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Organizational routines as negotiated order: The case of a young technological company

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Abstract

This paper contributes to the discussion on the foundation and development of organizational routines as "building blocks of organizational capability" (Winter, 1995: 148). By loosely referring to Weick's (1979, 1995; Weick, Sutcliffe, & Obstfeld, 2005) ideas of sensemaking and organizing, a framework is presented which analytically differentiates three phases describing the development of organizational routines. Based on the case of a young technological company, selected factors influencing the change of organizational routines are inductively identified and discussed. Overall, the findings suggest two main points: First, routine action and organizational stability has to be actively shaped and continuously reproduced by all organizational members in and through processes of ongoing negotiation. Thereby, fundamental change of routine action is, as observed, an emergent process which is triggered by a "crisis of truth" (Cunliffe, 2003) and ultimately grounded in situated action, feedback and success. Second, although the management plays a crucial role in triggering, pushing forward and shaping the change of corporate routine action and the outcomes of these processes, it is also shown that managerial influence is limited. While acknowledging the role of the managers

as key individuals is crucial for understanding the change of routine action, competence and competitive advantage, the role of non-management individuals also needed to be considered.

ORGANIZATIONAL ROUTINES AS NEGOTIATED ORDER: THE CASE OF A YOUNG TECHNOLOGICAL COMPANY¹

Alexander Martin & Carsten Dreher

ABSTRACT

This paper contributes to the discussion on the foundation and development of organizational routines as “building blocks of organizational capability” (Winter, 1995: 148). By loosely referring to Weick’s (1979, 1995; Weick, Sutcliffe, & Obstfeld, 2005) ideas of sensemaking and organizing, a framework is presented which analytically differentiates three phases describing the development of organizational routines. Based on the case of a young technological company, selected factors influencing the change of organizational routines are inductively identified and discussed. Overall, the findings suggest two main points: *First*, routine action and organizational stability has to be actively shaped and continuously reproduced by all organizational members in and through processes of ongoing negotiation. Thereby, fundamental change of routine action is, as observed, an emergent process which is triggered by a “crisis of truth” (Cunliffe, 2003) and ultimately grounded in situated action, feedback and success. *Second*, although the management plays a crucial role in triggering, pushing forward and shaping the change of corporate routine action and the outcomes of these processes, it is also shown that managerial influence is limited. While acknowledging the role of the managers as key individuals is crucial for understanding the change of routine action, competence and competitive advantage, the role of non-management individuals also needed to be considered.

¹ This paper reflects work in progress. Comments are warmly welcome.

INTRODUCTION

The competence-based view of strategic management theory highlights the central role of organizational routines for achieving and gaining sustainable competitive advantage. It focuses on “the importance of process” (Williamson, 1999: 1093) as the antecedent of unique resource stocks which allow for the ongoing generation of quasi-rents and sustainable competitive advantages (Dierickx & Cool, 1989). As such, the competence-based view is inherently dynamic (e.g. Easterby-Smith, Lyles, & Peteraf, 2009).

Among others issues (e.g. Arend & Bromiley, 2009; Easterby-Smith et al., 2009; Helfat & Winter, 2011; Kraaijenbrink, Spender, & Groen, 2010), it is still surprising that strategic management theory has largely ignored the internal (micro-)dynamics of organizational routines and competences (e.g. Arend & Bromiley, 2009; Feldman & Pentland, 2003; Kraaijenbrink et al., 2010; Salvato, 2009; Salvato & Rerup, 2011). The development of organizational routines is widely considered as being grounded in processes of *undirected local search* and *trial-and-error experimentation*, assuming a stimulus-response model of human behavior (e.g. Cyert & March, 1963; Levitt & March, 1988; March & Simon, 1958; Nelson & Winter 1982, Stuart & Podolny, 1996). This, in turn, implies strong emphasis on the external environment (Bourgeois, 1984) and past experience (Felin & Foss, 2011). Turned otherwise, explanations concerning the development of organizational routines and competences primarily refers to aggregated constructs (e.g. Abell, Felin, & Foss, 2008; Felin & Hesterly, 2007).

Thus, we still do not know much about how routines are actually carried out *in organizational settings* and what role *heterogeneous individuals* play for the stabilization and development of organizational routines and competitive advantage (e.g. Aime, Johnson, Jason, & Hill, 2010; Becker, 2004; Essén, 2008; Felin & Foss, 2009, 2011; Felin & Hesterly, 2007; Salvato, 2009; Salvato & Rerup, 2011). By largely neglecting “the individual as the

prime influencer of organized activity” (Bourgeois, 1984: 590), the development of organizational routines, or more broadly organizations, still seems to be a “process black box” (Priem & Butler, 2001: 33).

This paper aims to contribute to the “micro-behavioral foundation” (Kogut & Zander, 1992) of the development of organizational routines and competences (e.g. Abell et al., 2008; Felin & Foss, 2009; Foss, 2011; Gavetti, 2005; Lewin, Massini, & Peeters, 2011). By loosely referring to Weick’s (1979, 1995; Weick et al., 2005) ideas of sensemaking and organizing, a framework is presented which regards the development of organizational routines as a recursive process of (1) the *interpretive enactment of situations* by individuals, (2) the *social negotiation of emerging constructions of reality* and (3) the *sedimentation* of temporarily viable constructions in and through repeated collective action. The framework was empirically validated and inductively enriched by using a case study research approach (e.g. Eisenhardt, 1989; Flyvbjerg, 2006; Yin, 2009). Based on narrative interviews (Chase, 2008) and additional data sources (Eisenhardt, 1989; Yin, 2009), the successful change of routine action within a young technological company is reconstructed, spanning a period of almost ten years of which the last four years are of particular interest.

