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Differences in socio-cognitive filters

Illustrating an understanding of the information overload problem in the course of transformation processes

*Frank Heideloff**

1. Setting the stage: knowledge management, international cooperation, and sensemaking

Management in established corporations has been busy keeping up with the increasing pace of scientists and consultants promoting learning organizations as the one solution to the problem of constant corporate transformation (e.g. Senge 1990; Garvin 1993; Probst/ Büchel 1994; Arthur D. Little 1995). As the gritty details of implementation leave a lot of open questions in the organizational learning debate, yet another concept gains center stage in the discussion: knowledge management (for a basic analysis of knowledge Polanyi 1985; facets of knowledge management cf. Nonaka 1994; Probst et.al.1997). As knowledge becomes a more important source of competitive advantage (e.g. Quinn 1992), knowledge management highlights the intervention potential of management and consultants in learning processes and addresses the possibilities of new information technology-based tools to strengthen the utilisation of corporate knowledge bases.

Internationalization has become one of the main strategies to counterbalance and overcome the effects of fierce home market competition. In order to gain market access, a lot of large international corporations have acquired firms or are closely cooperating with companies in Eastern Europe. The Eastern European companies in turn have been able to adopt a number of useful tools and techniques ranging from IT and portfolio analysis to grid techniques and training programs or have been able to raise capital through these cooperations.

The cooperation takes adaptation efforts on both sides. Whereas a majority of Western and Far Eastern companies have to learn about different cultural

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backgrounds and ‘languages’, most of the Eastern European companies are forced to deal with a whole series of changes: budgeting procedures, reviews and bonus systems, internal pricing strategies, etc. A lot of the tools used by international companies to solve their coordination problems are a part of what can be described as an information overload for their Eastern European cooperation partners. While international corporations are struggling to coordinate and consolidate, Eastern European companies are struggling to make sense of what is going on.

In this paper I will try to illustrate why and how the information overload problem experienced during transformation can be described as a matter of ambiguity rather than uncertainty using a case study from the Holderbank corporation. I will use the term uncertainty to describe an organizational state of not yet being able to decide in a given situation, whereas the term ambiguity marks an organizational state of multiple interpretations of a given situation within the organization. Both are aspects of the common understanding of the term ‘insecurity’. But whereas companies can easily implement routines such as investment proposal procedures to deal with uncertainty, organizations have to act out the opportunities and threats of ambiguity. In order to illustrate the links between international cooperation, transformation, and sensemaking processes in organizations, the case study confronts the perspective of a Western knowledge management and learning organization approach to Holderbank challenges⁶⁰ with the transformation problems experienced by HIROCEM, the Slovakian branch of Holderbank⁶¹.

2. Holderbank - the challenges of dominating a long-cycle market

Holderbank, the Swiss-based world market leader in the cement and concrete industry, is a radically decentralised corporation. Even though building activity in established economies has faced sharp turns in growth rates during recent years, Holderbank has grown steadily and acquired numerous companies around the world (cf. Holderbank 1995). All branches and subsidiaries of the worldwide network have large decision making power with the headquarters only acting as a process catalysts and internal service provider. Cement, the main product of Holderbank, has a very long life-cycle in comparison to other industrial products.

⁶⁰ I am grateful to Kai Romhardt who has given me permission to translate and adapt his Holderbank case study (Romhardt 1997) on knowledge management aspects for this article.

⁶¹ The transformation perspective is based on interviews conducted in December 1996 in Rohozník, Slovakia. I am grateful to Mr. Z. Demján (CEO), PhD A. Vacko (Human Resource Manager), and Mr. M. Grassl (Financial Manager) of HIROCEM for their time and the information that they have provided.

Low competition and innovation pressure and the decentralised structure led to intransparency of national product development projects on the corporate level. Even though Holderbank enjoyed state-of-the-art know-how in its product domains as a corporation, it was unable to focus this know-how for worldwide commercialisation, could not benefit from cooperation potential between branches, and remained unaware of qualified research specialists in certain subsidiaries. Trying to consolidate its research projects, Holderbank started a worldwide development project system in 1993. Harry Brantz, a research and marketing expert, was charged with the establishment of a project database. Over a period of two years, Brantz created a personal network of R&D specialists. He tried to identify the head of research in each branch and made contact with at least one scientist in each research department of the worldwide network.

