

Enhancing corporate change: the case of strategic human resource management

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1. ABSTRACT

In this paper three forms of complexity are presented: algorithmic, organizational and organized complexity. Organized complexity is most suitable for managing companies. It is a form of negotiated order resulting from the strategic utilization of rules by competing interest groups in favour of certain forms of institutionalisation. The qualitative articulation of complexity is promising, especially when dealing with the micro-level of behaviour within a company.

To understand the business landscape of a company, four interrelated tensions need to be taken on board. They require a delicate balancing act. In addition, from the viewpoint of coordination, four value orientations are presented, which depict different attachments a company has to deal with. This frame-of-reference is used to elaborate on strategic Human Resource Management (HRM) as an example of organized complexity, and to sketch the design characteristics of the management simulation PERFORM™. As it is a self-organizing learning environment, I will point out that this free-form management simulation allows various forms of organization to emerge. The management simulation is used as part of an in-company training program. Its empirical base refers to that company, which is in a process of fundamental change from a governmental agency to a global market player in the service sector of the economy. One of the objectives of PERFORM™ is to enhance that change process.

After outlining the management simulation, I present attractors, which result from the way the participants of subsequent simulation sessions produce organization within their simulated company. Various barriers to change are presented, which impact on the attractor patterns.

2. INTRODUCTION: THE COMPLEXITY THEORETICAL LANDSCAPE

To grasp the meaning of complexity theory in social and human realms, it is worthwhile to distinguish between *algorithmic, organizational and organized complexity*.

Algorithmic complexity refers to calculability and reproducibility of systems (Stewart, 2001). It relates to the quantity of information to describe a system (Cohen and Stewart, 1995), to the minimal precursor pattern, the minimal templet, to (re-)construct the pattern (Katz, 1986). Moreover, algorithmic complexity is based on a systematic theory of models, relating the observer to the observed (Casti, 1994). The community of observers, dealing with this type of complexity, dons the lens of complexity through a variety of mathematical, systems-theoretical, cybernetic approaches to address a variety of problems. It excludes organizations that observe themselves, rather than being observed.

Organizational complexity relates to organizations in transition (Stewart, 2001). Complexity is explored as it emerges through far-from-equilibrium dissipative, autopoietic, or self-organizing systems in evolutionary space. This branch of complexity theory has its roots in evolutionary biology and the study of ecosystems, which increase or decrease in complexity as their component systems co-evolve (Kaufmann, 1993). It refers to the explanations of phenomena in which an a priori indeterminable number of microstates is narrowed down to a few biologically or socially relevant ones (Küppers, 1995). This is the case when no general explanations, or algorithms can adequately describe the relevant process, and a specific causative configuration is needed, but not yet available, to explain its unique history – and evolution such as for example, general scientific explanations to describe the particular circumstances that led to the attack on the Twin Towers in New York, the 11th of September 2001, or to describe the circumstances that caused a disease on the basis of a particular arrangement of DNA and living conditions. These processes select a unique and specific course through unimaginable large sequence spaces. Specific organization, structure and process produce order within huge sequence spaces. Such order is understood and explained through knowledge of structural, systemic, and environmental histories and knowledge of the extent of information and means of interpretation (Stewart, 2001). This could be possible by grasping the context, or boundary conditions that lead to a unique history, and requires knowledge of local circumstances (local knowledge).

Both distinctions do not take into consideration basic features of organizations that are self-observing, as they primarily pay attention to the perspective of the observer. Therefore, with respect to complexity of reflexive social systems, it is important to distinguish between the perspectives or positions of the outside/observer and inside/participant. From the observer's position, organizational complexity refers to the number of components, the degree of differentiation or diversity (variety) of these components, the degree of interdependence (connectedness) among these components, and the swift and unpredictable changes (turbulence) of the environment.

A third type of complexity is needed, which emerges through the self-awareness of the internal actors or agents who have to deal with high levels of complexity of the internal organization vis-à-vis the environment. To a certain extent this complexity emerges through the co-production of the actors/agents. It is a form of negotiated order resulting from the strategic utilization of rules by competing interest groups in favour of certain forms of institutionalisation. To distinguish this form of complexity, which is a social construction, from organizational complexity, which presupposes an outsider's and functionalist viewpoint, it is appropriate to speak of *organized complexity*. While organizational complexity is relevant from the viewpoint of the outside observer, organized complexity should be understood from the perspective of the internal participants of a social system. This distinction requires an epistemological switch. To understand this switch, I will address resulting epistemological questions.