ORGANIZATIONAL ROUTINES

Within the competence-based view (e.g. Dierickx & Cool, 1989; Grant, 1991; Penrose, 1959; Teece, Pisano, & Shuen, 1997), the concept of organizational routines (e.g. Cohen et al., 1996; Becker, 2004, 2005; Nelson & Winter, 1982) plays a crucial role in understanding competitive heterogeneity among rivals within a given population (Nelson & Winter, 1982). Precisely, the concept of routines explains why some firms are able to *sustainably generate above normal returns* given the availability of mobile resources at factor markets (Barney, 1986). Organizational routines capture the transformation of *ubiquitary* resources into

strategic resources and constitute imperfect market conditions by preventing competitors from imitating these unique processes of resource accumulation (e.g. Knott, 2003).

Organizational routines are, for example, defined as “patterned sequences of learned behavior involving multiple actors who are linked by relations of communication and/or authority” (Cohen & Bacdayan, 1994: 555) and determine how people work together and make use of resources (Grant, 1991; Levitt & March, 1988; Nelson & Winter, 1982). Since organizational routines represent the “abstract way of doing things” (Nelson & Winter, 1982: 113), organizational routines transcend time and space and the observable activities of individuals (Schreyögg & Sydow, 2010). Thus, organizational routines describe *collective experience* which was made *in the past* and *shape present and future activities* by making this experience – in form of collectively shared rules, norms or patterns of interpreting – available to the organizational members.

While most authors agree upon the consideration of organizational routines as recurrent patterns of collective behavior which is learned, context-dependence, deeply embedded and historically specific (Becker, 2004), it is still unclear what role agency and individual agents play within the concept of organizational routines (e.g. Lillrank, 2003; Reynaud, 2005). The understanding varies from a more or less deterministic perspective on agency (e.g. Ashford & Fried, 1988; Levitt & March, 1988) towards a rather voluntaristic perspective (e.g. Feldman, 2000; Feldman & Pentland, 2003; Pentland & Feldman, 2005; Eisenhardt & Martin, 2000). While the first perspective neglects human agency as *explanans* for understanding organizational routines, the latter may tend to overstate the leeway of human actors, thereby running into the danger of losing the constitutive characteristics of social embeddedness, history and inertia of organizational routines and organizations (Schreyögg & Sydow, 2010). What needed is a perspective which allows accounting for both

simultaneously: The embeddedness, history and inertia of human and organizational action *and* the possibility of deliberate change of routine action.

As the following section demonstrates, the concept of sensemaking and organizing as formulated by Weick (1979, 1995; Weick et al., 2005) and others (e.g. Balogun & Johnson, 2004; Gioia & Chittipeddi, 1991; Harris, 1994; Thomas, Clark, & Gioia, 1993) could help to shed some light on the dialectic relationship between the two opposed perspectives (Schreyögg & Sydow, 2010) by highlighting the *retrospective character* of human and organizational action (Weick, 1979, 1995) as well as the need to *continuously interpret the environment*, thereby “filling” creatively gaps in understanding, meaning and action in order to produce and re-produce sense, organizational action and social order (e.g. Garfinkel, 1967).

SENSEMAKING AND ORGANIZING

The concept of sensemaking and organizing as formulated by Weick (1979, 1995; Weick et al., 2005) is based on interpretivism (e.g. Wilson, 1970). Interpretivism basically rests on the assumption that reality is what people *think is real* and not what is objectively given (Thomas & Thomas, 1970). Understanding, meaning and action are based on *our interpretations* of the world and constructed in processes of social and material interactions (e.g. Joas, 1997; Orlikowski, 2007). Hence, understanding and meaning is relative to the people ascribing meaning to events and facts (Gioia, 2003). Although not necessarily mindful and conscious (e.g. Bourdieu, 1990), the construction of understanding and meaning is to be considered as an effortful accomplishment (e.g. Garfinkel, 1967; Pentland & Rueter, 1994) of knowledgeable actors (Giddens, 1984) in their specific situations (Joas, 1997; Suchman, 1990). Since from this perspective all social phenomena become reality solely through situated interaction, mediated by and resulting in viable knowledge of the world, our understanding of organization and organizing fundamentally changes (Weick, 1995).

Organizations only exist in and through processes of understanding and repeated interaction (e.g. Giddens, 1984; Wilson, 1970).

Following interpretivism, Weick (1995) calls the process of developing a viable understanding of the world *sensemaking*. Sensemaking is about how people “construct what they construct, why, and with what effects” (Weick, 1995: 4). According to Weick (1993: 635) “the basic idea of sensemaking is that reality is an ongoing accomplishment that emerges from efforts to create order and make retrospective sense of what occurs.” Quite similar, Thomas, Clark, and Gioia (1993: 240) describe sensemaking as “the reciprocal interaction of information seeking, meaning ascription and action.” Sensemaking is, at least, *historically anchored* and an *interactive accomplishment*.

