KAIROLOGY IN BUSINESS NETWORKS

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Abstract

The concept of Kairology is derived from the ancient Greek, but largely unknown, god Kairos, who was assumed to be in control of the right moment, or god of the more contemporary notion of Timing.

This paper is an essay about new avenues for the basis of managerial thinking and theories with a temporal focus. The paper looks specifically at the role of time and timing through event analysis in management theory. First, the impact of change and stability on models and theories in management are developed. Second the role of temporality, change aspects and timing related to contemporary business environment is highlighted. Third, a perspective of new directions of managerial thinking with a temporal focus is developed. Fourth, proposals are made for a new research strategy and managerial practice. *Kairology* is a term denoting the theory of appropriate timing for action in differentiated managerial situations and contexts. Traditional management theory deals with autonomous actors working in a world of organisational routines. A novel perspective should be concerned with *heteronomous* actors in a world of complexity and surprises embedded in a network of interdependencies. If this is the case we need a new management theory. Managers do in fact react to surprises as new opportunities or threats. They never do this alone; they always discuss, negotiate or experiment with new variations of actions within relevant time-space through interaction. Interaction is to move from heteronomy not to full autonomy, but rather to a state of *homonomy* (a neologism for the middle between autonomy and heteronomy, where relevant partners through interaction have arrived to a sort of common understanding for acceptable behavior, i.e. shared rules or norms). We can say that events control man, not the other way around, as general managerial thinking seems to propose. The essence of *timing* deals with this fact. When managers are timing correctly they can handle or understand events and event trajectories. But appropriate timing may not be understood apriori, but only recognized aposteriori. Event analysis and timing of acts in a stream of events can be used as a possible strategy for partial control of company destiny (a pre-determined course of events often held to be an irresistible power or agency).

INTRODUCTION

It is almost trivial to point to the fact of increasing turbulence in our time. Turbulence within the environment is increasing both because of the growing pace of technological, social, and other developments, and because of the growing interdependence of organizations across sectors, the positive feedback from whose actions can generate instability (Child & Kieser,1981). It is a characteristic of industrial, mature societies, that differentiation and, hence, interdependence increase. It is increasingly meaningless to talk about individual, autonomous actors who decide and act on passive recipients. Rather we should realize that actors are dependent or interdependent, limited or stimulated by other actors in networks creating opportunities and impediments for action. "Actors are not fully in control of the activities that can satisfy their interests, but find some of those activities partially or wholly under the control of other actors" (Coleman 1990). To produce even a simple final good requires participation of numerous organizations throughout the value chain - or more precisely: the value net - each contributing with a decreasing fraction of the value creating process as increasing differentiation and specialization, emphasizing core competencies, continue to take place. We witness

- A small world getting smaller as enabling technologies reduce the friction of time and space
- National and industrial deregulation breaking down protective walls
- Globalization leading to increasing competition
- The emergence of new regional markets
- New demands for ever higher quality, lower prices and faster deliveries
- Shorter product life cycles and faster time to market
- Radical changes - discontinuities - surprises

(see e.g. Castells 1996, Dicken 1998, Ohmae 1995)

In response to these new environmental forces affecting the business firm new objectives and foci of attention have emerged, e.g.:

- Shareholder value
- Stakeholder value
- Human capital utilisation
- Intellectual capital measurements and management
- Network capital creation

- Social responsibilities and ethics
- Environmental concerns

And a plethora of new management fads, buzzwords and three letter acronyms swarm the business world: TQM, QFD, BPR, TBM, TPM, KSF, EVA, SCM, KAM, CRM, PPM, HRM, JIT, ABC, SBU, MBO, USP, TBC….

New and more environmental complexities, new and more managerial concerns, new and more management technologies, and faster pace contribute to managers' loss of control. Increasingly they lose autonomy and become heteronomous actors, and increasingly success becomes a function of good luck and timing when managers decide for and act in an unpredictable and fast moving future. Or in the words of Toffler (1970): There are many possible futures. Based on the foregoing, the role of time and timing in management and marketing in business networks form the contextual perspective in this paper.

The paper is divided into the following sections:
First we look into the environment where firms operate and relate this as an exposition into the frames of reference in management theory. The second section deals with the time-concept and especially timing from a network perspective. Actor networks and especially the notion of event networks and the role of timing is presented in this section. The third section presents a managerial model, which treats timing and outcomes from both a chronological and an intentional time-perspective. The model frames the discussion about time, event networks and timing into a theoretical whole.
The fourth section of the paper summarises the discussion and presents possible research strategies and practical managerial implications using timing and event-networks as points of departure.