The distinction between on the one hand algorithmic and organizational complexity, and on the other hand, organized complexity becomes complicated when one recognizes that the realm of the natural sciences is simple compared to the human and social realms. Classifications in the human and social sciences are more difficult to handle than in the natural sciences. The classification "quark" or "ant" is indifferent in the sense that calling a quark a quark, or an ant an ant, makes no difference to them (Hacking, 1999). It does not influence their behaviour. This is not the case in the social and human realm. Taking an example from

the world of international relations, the classification “terrorist” (as a kind of classification) is an interactive kind because it interacts with things of that kind, namely people, including individual terrorists. They become aware of how they are classified and modify their behaviour accordingly. They form an interactive, self-referential kind. Quarks in contrast do not form an interactive kind; the idea of quark does not interact with quarks. The classification “quark” is invariant, while the classification “terrorist” changes with fluctuating political contexts. It is fruitful to study organizational complexity when dealing with indifferent kinds. However, it is too limited a view when considering interactive kinds. In such case, organizational and organized complexity should be linked. This applies particularly to the study and management of social systems.

Organizational and organized complexity mingle in the study of social systems, as agents both observe themselves and are being observed by the other agents. Organized complexity refers to the subjectivity of perspective and relative position of agents within the social system, while they act and as a consequence self-reproduce their organization. Emphasis is on tacit or embedded knowledge. Organizational complexity refers to notions developed by a community of observers. Their emphasis is on inter-subjective explicit knowledge. Therefore, complexity theory of social systems has to take on board notions such as, incentives, reflexivity, identity, opacity, particularity, uniqueness, locality, and incondensability.

In practical terms, views on organized complexity are translated in companies through organizing on the basis of dialogue, commitment of employees, agreeing on rules, codes of conduct. At least two different forms of coordination that is, market and industrial coordination will have to be taken into account. They should set conditions for enhancing teamwork and organizational learning to handle complex social systems. While focussing on organizational and organized complexity, algorithmic complexity is out of the scope of this paper.

3. ATTRACTOR MODELS OF SOCIAL SYSTEMS

Mathematical and computational innovations, similar to advances in molecular dynamics and simulation of atomic processes in biomolecules, may make significant contributions to theoretical developments in the social sciences under the conditions that appropriate epistemological considerations are taken into account. As mentioned above, classifications in the human and social sciences are more difficult to handle than in the natural sciences. If the distinction between indifferent and interactive kinds (Hacking, 1999) will not be included in the formal frame of reference, than the realm of the social and human sciences will be reduced to a purely mechanical that is, algorithmic approach, leaving out self-referential characteristics of emerging social systems. Available data and their categorization should be checked for their looping effect that is, the interaction between an idea or category and the person implied by that idea (Hacking, 1999). This observation is particularly relevant as social systems emerge from the interactions between agents, or actors. Social order emerges continuously from the interactions between human actors, which to a certain extent are viewed as cognitive agents. Social structure is constituted by human agency, and it is the medium through which it is constituted (Giddens, 1993). It is self-referential and based upon reflexive social actors. Therefore, attractor models of social systems should take into account this duality of structure.

In this paper, I will pay attention to the *qualitative articulation of complexity* while focussing on attractors within social systems. The high dimensionality and dynamic flux of events, uniqueness of circumstances, and the self-referential features of the duality of structure

hamper the direct application of chaos models to social systems (Klabbers, 2000, 2001). One should realise that especially new conceptual frameworks in the natural and social sciences ultimately rely on ordinary language (Bergstein, 1972). Morrison (1991) has pointed out that in the hierarchy of dynamic systems, chaotic regimes and their “strange attractors” exist between the regularity of periodic cycles and the probabilistic order of randomness. It should be made clear that this expression presupposes the viewpoint of the outside observer of the system. Insiders/participants may very well understand the meaning of those strange attractors as a result of the way complexity is being organized.