The *historical character* of sensemaking is described by Weick (2003: 895) as “life is lived forwards but understood backwards.” For Weick (1995, 2003; Weick et al., 2005) the process of sensemaking is inherently retrospective in the way that interpretations of events are based on *existing* frames of reference and experience. In this respect, “believing is seeing” and “prior conceptions drive interpretation” (Gioia, 2006: 1714). This does account for relatively unconscious and automatic processes of interpretation as well as for conscious processes of active thought and evaluation (Gioia, 2006; Weick et al., 2005). Interpretation comprises the “normalization” of irregularities and could inhibit the change of the dominant course of routine action (Weick & Sutcliffe, 2006). Thus, “normalization” allows for the relatively uninterrupted resumption of organizational activities even in phases of environmental change and may build the fundament for cognitive inertia (e.g. Tripsas & Gavetti, 2000) and path-dependency (e.g. Schreyögg & Sydow, 2011).

Sensemaking, or the production of viable understanding, is inseparably intertwined with *social action* (Weick, 1979). The construction of understanding is therefore not to be regarded as a cognitive process that comes before action, but fully enfolds in and during

situated action (Gioia, 2006). Thereby, sensemaking covers the full process of developing meaning and goes beyond interpretation by accounting for action as well (Gioia, 2003; Weick, 1995). Additionally we should note that sensemaking is about dealing with fundamental ambiguity, complete interruptions and the “basic questions” of daily life and captures the active, inventive and explicit reconstructing the world (Weick, 1995).

FRAMEWORK

The process of sensemaking and organizing can be separated analytically into the three phases of (1) the *interpretive enactment of situations* by individuals, (2) the *negotiation of emerging constructions of reality* and (3) the *sedimentation* of temporarily viable constructions in and through repeated action (see also Weick et al., 2005). Since these phases are characterized by multiple reciprocal processes of interchange, the following framework implies some kind of “scientific bracketing”, in which the world is *scientifically* organized to make sense (Giddens, 1984). However, the framework may help to deepen our understanding of the development of organizational routines.

Interpretive Enactment of Situations

Explicit sensemaking and conscious reflection upon the situation is generated by a high-level of “disruptive ambiguity” (Weick et al., 2005). The reception of a “crisis of truth“ (Cunliffe, 2003), a “breakdown“ (Gherardi, 2000) or a “surprise“ (Schön, 1983; Yanow & Tsoukas, 2009) leads to an interruption of routine action and a situation, in which existing norms, values, beliefs and mental models are rendered insufficient for accomplishing organizational life. As a result, more focal forms of attention are necessarily needed in order to reconstruct sense (e.g. Balogun & Johnson, 2004).

The reception of ambiguity further leads to conscious processes of noticing and bracketing (Weick et al., 2005): Anomalies in the environment are – often crude and in a first approximation – consciously registered, categorized and reduced to a manageable level. In

processes of interpretative enactment, individuals *begin* to develop new views of the world by making use of their past experience in processes of analogical reasoning (e.g. Gavetti, Levinthal, & Rivkin, 2005; Gentner et al., 1997) or by developing abstract models of the “their” world with reference to theoretical knowledge (e.g. Kolb, 1984; Yanow & Tsoukas, 2009).

Negotiation of Emerging Constructions of Reality

“The number of possible meanings gets reduced in the organizing process of *selection*.” (Weick et al., 2005: 414). While Weick et al. (2005) primarily refer with this statement to the intra-individual selection of meaning, the development of collectively valid meanings is here regarded as an inherently social process, which includes mental dialogs, communication and negotiation among different people (e. g. Harris, 1994). While reduction of possible meanings held by single individuals is one result, interaction with other people and material artifacts may leads to the discovery of new meanings. Turned differently, the creative development of new meanings and appropriate courses of action is inherently cooperative and social (Joas, 1997; Weick, 1995). Validity of new meanings and courses of action are shaped within processes of communicative rationalization (Habermas, 1981) and negotiation (Strauss, 1979). Collectively valid meanings are therefore to be constructed in processes of communication in which claims are made, discussed, revised, changed and, often by the use of power in processes of “sensegiving” (Gioia & Chittipeddi, 1991), collectively established (Geiger, 2009). *Collectively accepted*, but still preliminary understandings and strategies of how to proceed are “produced”.

Sedimentation

While the negotiation of meaning, understanding and appropriate courses of action may lead to temporarily collectively accepted ways of how to proceed, at this point in time shared meaning are often *highly fluid, fragile and conceptual*. Reconstructed understanding

that guides coordinated action needs to be proofed and further developed in processes of experimental learning (Kolb, 1984). As such, the development of viable understandings and relatively stable courses of action are ultimately connected to practice (e.g. Brown, Collins, & Duguid, 1989; Brown & Duguid, 2001). From the possible courses of action, the one is likely to be followed and refined which lead to the reach of a certain level of aspiration (e.g. Cyert & March, 1963; Mezias, Chen, & Murphy, 2002). Due to the complexity of the world, the likeliness that intentions and plans transform straight into action is thereby limited (Suchman, 1990) and processes of sedimentation may include the (ongoing) refinement of understanding, meaning and action (Weick et al., 2005).

METHOD, DATA AND SETTING

Method and Data

Interpretivism necessarily needs to look at social phenomena from an *inside perspective* (Gioia & Chittipeddi, 1991; Knorr-Cetina, 1981). Hence, interpretative studies are usually associated with qualitative research approaches (e.g. Denzin & Lincoln, 2008; Miles & Huberman, 1994; Pratt, 2009). Qualitative research aims for the *natural, in-depth, and holistic* inquiry of the phenomenon at hand and puts emphasis on the reconstruction of “meanings people place on the events, processes, and structure of their lives” (Miles & Huberman, 1994: 10). Case study research, as applied here, allows for the in-depth and inside inquiry of these processes (Eisenhardt, 1989; Eisenhardt & Graebner, 2007; Flyvbjerg, 2006; Yin, 2009).