TIME, STABILITY AND CHANGE IN EVENT NETWORKS

Time based competition (TBC) is a buzzword in management aiming at creating competitive advantages through the shortening of lead-times. Time is viewed from this perspective mainly as being chronological or absolute. Another view is the intentional or kairological view of time which also may inform strategy and become a time-based competitive tool. (See box at the end of this

paper: Chronos and Kairos). Chung exemplifies this with the Honda-Yamaha War and how Honda was the winner through better commitment and performance of its labour force. He states that:

"There are two dimensions of time: Succession and Intention. Issues in lead-time reduction mainly deal with the measurement of time and therefore belong to the dimension of succession. While it is important to reduce lead-times, it is equally (if not more) important to address the intentional dimension of time. After all, a strong winning desire and an unyielding fighting spirit are what it takes to compete successfully" (Chung 1999, 300).

Time is also always related to space. What takes place in time is having a spatial implication (existence in real world or in the mind-sets of humans). What is existing in space is also affecting and relating to time and temporal processes. "Space and time should be simultaneously considered in developing and implementing any competitive strategy"(Chung 1999).
Time also relates to different *time scales* (Zaheer et al., 1999). The term strategy usually means to look ahead and toward a changing competitive position in time-space of a company. Corporate strategy is intentional in this sense. *Time lag* takes the perspective of cause-effect dimensions looking at time as separating two connected events in a specific social setting. Reaction time or "latent periods" are other connotations of time lags. This can be understood by using Clarks' notion that time lag oriented research has "the intention to discover the ways in which effects emerge at some time after the initial intervention" (Clark 1985, 39). In event network terms the events affecting networks can materialise and become real after a time lag from where a prior connected event has been created. Defining and understanding the "root cause" are often triggering acts.

Business networks are also influenced by time-lags because of the existence of reaction times of different kinds (delays in decision-making and deliveries of goods and information, bureaucratic hinders, political decisions and regulations etc.). *Waiting costs* for network actors, caused by delayed solutions being the consequence. In business networks research this materialises, for example in the form of so called 'black holes' (Hedaa 1999). Black holes are found where willing and able actors cannot act because of unfavourable opportunity structures in a network.

In this paper we deal with another time-based issue, which is *timing*. One definition of timing is "selection or the ability to select for maximum effect of the precise moment for beginning or doing something" (Merriam Webster's Collegiate Dictionary 1993).

Timing is a situational time-concept, which relates to a discernible event in a stream of other events in time-space in order to achieve intentional outcomes (e.g. profits in the future). In a network context, timing is defined by us as *confluent event trajectories in a network of interrelated events*. Timing can have both chronological and intentional contents (or more precisely a continuum with both absolute and intentional meanings) (Chung 1999). We base our view of time as events appearing in time-space (Hedaa & Törnroos 1997). The event concept is used here as a way to look at time as event streams in business networks. The contextual element is framing the way temporality, and spatiality, comes to terms in this setting (Chung 1999, Hedaa & Törnroos 1997).

Business networks are defined as sets of connected exchange relationships between (more than two) business actors. Both stability and change characterise business networks (Ford 1990, Möller & Wilson 1995). In business markets firms are developing business relationships with specific actors in the upstream as well as the downstream of activities in the value chain or net. Business relationships are often of long-term nature. This does not mean that they are everlasting or do not change. Mutual adaptations and investments in relationships occur continuously. Interdependence creates a need for individual network partners (or actors) to change and adapt in relation to other partners. Actors, activities and resources are involved in exchange from an actor-network perspective (Håkansson & Snehota 1995).

We have defined events as ‘an outcome of acts or changes caused by man or nature’ (Hedaa & Törnroos 1997). Events are temporally specific outcomes of performed acts. *Event networks* are time-based connected event relationships. Event networks (EvNs) have the following characteristics:

1. the smallest unit of analysis is an event dyad (two interrelated events);
2. an event is always an outcome of human acts or caused by nature;
3. actors (or nature) are mediators of events;
4. events are always contingent on the existence of some antecedent events;
5. objectively, event networks have no beginnings and no endings;
6. seemingly similar events are differentiated by their position in time and space and through their loadedness;

7. events may be loaded by the past or the future, and/or by the source or the effected objects (e.g. actor loaded);

EvNs may appear as streams of interconnected events (event trajectories).

Intentional timing is about matching the corporate firm's position for emergent event trajectories in intelligent competition with other firms. In the industrial network approach the firm is basing its existence and market relationships on doing business with other firms in the form of actor networks. Occasional, accidental and random processes are also at play in the intertwined, global economy where firms with limited network horizon act in networks of relationships with other firms, suppliers, customers and competitors.
How does management theory address these issues? In the paper we try to pinpoint some time-related issues in order to look at more process-oriented aspects of management theory.