Schrodt (1988) mentions that the mathematical theory of chaos can be used to describe systems whose general behaviour is predictable but whose specific, micro-level behaviour is not. Rigorously applied to social systems whose general behaviour is not predictable, the conclusion is that such an approach is not (yet) feasible. Moreover, in order to understand co-evolution of agents within a social system, my focus of interest is the micro-level behaviour of agents, which constitute the general behaviour on a higher level of aggregation. For these reasons, I emphasize a conceptual approach to complexity of social systems. Sallach (2000 p. 251) suggests that such conceptual models include identification of:

1. the existence of an attractor pattern,
2. the origin and termination processes of the attractor pattern (if any),
3. the field boundaries of the attractor influence,
4. the attractor basin(s), and
5. possible control parameters.

As social order is an attractor state or class of states of a dynamical social system (Fararo, 1989), I will first pay attention in the emerging social order of the various sessions with the management simulation PERFORMTM, see below. Attractor patterns are influenced by the business landscape, which is enacted by a company.

4. THE BUSINESS LANDSCAPE: MEANS TO HANDLE ORGANIZED COMPLEXITY

Steering in social systems such as companies, which are operating in a volatile market, implies dealing with organized complexity. This applies especially when a company is innovating. Companies in a process of profound and rapid change, need to be highly adaptable. This requires both the ability of reflective monitoring and the flexibility of continuously tuning the internal organisation to external conditions. However, complex organizations have difficulty with innovation. They have to perform a delicate balancing act between opposing forces and coalitions. For effective product or service innovation the following sets of dialogic activities need to be taken into account (Dougherty 1996 p.19):

- conceptualising the product/service to enable the integration of market needs and technological potential (market-technology linking) that is, balancing the tension between outside and inside ;
- organizing the process to accommodate creative problem solving that is, balancing the tension between old and new ;
- monitoring the process that is, balancing the tension between determination with emergence; and
- developing commitment to the effort of innovation that is, balancing the tension between freedom (no strings attached) with responsibility.

From this set of activities rise various attractors (Klabbers, 2000).

Based on these tensions, especially hierarchical, bureaucratic organizations have difficulties to adapt. Emerging new forms of organisation show an increased fluidity in the external

appearances of companies through forms such as, chains, clusters, networks, (strategic) alliances and virtual organisations (Clegg and Hardy, 1996; Handy, 1995). Consequently, as the internal organisation has to mirror the fluidity of the external appearances, formal compartmentalization is breaking down into an empowered, flat, flexible organisation. Compared with the functionalist management paradigm, the individual in such an organisation is not considered a stable constellation of essential characteristics, or traits, that can be controlled, but a socially constituted subject.

4.1. Coordination

“Coordination” is a key concept to manage organized complexity. It deals with balancing the four tensions, mentioned above, while taking into account commerce with things as well as commerce with people (Thévenot, 2001). It is particularly relevant in the context of the knowledge society with people as the producers and bearers of knowledge (Klabbers, 2001). To relate and compare people and things, Thévenot points out that a form of equivalence is needed. However;

“A form of equivalence, which implies the realism of signs (logo, trademark, etc.), does not offer the same possibility of calculus as the one based on the realism of technical and functional tools. The comparison of these forms of equivalence demonstrates that time and space take different configurations in each of them, with significant consequences on judgement” (Thévenot, 2001, p. 408).

Signs are social constructs, appealing to conventions, and are by their very nature arbitrary. The realism of signs is ontologically subjective, but can be epistemologically objective. This is another way of saying that algorithmic complexity is not suitable to manage social systems. The realism of technical and functional tools is considered both ontologically and epistemologically objective. Such a view on technology is a basis for algorithmic complexity. For technology, embedded in socio-technical systems, it is too limited a view, as it is too much focussed on a narrowly technical rationality.

In order to deal with different configurations, Thévenot presents a principle of evaluation via the following three orders of ‘worth’, enabling various modes of coordination.

1. An elementary form of attachment between human beings and their environments, which include humans and material. Such attachments enhance human capacities, and are considered resources. Via these attachments, human beings relate to the world. New configurations of links emerge through identification and development of new equipment such as for example information systems.
2. The extension of the attachment via specialization and development of this equipment, complementary to human abilities. For example by improving visibility with proper equipment of visibility.
3. The systematized attachment between human beings and other animals requires a reflection on justice that is, about just and unjust power. It corresponds to the political and moral requirements of public space.

By emphasising equipment, complementary to human abilities (see above, mode 2), Thévenot leaves outside of consideration the role of technology as competitive to human abilities. The related technological imperative should not be neglected in understanding current forces of economic development and innovation.

One important order of worth is still missing. It relates to the attachments among human beings as members of an organization. It is an attachment that gives shape to the system of interaction between actors or agents.