As suggest by Pratt et al. (2009), the following single case was selected based on a *theoretical sampling*, in which “cases are selected because they are particularly suitable for illuminating and extending relationships and logic among constructs“ (Eisenhardt & Graebner, 2007: 27). In order to evaluate the aptitude of the case in advance, a preliminary talk with one of the CEOs of the researched firm was conducted in June 2010 before data

collection was finally started. The case was selected because it represents an *extreme case* in which the phenomenon of interest (broadly defined as the successful change of routine action and the rebuilding of competence within a relatively short period of time) was assumed to reveal transparently (Yin, 2009). Additionally, the existing relationship between the researchers and the researched, which was established in a former scientific project, was considered to be helpful for the accessing, gathering and interpreting data (Yin, 2009). Finally, the case captures work which is collective and complex in nature, bringing different people together to solve non-standard problems. This may be taken as genuine prototype of routine action as defined in literature (e.g. Nelson & Winter, 2002).

For the case study, a total of 20 face-to-face interviews with 17 different persons and an average duration of 1:04h were conducted from June 2010 to September 2010. The interviewees were selected according to their hierarchical and functional position within the researched organization and their duration of employment. In line with interpretivism, the interviews were conducted in a non-standardized fashion in order to hear the “voice of the interviewees” (Chase, 2008). However, to elude problems of handling massive data, the interviews were slightly focused and guided by a set of rough heuristics deduced from the framework (Chase, 2008). After the preliminary interpretation of 17 interviews, the researchers had the feeling to have reached a certain level of “theoretical saturation” (Eisenhardt, 1989). Therefore, the next three interviews primarily served to validate the interpretation of the researchers (Gioia & Chittipeddi, 1991) and were narrowed on selected topics and remaining open questions.

Besides the interviews, additional data sources were collected and taken into account (Eisenhardt, 1989; Yin, 2009). These data sources encompasses *primary data sources* as accompanying written remarks on interviews, visual impressions and informal talks as well as the collection of biographical data of the interviewees. Data collection also encompasses

secondary data sources provided by the organization or publically available. For example, strategy papers, organizational charts, project management guidelines, public presentation or financial figures were additionally analyzed.

Setting

Systemello (a pseudonym) is a young technological firm. It was founded in 2000 through a management-buyout. In exchange, the former employing company received 75 percent of the company's shares. The motivation for founding Systemello was described by one of the founders as grounded in a certain level of dissatisfaction with their former employer, their working conditions at that time and in the *personal desire* to return back to their home area. Detailed market, competitive or production site analysis were not conducted in the run-up of the business formation. Rather, the founders simply "*had the feeling*"² that there was some market potential.

Systemello works in the industrial field of process engineering and mainly develops and implements *highly complex engineering solutions* for the technical operation of production sites. Within these projects, *customer specific* software and hardware solutions are developed and implemented. The business model of Systemello is both technology and project driven. These projects span an array from small "one man projects" up to large projects with up to 20 people in which the core project team is working together for more than two years.

The company is strategically managed by the two CEOs and operationally by the leaders of three business divisions. The management group consists of the two CEOs, the leaders of each business division and the leaders of the central departments (e.g. marketing, it-systems, accounting). The management group meets weekly. Although the leaders of the

² Quotations from the interviews are cursively formatted and put into quotations marks. All quotations were translated into English by the authors.

divisions have a relatively high level of decisional freedom, corporate-wide activities are introduced and implemented by the CEOs.

Systello has now about 300 employees and gained in 2009 a total net sale of approx. € 35m. As many young technological companies, Systello was growing in the past extraordinarily fast. Until 2006, it almost yearly doubled its number of employees and net sales. Correspondingly, the average size as well as the technological complexity of the projects has increased significantly. However, Systello was able to meet or even over-fulfill its objectives *reliably* in the years from 2000 to 2006. Defining organizational competence as the potential of an organization to reliably meet its objectives (e.g. McGrath, MacMillan, & Venkataraman, 1995), Systello could therefore be considered of being capable of solving its problems. Turned otherwise, Systello seemed to possess until the mid of 2007 the relevant organizational routines for generating sustainable competitive advantages.

The primary period of this study covers the years 2007 to 2010. During this period, Systello mastered some of fundamental organizational change processes. These processes included, for example, the introduction of the three business units, the introduction of a comprehensive controlling system or the reorganization of the production of hardware components. More important, Systello was able to recover its competence after a financial loss in the year 2007 (and a balanced result in 2008) by deliberately changing its organizational routines. What is nowadays considered as *senseful organizational action and organizing* by most of the organizational members has changed dramatically. Until the mid of 2007, senseful organizing was primarily considered as the *development of sophisticated technological solutions* and the *ongoing generation of progressive corporate growth* (measured and evaluated in net sales and number of employees). Consequently, organizational action was at that time classified as *successful* if it led to the development of sophisticated technical solutions or if organizational action contributed to realize the progressive growth of

the company. *Please note that these ends need to be considered as “ends in themselves” without any further reasons.* However, nowadays organizing serves others ends and is best described as *the generation of corporate profits* and the provision of a high level of *organizational adaptability and transparency.*

KEY FINDINGS

Reconstructing the Initial Situation

The trigger for the observed change in sensemaking and organizing can be dated back to the third annual projection of the financial results in November 2007. For the fiscal year 2007, a substantial negative result was estimated, for the first time in the company’s history. Thereby, the fiscal projection made the organizational members “*first*” and “*suddenly*” realize that the positive corporate performance came unexpectedly to an end. Almost all of interviewees labeled this corporate situation as “*crisis*” and perceived this state as a situation in which the routinized ways of coping with problems had turned out to be significantly limited. Since the negative results were not expected by the actors, the situation represented an abrupt “surprise” (Schön, 1983) or “breakdown” (Gherardi, 2000).