STABILITY AND CHANGE IN MANAGEMENT THEORY

The essential driver of management is performance, to achieve objectives, to get results through and with other people. Usually, people's capabilities and motivation to do a certain job explain performance. The means to get the right quality of workers for a task are recruitment, training and appropriate deployment of sanctions. In a stable and therefore predictable world, it is possible for management to establish routines and control that the workers follow instructions. The task totality is solved by the coordination and integration of differentiated specializations of constituent human and physical performative elements. By repeating activities workers and management move down the learning curve and increase effectiveness and efficiency in performance, i.e. increasing output consistency and quality at decreasing costs. Opportunity structure is static and well defined, and timing is obtained through planning, scheduling and organization.

People obtain procedural knowledge - canonical and non-canonical practice (Brown & Duguid, 1991) - and they are involved in relationship learning, where incremental changes in roles, authority, communications channels, information technologies, standard operational procedures and shared vocabularies take place (March, Sproull & Tamuz 1991). Deviations from standard or performance expectations drive the people-to-task relationship toward equilibrium, steady states (von Bertalanffy

1950), and homeostasis (Katz & Kahn 1966) through negative feedback. This is the world of Chronos, where ex-ante prescriptions and normative theories thrive.

This closed system approach to organization and management comes under attack when a system opens up to the environment and gets involved with external interaction processes to obtain input to the system and to dispose of its output. The stable and controllable opportunity structure becomes dynamic and partly unpredictable. Organizations confront non-routine events and experience surprises. Resource dependency (Pfeffer & Salancik 1978) represents particular problems for organizations in high velocity environments, where "changes in demand, competition and technology are so rapid and discontinuous that information is often inaccurate, unavailable, or obsolete" (Bourgeois & Eisenhardt, 1988:816). The opportunity structure obtains dynamic network properties rather than hierarchical characteristics. This is the world of Kairos, where ex-post. explanations and descriptive theories prevail.

Kairology denotes a theory of timing (coinciding events) under conditions of uncertainty[1]. If the wrong events coincide it is bad timing or bad luck. If the right events coincide it is good timing or good luck. The problem is, of course, that we are only partly in control of the appropriate event constellation.
Business networks may be defined as connected dyads of firms, where a dyad is two firms and the relationship between them. Dyads of firms are connected in the sense that what happens (events) in one dyad conditions or are conditioned by what happens (events) in another dyad (Cook & Emerson, 1978). Events also form networks in connected event dyads (Hedaa & Törnroos 1997).

The model presented in figure 1 attempts to elucidate relationships between two different ways of seeing the business world. One triangle collapses traditional thinking (individual, autonomous actors creating routines). Predominant business thinking and textbooks usually take the perspective of the individual actor, i.e. manager or company, and build analysis and prescriptions on the assumption that individual actors are autonomous. Also performing a situation analysis, i.e. industry and company analysis is aiming at building new or re-engineering old routines to create a better fit between the internal and the external world of the company. Hence, volatility and dynamism are

[1] Concerning the Kairology-concept, see Kirkeby, Ole Fogh (2000): Management Philosophy; A Radical-Normative Perspective. Springer Verlag: Heidelberg/New York.

dealt with as abrupt, infrequent adaptive changes in order to create periods of stability, as dealt with in Greiner's seminal HBR-article (1972): Evolutions and Revolutions as Organizations Grow.

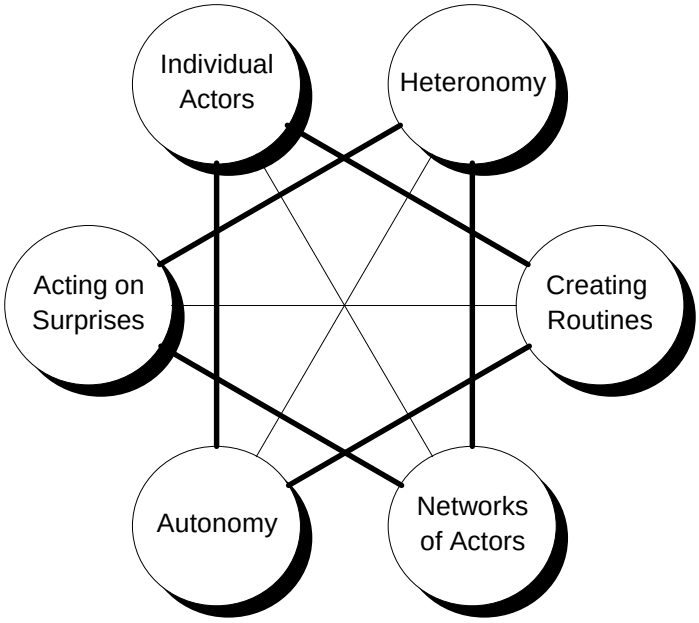

Figure 1. Two triangles relating to management theory and practice
Source: Hedaa 1997