4. An additional attachment related to market and industrial order is taken on board especially in the case when a market good is a service. It refers to the attachment between agents or actors and the way they construct and disseminate explicit and tacit knowledge within the internal environment of the company, and convey it to the external environment that is, the market. This attachment is based upon the idea of a firm as a social system.

Complexity results from these forms of attachment. Through compromises, the critical relationships between the resulting modes of coordination can be made compatible, temporarily and spatially. Companies are arrangements that have to deal with such an organized complexity, based on distinct coordination conventions. According to Thévenot, members of such organizations engage in different modes of coordination, depending on the configuration of the situation in which they find themselves. “All organizations have to cope with critical tensions between different orders of worth” (Thévenot, 2001 p. 410).

In the market economy, competitiveness of public services leads to a controversy between civic and market oriented worth. In addition, in industrialized societies tensions arise between different orders of worth underlying market competition and technological performance. They represent different conceptions of rationality about industrialization, and ask for different modes of coordination. This is illustrated for example in the meaning of ‘time’. In the market order it is reduced to the present, while in the industrial order of worth ‘time’ is the future, warranted by investment. Here lies a tension of allocating resources to the market-immediate satisfaction of customers’ wishes, or to industrial coordination of the production function. In line with the industrial mode of coordination, the attachment between agents requires a future perspective based on investment in learning and improving competency. The industrial form of coordination relies on capital investment of equipment, while the social systems form of coordination relies on investment in ‘human capital’ and building sustainable human relations. Both are interrelated. They have a long term perspective, aiming at continuity and a long and prosperous organizational live. “Companies die because their managers focus on economic activity of producing goods and services, and they forget that their organization’s true nature is that of a community of humans” (De Geus, 1997 p. 3)

From this viewpoint, business education as part of strategic HRM has an important role to play.

5. STRATEGIC HUMAN RESOURCE MANAGEMENT (HRM)

Organized complexity in a company takes many forms such as for example, hierarchical, divisional, or laterally distributed structures. A fruitful way to structure the internal organization is by means of the composition of personnel. One might see it as the fingerprint of human resources. It represents a sediment of the flux of people entering and leaving the company, and moving from one position to the next one within the company. The evolving personnel composition reflects its history, its current conditions, and its future potential. The personnel composition depends on the economic web of relationships between organisations and stakeholders that is, the institutional context in which a particular company is operating, the wider socio-economic and political business environment, the life style of people, and the business design with its installed base and personnel to operate it. These considerations are taken into account when dealing with strategic HRM.

When a company is in a process of fundamental change, one of the major foci of attention is the composition of the personnel formation vis-à-vis the internal organization. Shaking up the internal organization implies reconsidering the organizational design, its structure, the composition of functions and tasks, and as a consequence the staffing. When the transition is from a hierarchical, bureaucratic type of organization to a more flexible performance based company, then it is not only the current structure but also the culture that is at stake. People will have to learn to act and interact differently, breaking old habits, learning new skills and competencies.

Traditionally, Human Resource Management is concerned with the short-term implementation of personnel policies, taking into account legal and labour market policies. Its main focus is instrumental, applying techniques such as recruitment, selection, staffing, remuneration, Management and Organizational Development, performance assessment, education and training. It primarily supports ongoing business in its capacity derived from financial and production targets. Many impacts of HRM on the standing organization remain intangible, especially those, which relate to business strategy, and knowledge management. In addition, to which extent HRM techniques are based upon a coherent view on competencies, and linked to the long term dynamics of the personnel formation, and career patterns, is difficult to grasp, and weakly managed. In many companies, a clear view on the linkages between HRM and the company strategy is weakly developed. Interrelationships between company strategy, evolving task structure, personnel formation, traditional HRM techniques and competence management are illustrated in figure 1.

The framework of figure 1 captures generically the notions of organized complexity, attractor patterns, the set of dialogic activities, modes of coordination and the related value orientations, and the controversy between civic and market oriented worth, presented above.

To learn to handle organized complexity of strategic HRM, the management simulation PERFORMTM has been developed. It is used as part of Master Class of a company in the service sector of the Dutch economy.