Before November 2007, organizational action was primarily based on a high level of practical knowledge (Giddens, 1984) and historically grown over the years. The more or less unconscious application of existing problem-solving routines can further be described as (1) *the ad-hoc shift of experienced staff between different projects*, (2) *the short-term jump of the experienced CEOs into problematic projects*, (3) *the uphold hiring of young employees for the closure of resource bottlenecks* and (4) *the compensation of resource bottlenecks through above-average efforts by experienced organizational members.* These problem-solving routines have “*obviously worked well*” for a long time. Change in the four dominant problem-solving routines was incremental and can be characterized by a high level of local search (Stuart & Podolny, 1996). Corporate problems were mainly solved by an intensified

application of the existing problem-solving routines. Thereby, the problems which should be solved (e.g. coordination and resource problems in projects resulted out of the uphold hiring of young and inexperienced employees) were *recursively intensified*. Turned otherwise, the change of routine action and organizing was path-dependent (Becker, 2004; Sydow et al., 2009). One of the interviewees explicitly made the analogy of a “*spiral*” to describe the path-dependent character of most organizational action at that time.

In a first abstraction, collective organizational action at that time can be described as “behavior that is conducted without much explicit thinking about it, as habits or customs” (Nelson, 1995: 68). However, characterizing *all* organizational action as being pre-reflexive and unconscious would conceal the fact that there were also change initiatives in place which were grounded in more reflexive forms of coping with the consequences of the rapid company growth and the ensuing negative side effects of the intensified application of the four problem-solving routines. Some organizational members expressed *long before* November 2007 *explicitly and repeatedly* the concern that the current corporate development of Systello “*could no longer go well.*” These organizational members dealt reflexively with the corporate situation and developed *alternative constructions of reality and action strategies* to address the consequences of the rapid company growth.

Interestingly, the development remained not a mental construction by some isolated individuals. Prior to the crisis, a variety of change initiatives were formally implemented. For example, in 2003 official qualitative management directives for the implementation of customer projects were released or, another example, training courses were offered for new employees in 2005. These initiatives were targeted to cope with the general working conditions and didn’t *directly* pursue the two ends of developing sophisticated technical solutions and the generation of progressive company growth. Thus, they were grounded in different models of sensemaking and organizing.

In spite of the formal implementation, the impact of these initiatives on the *collectively shared models sensemaking and the collective ways of organizing work* was limited. The necessity and usefulness of the initiatives were not acknowledged by the majority of the organizational members. Besides other issues like the ongoing success of routine action (e.g. Miller, 1994) and a certain state of euphoria, passion and absorption (e.g. Csikszentmihalyi, 1975), especially the lack of relevant business knowledge structures (Cohen & Levinthal, 1990, 1994) hampered the successful implementation of the formally implemented change initiatives. However, since the attempts of introducing the alternative constructions of reality could be traced back *over a period of several years*, it is to assume that multiple models of sensemaking and organizing exist simultaneously in organizations. This, in turn, also shows that continuity in routine action and organizational stability need to be produced continuously in and through processes of negotiation between heterogeneous actors holding different models of sensemaking and organizing. Hence, routine action and organizational stability should *not be theoretically presumed as already given by researchers* (e.g. Schreyögg & Sydow, 2010; Thomas, Sargent, & Hardy, 2011; Tsoukas & Chia, 2002; Weick et al., 2005). Organizational routines and social order rather seem to be, at least to a certain degree, fragile and needed to be actively produced and re-produced by knowledgeable actors (e.g. Garfinkel, 1967; Giddens, 1984).

Interpretive Enactment

The following paragraph focuses on how individuals (or a small group of individuals) at Systello developed alternative constructions of reality and appropriate action strategies in response to the perceived corporate crisis in November 2007.³ These individuals started to develop alternative models of sensemaking and organizing in order to overcome the critical

³ For the sake of clarity and to reduce redundancy as best as possible, the level of analysis is the management group which is treated here as a relative homogenous entity. This was actually not the case. However, processes of negotiation *within* the management group are not closer examined in this paper.

corporate situation by re-ordering “their” world. First, there was an acceptance of the usefulness and necessity of *already existing* alternative constructions of reality (e.g. the official qualitative management directives for the implementation of customer projects or guidelines for controlling projects) within the management group. In response to the crisis, these alternative constructions of reality were considered as a sensible way of how to cope with the consequences of the rapid corporate growth. Within the process of “*taking over*”, the management group started to notice and bracket other “sections of the world” (Weick, 1995) and started, for example, to urge the employees to adhere to the existing guidelines.

The development of rather *new* constructions of reality and appropriate courses of actions can be traced back to *processes of analog reasoning* (e.g. Gavetti et al., 2005; Gentner et al., 1997) as well as to the *acquisition of theoretical knowledge* (Kolb, 1984; Yanow & Tsoukas, 2009). For example, the idea for establishing three business divisions was developed in drawing an *analogy* to one legally independent subsidiary of Systello. The subsidiary was economically successful in 2007. Hence, altered constructions of reality were based on analogies drawn between the corporate situation at Systello and other (successful) entities (the subsidiary, competitors or former working experience of selected individuals).