The other triangle takes departure from the antonyms of the traditional approach, identifying a system where actors are heteronomously embedded in networks and acting on or enacting surprises. One wonders if this model of the business world fits reality better than the former triangle. If so, we need a new management theory. Managers do in fact react to surprises as new opportunities or threats. They never do this alone; always they discuss, negotiate or experiment with new variations of actions within perceived relevant time-space. When they act it is always a function of some prior interaction. Interaction is to move from heteronomy not to full autonomy, but rather to a state of homonomy (a neologism for the middle between autonomy and heteronomy, where relevant partners through interaction have arrived to a sort of common understanding for acceptable behavior = shared rules or norms).

The latter part of the overlapping triangle model may help us in understanding how companies interact and why it is important for arriving at a better situated and contextualized set of actions from which one may choose specific interactions (Hedaa 1997).

A MODEL OF TEMPORALITY AND TIMING IN BUSINESS NETWORKS

Time and temporality has been more extensively studied within sociology and other social sciences which could enrich the understanding of change and evolution of business networks (see e.g. Adam 1995, Clark 1985, Gurvich 1964). Developing models about the processual dimensions of business networks require, to our notion, an excursion into other social sciences. Using ideas and theories as springboards for a more coherent understanding of these mainly socially constructed business networks may be a promising avenue (for a closer examination of the use of the network metaphor see e.g. Araujo and Easton 1996).

The network approach to marketing uses temporally loaded terms and vocabulary. The use of theoretical constructs and the relation to practical research, theory and models is raised here with the perspective taken on time, timing and especially through interconnected events in understanding business networks.