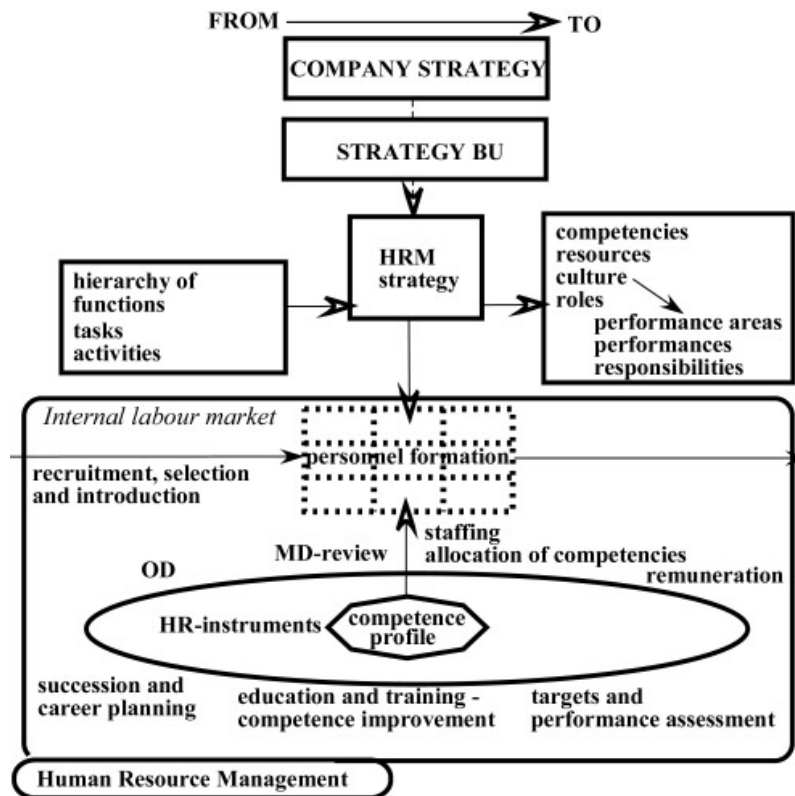


Figure 1: Strategic landscape of HRM

6. DESIGN CHARACTERISTICS OF THE MANAGEMENT GAME PERFORM™

The basic building blocks of games and simulations are depicted in figure 2.

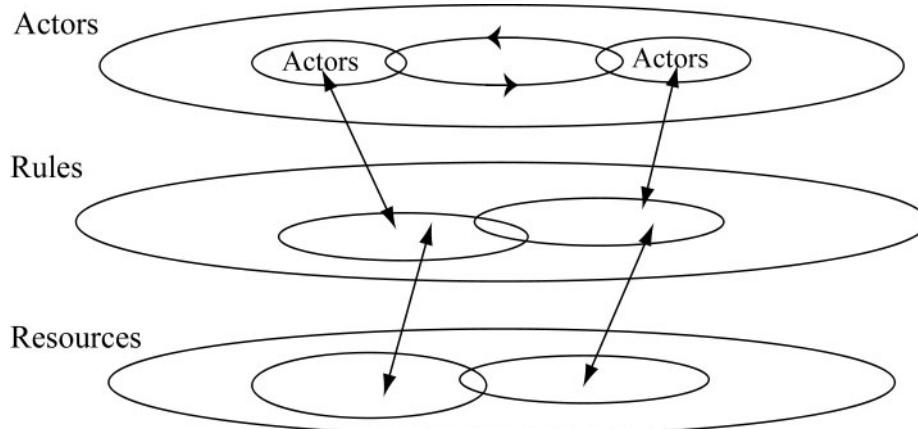


Figure 2: Building blocks of games and simulations (Klabbers, 1996)

On the basis of this frame of reference I have developed a taxonomy that enhances a classification of games and simulations (Klabbers, 1999). It is a representation of social systems, linking multiple actors, or agents, to rules and codes of conduct, when utilizing resources. It is a generic model of social systems. Within that framework, the idea of duality of structure should be kept in mind (Giddens, 1993). By this, Giddens points out that social structures are systems of interaction.

“Interaction is constituted by and in the conduct of subjects; structuration, as the reproduction of practices, refers abstractly to the dynamic process whereby

structures come into being. ...Social structure is both constituted by human agency and is at the same time the medium of this constitution (Giddens 1993:128)."