Other constructions of reality emerged by making use of *theoretical knowledge*. For example, some of the interviewees referred to a management textbook (Malik, 2000) which had a strong influence on their sight of what contemporary business management should look like and how it is practice nowadays. The theoretical knowledge provided by the textbook and by other sources (e.g. business courses) influenced the development of new constructions of reality and shaped the ways of how to cope best with the crisis situation in 2007. Precisely, the end of ensuring continuous adaptability and transparency was directly inspired by the management textbook, while the end of generating corporate profits may be traced back to the

participation of selected key individuals in externally provided business courses on controlling.

The study of the relevant management literature as well as the participation in business courses not only led to new constructions of reality, but also had a substantial impact on *the construction of the identity* (Weick, 1995) of selected members of the management group. One of the CEOs summarized his nowadays role with the keywords “*driver of change*”, “*strategist*” and “*economist/controller*”. Specifically, this CEO sees his main task now in ensuring continuous adaption (“driver of change”), the ensuring of adaptability and transparency by reducing uncertainty (“strategist”) and the generation of profits (“economist/controller”). Sensemaking and organizing has started to shift from the development of sophisticated customer solutions and the generation of further corporate growth toward the continuously adaption to environmental change and the generation of corporate profits. The development of sophisticated customer solutions as well as the generation of business growth represent now, in turn, means and are subordinated to the ends of ensuring organizational adaptability, transparency and the ongoing generation of corporate profits.

Negotiation of Emerging Constructions of Reality

The following paragraph examines the question of how a certain level of *collectively shared understanding and meaning* was established within the workforce of Systello. Precisely, this paragraph aims to answer the question of how the management group was able to make the workforce understand and accept the altered constructions of reality. Thereby, a certain level of resistance had to be overcome which, in turn, also led to the refinement of selected constructions of reality held by the management group (e.g. Gioia & Chittipeddi, 1991; Thomas et al., 2011). For example, the development and implementation of the corporate risk management system was characterized by several feedback loops between the

models held by the management (and developed primarily by reference to theoretical knowledge as, for example, provided by literature) and the adaption of the risk management system by *experienced, non-managerial project leaders* in and throughout its application. Thus, the shape of the risk management systems (e.g. the scope of data to be collected) and the way how to use it (e.g. the modes of data collecting and evaluation) were massively changed in order to work in practice. Other change initiatives, for example the implementation of a sale controlling system, completely failed due to the resistance of the workforce. The ideas developed, held and introduced by the management group often changed or even completely failed within the process of negotiation in which resistance needed to be overcome.

However, acceptance of the altered constructions of reality within the workforce could be achieved relatively quickly by argumentative reference to the significance of the crisis situation. Thus, the *relevance and scope of the items to be negotiated* was one factor which contributed to the acceptance and understanding of the change initiatives (Strauss, 1979). Despite the given relevance and scope, the establishment of a certain level of acceptance within the workforce was by no means a “*fast selling item*”. The successful implementation rather required *ongoing communicative efforts* by the management group in order to convince the workforce of the “sense” of the diverse change initiatives. Communication was not simple. Due to their secondary socialization (Berger & Luckmann, 1980), the technical workforce holds different knowledge structures (Cohen & Levinthal, 1990, 1994). This was, for example, described in the interviews by statements like “*the economically unfamiliar programmers could not grasp with business numbers*” or the “*business unit managers, for example, those are all engineers, and have relatively little economic background.*” The different knowledge structures served as communication barriers. The altered constructions of reality represented *non-interpretable disturbances* and the lack of understanding further on

led to the retention of old patterns of action in order to maintain ontological security and emotional identity (Giddens, 1990). Consequently, accompanying business courses enabled the workforce to begin to develop a first understanding of the altered constructions of reality as held by the management group. The educational business courses primarily served to convey the “*economic background knowledge*” and played a crucial role insofar as it helped to develop the “knowledgeability” (Giddens, 1984) of the workers.

Further on, successful communication cannot be understood as a linear process of releasing information. Rather, communication was successful when it was practiced as *discursive processes* involving the open exchange of arguments (Habermas, 1981) among all organizational members. Thus it was essential for the acceptance and takeover of the altered constructions of reality that the concerns of the workers were taken seriously into account by the management group and that these concerns were discussed discursively (Thomas et al., 2011).

However, successful implementation additionally required a certain level of *observability of the change efforts undertaken by the management group*. It is assumed that the “non-verbal behavior...in the sense of social technologies are central to the psychological effectiveness of the actual information” (Bergler & Six, 1979: 35, our translation). For example, various interviewees referred explicitly to the *credibility and authenticity* of the management group as important factor for the successful implementation of the various change initiatives. The altered constructions of reality and appropriate courses of action needed therefore not only be discursively mediated but also physically in processes of *direct interaction* in which trust, respect and commitment are produced (Orlikowski, 2002). The change initiatives were first fully accepted by the workforce as they could *observe* a certain level of congruence between the discursively expressed requests for change and the change of *observable managerial* (physical) action.