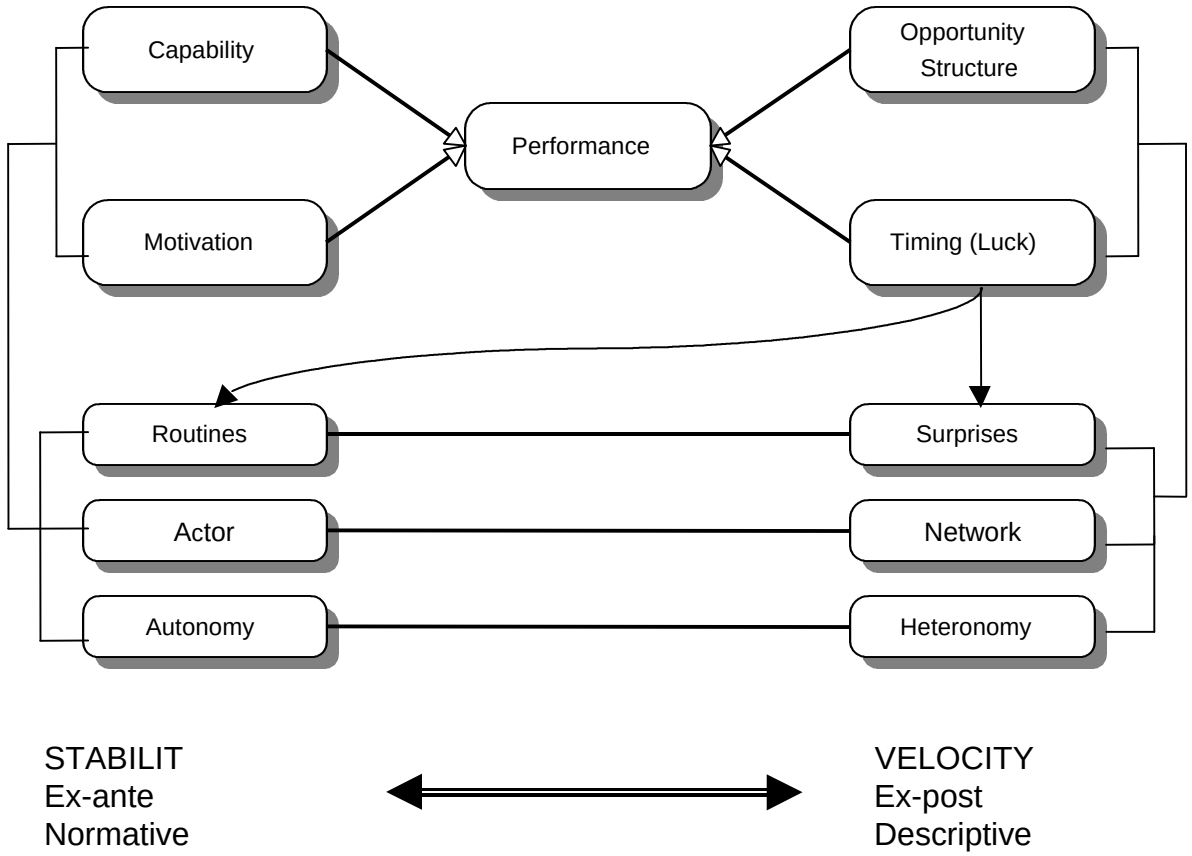

Figure 2. Performance-criteria in a two-dimensional time-space

When people explain their present favorable situation or position they often refer to antecedent circumstantial luck: “Well, I happened to be at the right place at the right time with the right kind of solution”. They admit that they exist under situational constraints beyond their own control. Situational constraints that regulate action either by supporting a certain set of activities or by impeding certain other activity sets may be referred to as opportunity. In a world of change, time becomes tim*ing* when an opportunity and an individual readiness to seize it coincide.

The processual approach to marketing and management deals with temporal and spatial change. When using events as temporal entities, the term process denotes how things change over time in the form of event trajectories.

In context, timing is seen here as the situational act in the form of a discernible event, which is made in a certain resource constellation with other actors (individuals, departments and firms).

These actors directly or indirectly contribute to the value net and influence competitors and other actors in the markets.

The model highlights the core perspectives concerning timing in business networks.
At one end of the model we have the world of Chronos and order at the other end unpredictability and the world of Kairos.

Performance is having two dimensions as well. The role of motivation and capability as factor together with the opposite, but relating force, of timing/luck and the prevailing opportunity structure.
Order and routines can be found in the Chronos world (reducing lead-times, syncronizing deliveries, JIT-management practices etc. between network actors).
Timing requires the ability to sense trends, tastes and combinations of new relationships and change in present network constellations. Finding new ways of combining former relationhsips (upstream or downstream) or connecting and investing into new relationships belongs to the world of Kairos. Both dimensions should be considered.
The four upper boxes in the model relate to performance in the time-space of Chronos vs. Kairos (stability vs. velocity). Capability and motivation relate closer to the actor (firms, departments individauls) in firms. Opportunity structure and timing relate more to the favourable moment and timing of new actions as pre-requisites for success in the forthcoming future event trajectories. The notion of both stability and change of business networks falls well into this type of modelling, where both aspects should be considered.

“Let’s go fishing”

In an event network perspective timing may be defined as *confluent event trajectories*. To illustrate this definition, let’s go fishing. The fisherman and the fish exist in two independent streams of events. In order for the fisherman to catch the fish (good timing or good luck) and the fish to be caught (bad timing or bad luck) a number of compatibility conditions and acts must coincide. First of all a favorable locational opportunity structure for fishing is water rather than soil. Secondly, the fisherman must use some kind of technology to get access to the fish world (fishing equipment, traps or bait). Thirdly, the fisherman may or may not have experience of good places to fish, or he

may have knowledge as to how to recognize a favorable biotope and time (deep or low water, spring or autumn, morning or night). The more relevant knowledge and experience the fisherman possesses the more likely it is, that fish will be caught. But fish may have experience as well, so they can recognize what traps or bait to avoid. The important thing to notice is the limitation in control of events by any one of the involved actors in the interaction. But also that the actors (fisherman and fish) can increase or decrease the probability of catch through choice of opportunity structure (e.g., mutual availability and proximity) and timing (synchronicity), rather than through the more direct factors of capability and motivation. Hence, the Kairology of fishing may impact probability of outcome, but there is no certainty of obtaining specific results.

KAIROLOGY IN THE DYADIC EVENT CONFIGURATION WITH REFERENCE TO BUSINESS MARKETING

Let us now move on to a more abstract discussion of interaction at the level of the dyad.

We have defined an event as '*an outcome of acts or changes caused by nature'* (Hedaa & Törnroos 1997). An event must have an informative content in order to be noticed (sensed). Weick (1995:86) raises the question: "How do you know when an event should be ignored (to let it pass) or something to pursue?" And he adds: "The same uncertainty occurs when people notice salient, novel, unusual and unexpected cues. Occasionally those cues are pursued. Usually they are not". The information in an event must be sufficient to overcome a certain threshold to be perceived and become a stimulus for an actor, whether that actor is the creator of the event or some other actor. A threshold may be defined either (1) as the amount of time and input necessary for sensing an event or (2) that intensity of stimulus from an event below which there is no response. Some events are only noticed by the actor who created the event, some are only sensed by others, and some are noticed by both the event creator and some other actors.