Companies exist through the reproduction of practices of its employees, which produces a certain structure. That structure is also the medium for reproducing the organizational structure. It brings forward the codes of conduct and the navigation system for the employees (actors/agents) to understand the meaning of communication and to confirm that same structure. Actors constitute systems of interactions. They draw upon rules and resources while performing tasks in organizations. Through confirming each other's roles, and making use of the rules and resources, they produce and reproduce the social system concerned (Klabbers, 2000). By changing the interactions, the rules and/or the resources, they either transform the system or produce a completely new one. PERFORMTM enhances such processes of structuration, and forms of organized complexity are emergent properties of such organization.

Because of the duality of structure, participants can also switch position, from inside participant (actor) to outside observer. From these positions, they have different stories to tell about the gamed companies (Klabbers, 1996). In such case, they can question their motives and personal efforts, the rules and/or the resources, to develop strategies for the maintenance or transformation of the social system. Underlying this approach to social systems are notions about autopoiesis (self-reproduction), self-reference, and reflexivity (self-awareness), organizational and organized complexity.

It is out of the scope of this paper to elaborate further on the specifications of the design of PERFORM. However, from the viewpoint of organized complexity, it is important to understand the distinction between rule-based and free-form simulations. PERFORM is a so-called free-form simulation. The participants have the freedom to self-organize their company the way it fits their views and expectations. They shape the rules of the simulation. Therefore, organization is an emergent property, producing and reproducing some form of organized complexity.

On the basis of this design characteristic, one should realize that every PERFORM session is unique. It is a self-organizing learning environment (Klabbers, 1996). No general explanations, or algorithms can adequately describe the relevant process. A specific causative configuration may be needed to explain its unique history, and eventually to steer the system. Such configuration is not yet available. From the viewpoint of an outside observer, an idea of *organizational complexity*, related to this particular organization in transition, will only be suitable after a series of simulation sessions. Only then it will be possible to grasp processes, which will select a unique and specific course through (unimaginable) large sequence spaces. The specific organization, structure and process of each session, produces and reproduces order within a huge sequence space. Such order may eventually be understood and explained through knowledge of structural, systemic, and environmental histories and knowledge of the extent of information and means of interpretation (Stewart, 2001).

6.1. Outline of PERFORMTM

PERFORM is part of an in-company Management Development program. Its aim is to enhance the ongoing transformation process from a government agency to a global market player. The management simulation integrates strategic HRM with strategic management, dynamics of the labour market, and competence management. Its focus is on learning to deal with organized complexity in a learning-by-doing setting. One of its major aims is to handle co-evolution among the business units involved.

The company represented by the management simulation is a composition of internal agents, linked to various external stakeholders. These agents produce the company as a historically located actor, partly under the conditions of its own choosing. The organization is not conceptualised as simply placing constraints upon the internal agents, but as enabling them to act and to shape the game they play. The agents within PERFORM are viewed as social systems with the following properties (Boxer and Cohen, 2000 p. 19):

- *Composite* - relying on the capabilities of other agents – they act on local knowledge;
- *Emergent* - not being a mere static aggregate of those capabilities;
- *Purposive* – having their own goals and seeking to achieve them – they are action oriented;
- *Anticipatory* – capable of choosing among possible actions on the basis of its own internal model (image, idea) of its world – based on limited information processing capacity;
- *Adaptive* – capable of learning and thereby modifying both its organization and its internal model with a view to improving its performance.

Within PERFORM the agents are five teams of five managers, which have freedom to act according to rules they agree upon with one another. The emergent properties of the organization they shape result from the way the participants interact and mutually shape meaning and knowledge during the simulation session.

The management simulation represents a major company in the service sector of the economy. It consists of five teams: the Board of Directors, Concern Staff, the Business Unit “Concern Information Systems” (CIS), and two business units (BU) providing different types of financial services. These two BU’s operate in two completely different markets. Business Unit A is a global player in the volatile market of finance. Business Unit B operates nationally in a market characterised by ongoing deregulations and increasing competition. Performances of the BU’s are closely connected both on a short- and long-term basis, as they provide mutual resources for their operations. Performance of the overall concern depends on the co-evolution of both BU’s. CIS provides the ICT-infrastructure, and it implements the business and information policy of the concern vis-à-vis the information policy of the BU’s. It operates in a regional market of ICT providers and consultants, implying that it is able to outsource certain short-term capacities to meet ICT targets.

Competitors, government, employers’ organizations, and unions constitute the economic web of the concern. The structure of PERFORM is represented in figure 3.