Meeting members of all Holderbank firms, Brantz was able to communicate the mission of his project: sharing knowledge on technology and product development throughout the entire group. Brantz fostered trust among scientists - an indispensable basis for decentralised development projects. Collecting information from all sites, his first success was the discovery of the wide range of efforts: while US scientists were working on using recycled materials in concrete production, the German subsidiary developed a process to reduce the carbondioxyd use in cement production. In order to gain systematic access to the information collected, Brantz classified the projects by (1) research domain (alternatives, durability, chemicals, etc.), (2) project goals, and (3) project progress. A 'product development and product launch plan' (PIP) allowed all scientists to use a common language in classifying their projects. By 1995, Brantz had identified 283 development projects. Using a classification matrix, Holderbank was now able to identify different areas of research and synergy potential between branches. Today, linking the project information to a 'phone book' of scientists helps each development team in Holderbank to identify possible cooperation partners within Holderbank group worldwide. Even though cultural, personal, political, and structural barriers to the use of the project database may arise, first common projects including Mexican, US, and European researchers have been launched. The common research interest had been identified using the database. Some of the future prospects for Holderbank include further research cooperations, international multiplication of research findings, and the foundation of special interest groups.

3. HIROCEM - the difficulties of making sense of transformation

Transformation is like changing tires in full motion.

HIROCEM was founded in 1977 as the largest producer of cement in Slovakia. Its main site is located in Rohozník in West Slovakia where the company produces grey and white cement and a number of aggregate products. White

cement is a monopoly product in the Slovakian market and there is only one other production site for this product in all of Europe. In 1990 the company counted over 1200 employees and dominated the Slovakian market. With the big privatization drive taking place in Slovakia in 1992 Holderbank acquired a 30% interest in HIROCEM. The Swiss group tried to influence the general management to adopt a more people-oriented approach to leadership, but failed to overcome the resistance of state-backed managers. HIROCEM struggled to ignite a stable development. Over a period of three years, the company launched a series of reorganization programs assisted by the internal consulting unit of Holderbank, Holderbank Management Consulting. HIROCEM reduced personnel to 660 by 1996, implemented a state-of-the-art budgeting and provisionment software, and invested heavily in both modern production technology and personnel training. Sales rose from 1 Billion Slovak Kronas (SKK) in 1992 to 1,8 Billion SKK in 1995 with a posted profit of 58 million SKK (Holderbank 1995). By 1995 HIROCEM had regained a market share of 30% in Slovakia (Hirocem 1995). The Rohozník site became one of two Holderbank 'learning organization lead projects'. In May 1996, Holderbank raised its direct share to 51,4% in the course of the second privatization wave in Slovakia.

The CEO's perspective on the transformation process⁶²

The CEO of HIROCEM is a blueprint model of a charismatic leader. One of the stories most often told about him is his climbing the Mount Everest. 'He has something inside, he is able to take risks' (HR Manager). From the CEO's perspective, HIROCEM had to deal with a prolonged period of insecurity caused by a three-step-reduction of personnel: 'people didn't know - reduce, reduce, because the Swiss want to' (CEO). The Czech daughter company of HIROCEM reduced staff in one big leap, improving results and operations quickly. In order to stabilize operations, HIROCEM adopted a functional organization after having already operated product-oriented (grey and white cement). A massive delayering took place: from an eight-level-hierarchy and fourteen departments reporting directly to the CEO only four levels in five departments remained.

The list of change projects is impressive: introduction of regional sales forces, certification ISO 9002, and a companywide software-supported logistics system, etc. HIROCEM intends to shift back to a product and process organization by the end of 1997. The back and forth between structures seems

⁶² All of the three managerial perspectives are based on the interviews conducted in December 1996. They all focused on one question: 'What are the most important aspects of the transformation of HIROCEM from your point of view?' The three 'perspectives' as presented here reflect a summarization of the interviews; literal quotes are indicated.

confusing to an outsider, yet it evidently makes sense for people at HIROCEM: 'You have to develop one step after the other' (CEO). The CEO names two important tools to get the work done: (1) HIROCEM is operating under a five-year business plan and (2) has set up a review and performance appraisal system that combines suggestions for improving process quality and a 'small MbO solution' (CEO).