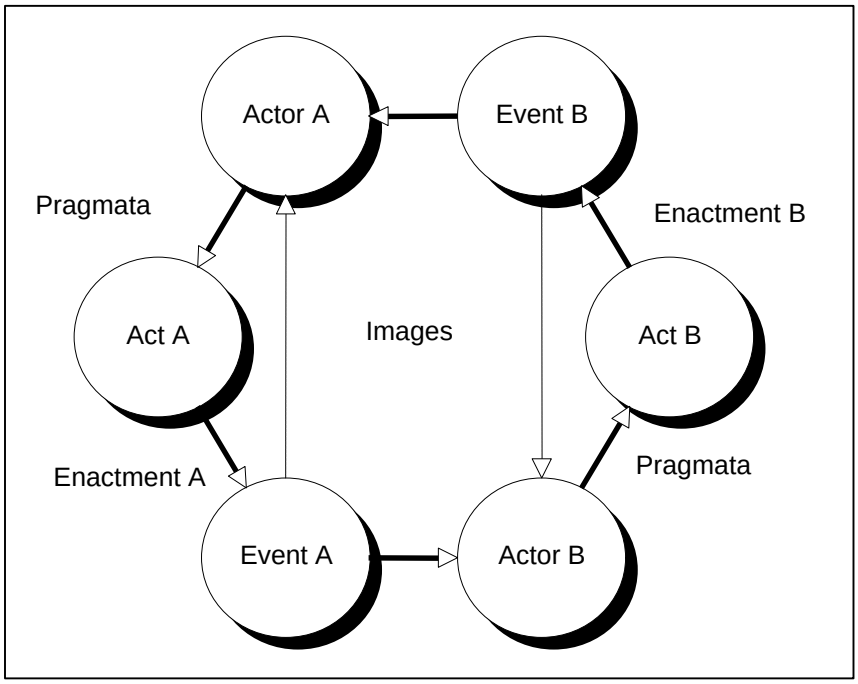

Fig 3: Dyadic Event Configuration

We notice events through a system of receptors. A receptor is that part of an organism which, in co-operation with the nervous system, detects what goes on (i.e. receives stimuli from) outside or inside the organism. Receptors are highly differentiated to specific stimuli to allow perception processes like touching, hearing, seeing, tasting and smelling. Receptors specialized to sense events emanating in the external world are named exteroceptors. Some of these, proprioceptors, are specialized in detecting position and movements of objects/events. Organisms also include internal oriented receptors, introceptors, aiming at detecting stimuli arising inside the body, such as pain or hunger, and probably ambitions.

We interpret the existence of these receptors in organisms as a proposition, namely that actors and associated acts (pragmata) are a function of (response to) events. Why else should we be equipped with our senses? That is also mirrored in the fact that a loss of one or more receptor functions is classified as disability, because reduced function of receptors impedes detection of events and thus invalidate our action repertoire.

The new normative response to globalization is flexibility. Organizations must react fast to events in global business. In order to react organizations must be able to detect what is going on and select an appropriate response. Being close to the customer (availability and proximity) may also be

interpreted as a means of timely detecting (visibility) and reacting to changes in customer needs (synchronicity, expressed through events at the customer or in supplier-customer relationship).

In an event perspective we posit that business events are connected, and that these connections are mediated by pragmata and enactment. We cannot think of any event that is not connected to an antecedent event, in one way or another. Incoming orders for new supplies do not come out of the blue. Neither can we think of any pragmata or enactments without connections to experienced prior events, or expected future events. In a sense all organizations are event-based organizations. It becomes especially clear when thinking of news media (reporting events), hospitals and fire-fighting service (repairing events), legal courts (settling events), insurance companies (compensating events), security firms (preventing events), advertizing agencies (creating events). From these examples it can be seen that some firms tend to specialize according to type of events they deal with (event composites).

Also intraorganizational differentiation takes place based on event specialization, and on event composites, determining roles and role relationships. Most organization diagrams with incumbents and roles implicitly illustrate composite events by design. Actors are selected, instructed and trained to notice and react to specific events, and to ignore most other events. If they go outside their assigned receptors' realm and action space employees may be told 'to mind their own business'. If relevant and important events take place outside the organization that have no corresponding exteroceptors in the organization then a crisis is likely to occur, sooner or later. Application of new technologies has hampered or even wiped out whole national industries. Contemporary business marketing ideologies of concentrating on existing customers and customer retention, and particularly attending to Key Accounts, at the costs of getting new customers, may exclude access to important informative events for addressing demands of the future markets.