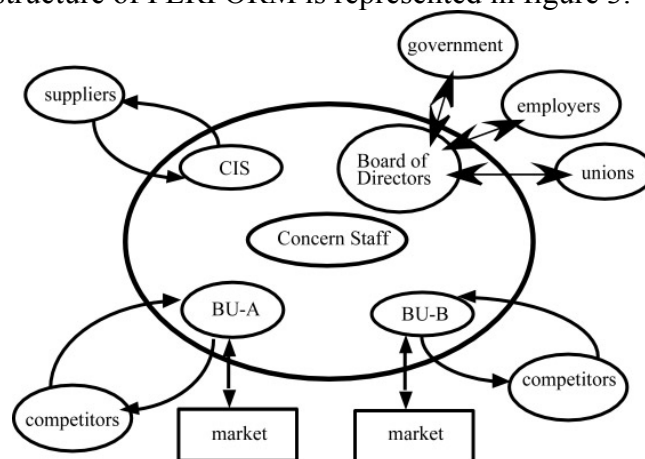


Figure 3: Organization of PERFORM™

The simulation-session evolves through four phases. During Phase 1, focus is on an assessment of the internal organization with emphasis on the strengths and weaknesses of the current personnel formation. Phase 2 pays attention to the external organization with special emphasis on changes in the institutional arrangements and their consequences for the Concern, particularly their potential impact on personnel policy. Both phase 1 and 2 provide the strategic landscape, and the choices that have to be made during phase 3. In this phase, the managers assess several innovative projects in terms of their strategic potentials. These projects can only be carried out in close cooperation between the three BU's. They require the timely hiring of highly qualified professionals to advance the innovation projects, taking into account the current conditions of the labour market, and the required competencies needed. If the hiring is only partly successful, than the projects cannot be carried out according to schedule. This will hamper the necessary innovations, and on the long run weaken the innovative capacity and competitiveness of the concern. At the end of phase 3, the managers assess the situation, and make final decisions on the implementation of the innovation projects. During phase 4, they define the overall strategy, strategic HRM included. To ensure an effective implementation strategy, they present an action plan covering the over all and BU personnel policies, and the related information and communication plan.

The simulation session, which lasts one and a half day, is completed through an extensive debriefing.

7. SOME OBSERVATIONS ON ATTRACTOR PATTERNS

PERFORM is not a closed simulation, which means that the managers do not follow the instruction: " This is the problem. How will you solve it?" It is an open simulation. The managers step into a situation, and are asked: " How will you deal with it?"

Although the participants are aware from the beginning that co-evolution between the business units is necessary, to gain overall success, this goal is not achieved easily. One of the major barriers is the organizational structure that is enacted right at the beginning of the simulation session. The managers are free to choose the way they shape their organization.

The company involved is in a process of fundamental change from a government agency and a bureaucratic organization to a performance based market player. The company culture and structure are in transition, and old habits have to be broken, which is a time consuming and painstaking process. The impact of the flux and transformation is illustrated in box 2 (Klabbers, 1999).

Many managers, who have made career in the "old" company for various reasons have difficulty to adapt to the new circumstances and requirements, and to achieve new competencies. They have to conquer various barriers such as summarized in box 3 (VanGundy,1992; Maslow, 1971). Over some of them they have little control such as social/political, structural, procedural and resource barriers. Even individual barriers are difficult to level out, as the "new" company only gradually is emerging, and unlearning old habits takes time.

From	To
Inside: rapid and efficient production	Outside: tuning technological potential vis-à-vis markets needs
Old: reduction of complexity	New: creative problem solving
Determination: control/steering of operations	Emergence: setting the context and conditions for new ideas, processes and systems
R-strategy: Learning by assimilation	K-strategy: Learning by accommodation
Barriers (blockades) to change	Tolerance and variety
Narrowly defined responsibility: territory exploitation; short-turn shareholders' return on investment	Freedom: tolerance & adaptability; flocking and mobility; knowledge creation; resilience and continuity.

Box 2: Influences of innovation on business-as-usual

Barriers	Key concepts
cultural barriers	conformity, secrecy, group vs. individuality
individual barriers	fear, defences, inhibitions, lack of strength, (courage, trust, spontaneity, expressiveness), sticking to the past i.e. low synergy (struggling to cope with the polarity between primary and secondary processes) (Maslow, 1971 p.78)
social/political barriers	power relationships, reward systems, pluralism
structural barriers	stratification, formalization, centralization, functional specialization
procedural barriers	rigid planning, over-control, cost-driven management
resource barriers	lack of - people, money, supplies, information, time

Box 3: Barriers to change.