The inquiry also showed that mechanisms of legitimation and sanctioning were additionally needed. In essence, three different forms of legitimation may be distinguished: *First*, it was necessary that the management group legitimate the introduction of the change initiatives towards the workforce. The management board primarily did this by reference to the supposed interests and claims of the majority shareholder. Thus, the positional power of the management group could not simply be applied (Giddens, 1984). Rather, it had to be negotiated within Systello. *Second*, powerful individuals had to threaten sanctions on deviant behavior. In the years before 2007, several changes initiatives were launched and introduced by the quality management department without managerial support. Due to their hierarchical position, the quality management department wasn't able to apply sanctions in case of deviant behavior and the workforce could easily ignore the change initiatives without fearing sanctions. After the change initiatives were introduced with strong support of the CEOs (and, as mentioned, truly acknowledged by the CEOs and other members of the management group), deviant behavior could hardly be legitimated against the quality management department anymore. *Third*, processes of social control (e.g. Barker, 1993; Janowitz, 1975) were observed at the workforce level. Due to the re-employing corporate success in 2009 and 2010, the acceptance of the change initiatives became increasingly collectively shared and institutionalized among the workforce of Systello. The workforce members who didn't accept the "*new rules of the game*" increasingly needed to legitimate their deviant behavior against the more successful colleagues.

Sedimentation

Most of employees at Systello, at the workforce level as well as on the management level too, nowadays routinely apply the altered ways of how to implement projects. It is now, to a certain degree, "normal" that projects are means to realize corporate profits rather than means for the development of sophisticated technical solutions and the achievement of further

company growth (as it used to be in the past). Accordingly, most of the organizational members “*live*” the changes initiatives and “*got accustomed*” to the new ways of organizing their work. The altered constructions of reality and courses of action have experienced some spatial and temporal expansion within Systello. This is additionally indicated by the fact that the readiness for new change initiatives has declined and organizational members *at all hierarchical level* have started to develop again “defensive routines“ (Argyris, 1985).

Positive feedback on the results, generated through the altered organizational action, was the most critical factor which contributed to the sedimentation of understanding, action and to the stabilization of routine action. Besides the quick achievement of outstanding corporate profits in 2009 and 2010, especially the perception of a certain level of competence attribution by third parties (customers, external auditors, the majority shareholder, other companies and competitors) were substantial for maintaining (and refining) the developed constructions of reality and the altered ways of organizing. Turned otherwise, the perception of success contributes to the transformation of deliberate steps of action into a “continuous flow of conduct” (Giddens, 1984) and thus routine action.

However, success needed to be *causally attributable to the change of action* and needed to be *experienced more or less directly by the organizational members*. Consequently, it was important to provide a high level of transparency regarding the relationship between the change of action and the generated results. Transparency was thereby possible by the availability of certain resources (e.g. information systems) as well as by well-established rules for the management of projects. The interviewees illustrated this by referring to the introduction of productivity indices (e.g. the percentage of completion of projects) and key performance indicators (e.g. profit margins at the project level). The availability of these numbers made the results of their own action as well as the results of other people’s action *visible* for the organizational members. While before November 2007 the practice of

accounting profits at the corporate level “randomized” the relation between individual action and results, the impact of individual action can now be evaluated directly.

Additionally, results were additionally made “experientable” by modifications of the incentive system toward a project-based evaluation which honors individual efforts. Thus, the change of action could be *directly experienced* by the organizational members. This was also felt by the actors in another way: Due to the ensuing efficient management of projects, there was a significant reduction of the individual work load. In this respect, the workers (as well as the management) directly experienced the success of adjusting their actions.

Besides, a certain degree of *structural continuity* – understood as the *continuity in the validity of altered constructions of reality* held by the management group – was essential for the sedimentation of action. Especially in the initial phase and in direct response to November 2007, the implementation of change initiatives were considered as overhasty by the workforce. This was, for example, illustrated by reference to the availability of controlling forms for registering the project progress and underpinned by the assertion that the volatility of the formal structure hampered the sedimentation of action. Put simple, the actors couldn’t “*get used*” to the change initiatives because there was nothing to what they could get used. Thus, it was imperative that the constructions of reality exhibited a certain degree of validity in time and space.

Closely related, the possibility of a *frequent application of the altered constructions by the workforce* played an important role for the sedimentation of action. Turned otherwise, appropriate understanding and organizational action have to be learned by the actors in their specific situations (e.g. Brown et al., 1989). Through the repeated application of the altered courses of action, reliable patterns of collective action were (often creatively) developed. Thus, the possibility of repeated action in relatively stable contexts seems to be necessary in order to develop a viable understanding and reliable patterns of action.

The sedimentation of action additionally needed to be accompanied by *measures of sanctions*. Thereby, it was important that sanctions referred to the criteria applied by action and not to the generated results. While a certain level of tolerance for the non-achievement of the intended results of action was necessary, especially to allow the actors to *experience* the altered constructions of reality, a certain level of intolerance against deviations from the underlying constructions of reality was needed. However, the imposition of sanctions was a tightrope act. A *reasonable deviation* from of the official rules needed be tolerated by the management group in order to ensure that the organization remains functional (Bensman & Gerver, 1963). The management group needed to allow in specific cases – or specific types of cases – to some extent deviations and should not impose sanctions mechanically. To keep control of the extant of deviations and to prevent that exceptions turn into rules themselves, the management group needed to act officially “as if” the deviations are unknown to them. The employees, in turn, pretended “as if” they would follow the rules (they knew, of course, that they deviate from the norm and, additionally, they also knew that the management group knew that they deviate from the norm). Thus, both parties knew that in *selected cases* (and only there) more or less clear deviations from the official rules are acceptable (and needed).