Composite events also configure themselves through evolution (event variation, (natural) event selection and event retention). Each period of time may be seen as a latent period for a number of different and mutually excluding future event trajectories (i.e. cumulative sequences of linked events). It is like snowballs collecting events on their way down the slope of time. Only at the end of the slope it will be possible to determine which one of the snowballs at the beginning accumulated most events on they way down, or if the initial events caused an avalanche.

Alfred Marshall's, and later Arthur Brian's theory, of increasing returns may be an appropriate parallel exemplified by an account of why the variety of VCRs HVS was selected over BetaMax and System 2000 in consumer preference (HVS positive externalities, or events supporting HVS, sympatric to this specific variety, increased its attractiveness for both consumers, suppliers and providers of auxiliary services, despite a technology claimed inferior to BetaMax).

Much of our learning takes place through observing the outcome of our own acts. If we sense that our acts concur with our intentions in the resulting events we tend to repeat these acts whenever we want the event to occur. If the resulting event disconfirm our intentions we tend to adjust our acts in new trials. Learning is a lot easier if the event occurs immediately after the act, and if we can observe and hence experience the relationship between act and event. Delays in feed-back often create ambiguity about enactments and pragmata which means that actors need many more trials in order to establish proper relationships between acts and events. The effect of humans' skin contact with poison ivy appear 24 hours after the touch. This delay makes it difficult for man to identify the exact source among many possible causes of skin eruption, especially if one does not know the length of the incubation period. Even more difficult: The mushroom, Paxillus involutus, is edible only about ten times after which it destroys your kidneys for good. The combined length of reaction time and cumulative potentiation of the mushroom was discovered only a generation ago.

In the dyadic event configuration learning becomes even more complicated. In the figure above we combine two actor-act-event cycles, A and B. The relationship between events and actors we denote images. There are four images in a dyadic event configuration: AA, AB, BB, and BA of which only two are accessible for any one of the two actors involved. Actor A can, within limitations, sense Event A (image AA) and Event B (image BA), but can only guess about how Actor B, also in a limited way, senses Event A (image AB) and Event B (image BB). Here again, time lag and additive effect of separate event stimuli complicate learning, and hence, complicate timing. Furthermore, separation by space and cultural distance disturbs image congruencies and gets in the way for Kairos. Because our receptors have limited reach in dyadic event configuration we spend a lot of time in trying to make sense of fragmented and often puzzling contradictory images.

In undisturbed, stable dyadic relationships experience and experience exchange and transfer through generations may disclose patterns and event trajectories concurrent with refined expectations. But

when dyadic relationships expand into wider networks of many actor-act-event cycles our requisite variety of receptors and mental faculties become insufficient. Nobody today will deny that business firms exist in a global maelstrom or vortex of events, some of which have global reach and impact all business firms one way or another. We have spend aeons on figuring out what goes on in the mind of human beings, we have been occupied in generations with understanding how people decide and behave, but very little has been done to understand Kairos, how events are connected. Research has been focussed on actors, pragmata, acts and enactments. They are much less observable than are events. Hence, much of our understanding is based on speculation, which of course is not wrong per se. However, management fads seems to replace each other at an increasing speed (recently: total quality management, bench marking, just-in-time, business process engineering, learning organizations, team development, empowerment, relationship marketing, etc.). Most of these fads are tool-based rather than based on understanding of the underlying phenomena the tools should deal with. They deal more with pragmata and enactment than with events and images. The fads also respond to managers need for being in control. Evolution of tool applications (variation, selection, retention) and the short duration of fads may indicate that control mechanisms and methods are based on illusionary notions of autonomy and independence, where notions of heteronomy and (inter)dependence may be a more realistic foundation for management and marketing theory.

OUTLINE FOR A RESEARCH STRATEGY AND MANAGERIAL PRACTICE

Research strategy

We have looked at temporality as continuum of both Chrono-time and Kairos temporality in time-space (see Fig. 2).

Event networks and actor networks both affect the outcome regarding the timing of events in the form of relational time (i.e. contextual elements embedded in the flow of events from the past to the present and to the future) (Halinen & Törnroos 1995).

Both normative and descriptive theories relate to business marketing strategy in networks (see fig. 2). The normative ones have been dominating the world of Chronos. The contemporary turbulent environment of business creates disorder and unpredictability. Timing is a key word to

find a match between possible favorable outcomes of acts between event trajectories coinciding in time-space.

