as the connection of events and processes through time and in time, provides one basis for our analysis (Hedaa & Törnroos, 2008). Events are given their meaning by their human connection to past, present and/or future events within an event–time network. This event–time network is socially constructed on the basis of human interpretations of events (Hedaa & Törnroos, 2008).

Event time is a social construction, which is literally *social time* in the sense described by Adam (1995). The social construction of event time is displayed in Fig. 1, where the boundaries of the present rely upon a past and future time (Medlin, 2004). Event time is distinguished from clock time, which is also a human construction. The development of clock time was based on human understanding of absolute time, with invariant periods flowing and pressing into the future. How event and clock time perspectives are differentiated and related is discussed next.

2.1. Event–time and clock-time as human time concepts

The idea that time is a human concept is widely accepted in social sciences (Adam, 1995; Bluedorn, 2002; Davies, 1994). Time is an elusive notion, possibly because it is so essential to all human understandings of our world. However, the ways that time is socially constructed remains a focus for on-going research. Berger and Luckmann (1966) theorize that time is constructed between humans as they interact within commonly understood social structures. Orlikowski and Yates (2002), applying the concept of structuration (Giddens, 1984), consider time structures as negotiated through everyday action. Kavanagh and Araujo (1995) consider time and timing as contested constructs between and relative to at least two different entities. Being a human construct, all of these representations are a part of time construction.

So the question is: how should time be understood within and as a background for the business networks in which firms are continuously interacting?

The absolute concept of time, as *x*-axis time, where time is the ultimate independent variable, would consider business interactions as occurring within the container of time. In this perspective, time is a variable that separates any two identical events, so that they are distinguished from each other (Ackoff & Emery, 1972). Equally, and as a corollary, *x*-axis time allows conceptualization of clock time, and together with the institutionalization of clock time they serve the human necessity of a conceptual tool for event synchronization (Davies, 1994).

However, *x*-axis time is not so useful for understanding business networks, as events occurring in *x*-axis time are not connected to each other in meaning. Rather *x*-axis time (and clock-time) simply separates events treating them as observations. Such a view of time does not accord with the constructivist approach to human shaping of business networks. The view put forward here is constructivist, or at least moderately constructivist in its nature (Lincoln & Guba, 2000).

In the constructivist perspective, time and timing are not absolute. Time refers to event time, or social time, where events are connected to each other in meaning and time is a property relative to the entity (Bergmann, 1992; Elias, 1992; Hedaa & Törnroos, 2008; Nowotny, 1994; Sorokin & Merton, 1937). From an event time perspective the nature of the entity shapes time. Thus, time is understood in multiple human ways according to the characteristics of the entity's culture, organization and/or personal aspects (Halinen & Törnroos, 1995). Elaborating the entity in a business network sense, time is constructed by organizational forms such as firms and business relationships, along the lines of Hassard (1991).

Events also carry a relative nature with respect to past, present and future. Events shaped by humans and enacted through social construction together form the event–time. Hence, in this paper we consider time from a human perspective, as an individually and socially constructed event–time, and suggest that using the entities' event times together with clock-time can notably improve our understanding of processes, change and development in business networks.

2.2. Properties of human times

We may distinguish five properties in the way humans apprehend time. These are *before time, time flow, time periods, the connected nature of time flow and periods*, and *different times*. These will be presented next.

2.2.1. Before time

The first human apprehension of time is through one's senses. This sense of time is not a thing (Whitehead, 1920); rather time is only subjectively and personally known. Holding in our thoughts this primal human and especially individual apprehension of time is useful for noting a contrast with social constructions of time

2.2.2. Time flow

The second aspect of human apprehended time is flow. Time passes and is known socially and collectively in everyday life as an inter-subjective category: time is a noun indicating flow. The concept of time as flow was recognized in early Greek culture as Chronos (Hedaa & Törnroos, 2002). Chronos has been aligned in modern culture with clock-time (Orlikowski & Yates, 2002), but modern clock-time is more than simply time flow as it divides time in measurable units based on their duration (e.g. minutes, hours, days).

Humans, with the passing of incidents and events, either social or physical, note time flow. This variation in time flow is recognized in the literature (Ancona, Okhuysen, & Perlow, 2001; Kavanagh & Araujo, 1995). Variations are evident when incidents and events transpire either quickly or slowly within time flow (Medlin & Saren, 2012). However, ways to understand, describe and communicate time flow are poorly elaborated for business processes.

The nature of an incident, or event, is critical to human understanding of time flow. The dictionary meaning of an event is an incident, which is 'a definite occurrence' (Wilkes & Krebs, 1985, 567).

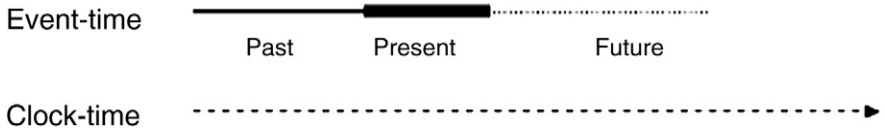

Fig. 1. Event time and clock time.