CONCLUSSION

The case study provides, among other issues, two central results: *First*, it shows that even in times of *environmental stability* and *outstanding organizational success over a relatively long period of time*, routine action still has to be actively shaped and continuously reproduced by organizational actors. Within Systello, the observed company, opposing models of sensemaking and organizing *co-existed over years* and, in turn, needed to be mediated in order to allow for repetitive organizational action and organizational stability. Thus, organizational routines are not something that lies outside individual action and determines individual action (Feldman & Pentland, 2003). In this respect, the notion that routines

represent some kind of an “organizational truce” (Nelson & Winter, 1982) may be doubted (e.g. Feldman & Pentland, 2003). In contrast to the dominant view in strategic management theory, organizational routines ultimately exist in and through situated action. Consequently, organizational stability, or more broadly social order, has to be constantly produced and reproduced through *processes of negotiation* among heterogeneous organizational members in specific situations and should not be prematurely presumed as already given by theorists (e.g. Garfinkel, 1967; Schulman, 1993; Strauss, 1979; Thomas et al., 2011; Tsoukas & Chia, 2002; Weick et al., 2005). Important to note is that negotiation even accounts for the relatively stable reproduction of routine action (e.g. Howard-Grenville, 2005). Hence, in order to understand organizational routines and stability, it seems important to investigate the processes of negotiation in and through which stability is temporarily produced by closely looking at the “micro-behavioral foundation” (Kogut & Zander, 1992) of routines and competences.

The *change of routine action* is further on an emergent process influenced by several factors simultaneously. While the perception of a certain crises may trigger the fundamental change of routines and competences (e.g. Kim, 1998) and leads to the occurrence of processes of *explicit sensemaking* and the conscious development of alternative constructions of reality and appropriate courses of action, the corporate-wide introduction of alternative models of sensemaking and organizing necessarily has to be accompanied by the *provision of theoretical knowledge, discourse communication efforts, direct interaction and sanctioning mechanism*. Thereby, actors ultimately need to understand – to make sense of – the change initiatives in order to adjust their action reliably. While theoretical understanding is important, *successful* situated action in relatively *stable environments, direct and indirect experience* and *causal feedback* seems to be even more important and cannot be separated from understanding (Weick, 1979). Ultimately, actors make sense of new constructions of reality and appropriate

courses of action while they (directly or indirectly) *experience* the usefulness of new constructions in and through the application of these constructions in their specific situation.

Second, certain individuals play a crucial role in shaping the processes of negotiation and the outcomes of these processes by “giving sense” to other organizational members (Gioia & Chittipeddi, 1991). Selected key individuals were especially important for the change of routine action, as, for example, assumed in literature on strategic change (e.g. Gioia & Chittipeddi, 1991) but mainly neglected in the literature on organizational routines (e.g. Nelson & Winter, 1982). This is underpinned by the fact that almost all of the interviewees referred to *two key individuals* when describing the success factors for the introduction of the diverse change initiatives. The interviewees highlighted especially the *enthusiasm*, *authenticity* and *perseverance* of these individuals as necessary for the quick reconstruction of Systello’s competence. While this generally highlights the relevance of individuals for understanding routine action and competence (e.g. Salvato, 2009), this further pinpoints towards the relevance of *power* for understanding organizational routines – an issue what seems to be remarkably underrepresented in strategic management theory on routines (e.g. Contu & Willmott, 2003; Howard-Grenville, 2005; Thomas et al., 2011). However, powerful individuals couldn’t simply introduce and enforce change initiatives but rather had to struggle with *productive resistance* at almost all stages of the introduction. Thereby, change initiatives proposed by the management group got (often) fundamentally modified and necessarily needed to get modified within the process of implementation – or even completely failed in some cases. Thus, while management support for the change of routine action is necessarily needed, the influence of non-management individuals on organizational change and competitive advantage is also evident. Especially *experienced individuals* played a crucial role by delivering practical knowledge which makes the change initiatives work in practice.

Taken together, the study provides evidence for the importance of individuals for both the ongoing stabilization of routine action in times of environmental constancy and the fundamental change of routine action. Thus, individuals are *relevant* for gaining and sustaining competitive advantage. Economically speaking, individuals contribute to both the exploitation of existing possibilities and the generation of a “stream of quasi-rents” (Dierickx & Cool, 1989) *as well as* the exploration of new possibilities and the generation of Schumpeter rents (Teece et al., 1997).

DISCUSSION

Based on these findings, future research on organizational routines is suggested to focus in greater detail on the ongoing and underlying micro-processes of routine action as it has recently started in literature (e.g. Foss, 2011; Howard-Grenville, 2005; Salvato, 2009; Salvato & Rerup, 2011). Considering organizational routines as grounded in processes of negotiated sensemaking thereby opens research for the consideration of power-related issues. Additionally, the findings suggest to take the role of heterogeneous individuals for the development of routines and competences more seriously (e.g. Aime et al., 2010; Salvato, 2009), thereby getting closer to the “true” sources of (dynamic) capabilities (e.g. Augier & Teece, 2009). Since the mediation of understanding and action was not only discursively grounded, but also physically, research is further on suggested to focus on the *observable processes of direct interaction*, in which understanding, collective action and social order is continuously established (e.g. Goffman, 1959). This, as we think, calls for ethnographic research methods (e.g. Spradley, 1980) to capture the processes in which sense and action in organizational settings are *actually* produced and reproduced.

Although some interesting aspects as, for example, the role of material resources for the change of routine action, haven't been further elaborated in this paper, the findings are instructive and hopefully help both researchers and practitioners alike to gain a better

understanding of the underlying “mechanisms” of the successful change of organizational routines.

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