A research strategy, based on the foregoing discussion, should take a holistic perspective on time and timing in framing the world of actors as being heterenomous, rapidly changing, loaded with surprises and increasingly networked. Luck and surprises are usually not included as a part of managerial strategy. Managers think they should know how to make decisions under uncertainty and try to predict the coming future. We feel that it is important to address and realize the existence of non-controllable and unpredictable realities and make "sense" of it as a part of the networked environment where corporate firms operate. Having the ability of reading cues and making sense of changes and possibilities is a part of a research strategy when noting that the world consist of heteronomous actors, is networked and filled with surprises (cp. Weick 1995).

Managerial Practice

From a managerial point of view, noting temporality and timing forms a core competitive tool in marketing and management in networks in the turbulent global economy. The presented triangle with heteronomy, surprises and networks of actors could be a way to expand managers' understanding of reality in time-space (Fig. 1). Chung (1999) - in a similar manner - notes the role of extending temporal realities from chronological, absolute time notions to include time-based, intended, social time constructs as a strategy.

Management buzzwords and managerial tools developed for obtaining more efficient market strategies have, so far, predominantly used managerial routines in order to find more efficient time-use in decreasing lead-times, time-to-market models and JIT-management practices in the value net. Timing is the art of sensing and reacting to environmental changes as intended and unintended cues and signals for coming events.

From a network perspective relationships with other firms are in focus. Network management has mainly the following objectives to consider (1) establishing new relationships, (2) developing existing relationships, or (3) dissolving non-profitable relationships. New combinations of relationships form resource constellations (network capital) to meet corporate objectives. New investments into new and changes in existing business networks can create a resource constellations to prepare for a new and unpredictable future.

Kairology is a theory of timing in a stream of coinciding event networks and the random, accidental and potentially favorable upcoming event networks in the future. Sensing and making

sense of cues extracted from imagination about the coming time and requirements may be an important prerequisite for success - whether understood apriori of aposteriori.

Performance relates to both the Chronos part of time and to the Kairos part. Seeing the future possibilities and the impact of surprises as an opportunity structure for corporate performance leads to a focus on flexibility and rapid reaction rather than focus on being big and powerful. When firms position themselves in a network with other actors they can reduce uncertainty and create common structures to meet environmental turbulence.

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CHRONOS AND KAIROS

The ancient Greeks recognized two concepts of time, symbolized by the two gods: Chronos and Kairos.

Chronos was father of the Horae and of the mighty god Zeus. He represents linear, quantitative and all-consuming time. He is in control of the past, present and future. He ensures the orderly experience of life, and the appearance of things, making them look newer or older. From Chronos comes chronology, defined as the science that deals with measuring time by regular divisions and that assigns to events their proper dates.

Kairos was the youngest son of Zeus (Harold Kelman, 1969). He was young, with winged feet and most distinctly, has a long forelock in the midst of shorter hair. This forelock was symbolic of the 'right time' that must be seized before it 'flew' away. The Greeks used the word to give sense of a decisive point or place in time. It informed the 'best choice' of a particular time, (Mark Montesano, 1995:169). Kairos points to the significance of both time and the particular place in which an event occurs. The chronotype, the intersection of time and place. Kairotic moments potentially destabilize our belieft system (Mikhail M. Bakhtin, 1981).

Richard B. Onians (1951) has mentioned that besides 'the right time' or 'timelisness' Kairos also carries a spatial metaphor, that of a critical opening. The earliest Greek uses of the term, in both archery and weaving, referred to a 'a penetrable opening, an aperture,' through which an arrow or a shuttle must pass. Dale L. Sullivan (1992) refers to this as a window of opportunity. The kind of truth that comes through this 'window' is that which is 'unveiled' or revealed, not one that lends itself easily to analysis and study. Or as Paul Tillich (1963) notes: The 'right time' cannot be predicted. 'The holy spirit blows where it will.'

Carolyn R. Miller (1994): Kairos tells us to look for the particular opportunity in a given moment, to find – or construct – an opening in the here and now, in order to achieve something there and then. Pointing as it does to the ways that situations change over time, to relationships between past and future, to the ways that one moment differ from the next, Kairos seems to be a natural tool for examining discourse that emphasize change, development, progress.

'Tempus Opportunuum, Occasios, Utilitas' – What has been provided by opportunity (Lexicon Platonicum).

Chronos splits time in past-present-future, whereas Kairos is positioned between 'not yet' and 'never-more'.

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