The HR Manager's perspective on the transformation process

Because the company has shifted from a product to a people driven operation, the HR Manager's list of challenges is even longer than the list of implemented projects. HIROCEM has launched inhouse, computer-based, and external training programs on technology, administrative techniques, and languages. A great variety of communication channels is used to reduce insecurity of staff who are 'still afraid of losing their jobs' (HR Manager). A company newsletter, meetings and workshops, and every informal conversation is used to spread the message and reassure that 'HIROCEM has a future' (HR Manager).

The learning organization lead project is supported by Arthur D. Little, Prag. HIROCEM quickly discovered that there are major differences in people's attitude and the kind of problems between itself and the second lead project site in Belgium. 'We seem to have a big language problem. If weak companies are to be changed by OL projects and do this with unprofessional ideas and no support, the whole thing is discredited' (HR Manager). The main problems at HIROCEM are questions of responsibility and guilt which mark the barriers between top and middle management. 'We must work with them every day to change their attitude' (HR Manager).

The Financial Manager's perspective on the transformation process

From the Financial Manager's point of view the step by step acquisition of HIROCEM by Holderbank was a mistake. Holderbank was unable to set an agenda for the transformation process as a minority shareholder. HIROCEM did not benefit at all from the existing export potential after 1989 until Holderbank took a minority interest in the company in 1992.

The investments in HIROCEM are thought to pay back over a period of 15 years. 'After having stabilized the company, we slowly start sustainable growth' (Financial Manager). With international investments coming to Slovakia the building industry will stabilize and grow. Infrastructure projects of the government will create additional market volume. Still the continuity of management and management styles, the personnel skills at the Rohozník site, and the internal pricing procedures remain major challenges for HIROCEM from the Financial Manager's point of view.

4. Information overload during transformation - a problem of ambiguity

The problem of Harry Brantz was already a complex one to solve. Establishing the project database of all development projects took two years and a lot of meetings. Yet in the situation of HIROCEM, this complex tool appears to be just one among dozens. The stories told by the three top managers of HIROCEM sketch a world quite different from clean problem definition and tool execution. None of the three managers interviewed had ever heard of the development project database even though the HIROCEM site in Rohozník is a 'learning organization lead project' and HIROCEM could contribute information about the unique white cement to the database.

All actions adopted by HIROCEM under the learning organization label can be understood as massively reducing uncertainty. Delaying the company and adopting a functional organization reduces organizational complexity and renders the attribution of responsibility, success, and failures possible. Starting training programs enables HIROCEM's employees to carry out their new tasks and to communicate with other people in the Holderbank group. The 'small MbO solution' (CEO) tells people what is important, a pay back period of 15 years and sustainable growth, and what is not, e.g. job security or keeping established relations within the company alive.

All of these techniques are helping HIROCEM to function, yet HIROCEM has no means to understand what it is doing. Whereas Holderbank has successfully helped HIROCEM to adopt procedures and tools to reduce uncertainty it will take time for people at HIROCEM to develop a socio-cognitive filter to make sense of what is going on and thereby reduce ambiguity (Weick 1995: 91). Drawing from the collective experience of yearly budgeting procedures, inhouse training sessions, an ISO 9002 certification program, etc. people at HIROCEM will eventually develop a common understanding of why the company is doing what at a particular point in time and why it is choosing certain options above others. A socio-cognitive filter is then the means of the organization to attribute sense to any given situation. It is based on action just as much as consideration of actions taken in the past. A socio-cognitive filter has two main functions which cannot be developed by adopting tools provided by cooperation partners.

HIROCEM knows today how to operate a designed system and tool set, yet it does neither have (1) a selection routine for choosing tools itself nor does it (2) develop the competence to initiate organizational changes itself as challenges vary over time.

Developing a socio-cognitive filter for attributing sense to what is going on, HIROCEM acquires the indispensable basis for the formation of its own selection routines. This paradox of internationally standardized processes and locally customized procedures is common to many international corporations. In

developing its socio-cognitive filter and selection routines, HIROCEM could teach Holderbank a lesson. If the formation process of the socio-cognitive filter for 'sensemaking' (Weick 1995) is monitored carefully, Holderbank could learn from HIROCEM how to develop a means to make sense of an ever confusing world and how to deal with information overload. This lesson could be an important one to learn, if Holderbank is to be apt to cope with structural changes of a long-cycle market in the future.

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