PERFORM is used as part of an in-company Management Development training program. In terms of Suits (1984), it is a voluntary attempt to overcome unnecessary obstacles. On the basis of observations made during each simulation, understanding gained during the subsequent debriefings, and written summaries of the gamed processes, some general observations are made. They should be understood as educated impressions, not as empirical evidence.

7.1. Attractor patterns

As mentioned above, “organization” is an emergent property of this type of simulation. The participating managers have the freedom to choose their preferred form of “organized complexity.” In such interactive learning environments, although free to experiment with new forms of organization, managers tend to start reproducing the organization they feel familiar with. Once that structure is in place, they might feel tempted to reproduce a new type of organization, but various barriers are hampering such transition (see box 3). Based on their experience with and knowledge about organizations, managers have mentally available a stock of organizational forms, each with different sets of ways to communicate. That set is viewed as an attractor basin from which they can choose a particular form, which acts as an “attractor.” As

mentioned earlier, in this company, which is in a transition from a former governmental bureaucracy to a market player, two organizational “attractors” are emerging.

Dependent on the composition of the subsequent group of participants, two different organizational patterns have emerged right from the start of the session. The teams playing the Board of Directors have either opted for a hierarchical type of organization, illustrated in figure 4 as the distributed one-boss arrangement, or a mixed core-network, star-network.

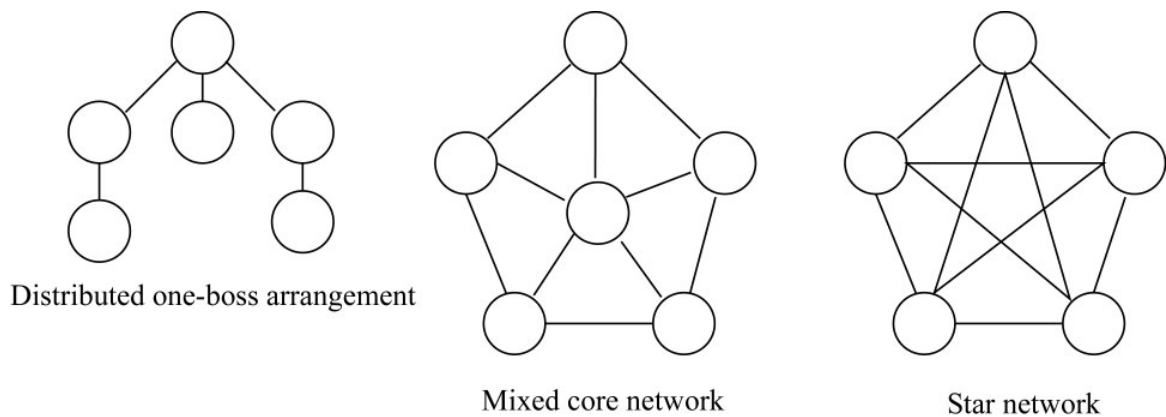


Figure 4: Attractor patterns

The distributed one-boss arrangement resembles the past, the core-network/star-network the emerging future. This is also shown by the way the managers interact with one another, and how they manage time. Time is a definite constraint, and only if all managers share information, they are able to stay in tune with the pacing of the simulation phases. In the one-boss arrangement tasks are performed hierarchically and sequentially. In the network arrangement, tasks are performed simultaneously. The framework of Boxes 2 and 3 helps to understand the different dynamics of the sessions.

7.2. Distributed One-boss Arrangement

By choosing for the hierarchical one-boss arrangement the managers enact a number of obstacles, which they have to overcome subsequently. I will sketch some obstacles.

Teams tended to be focussed on the internal dynamics, which means that the gamed company was inner-directed. Focus was on reduction of organized complexity, which hampered creative and timely problem solving. Sequential and hierarchical communication among teams and emphasis on control of operations formed a barrier for change. Time management became a major obstacle to the point that in one session, the Board of Directors (BoD) and the Concern Staff lost control, and the BU’s managed their affairs mutually without further “interference” of the BoD. Responsibilities were narrowly defined, and existing territories were exploited at the cost of co-evolution of agents. Management paid attention to control over content, loosing track of context and mutual relations among the teams. Frustrations with the way things evolved were not canalised among groups, and the managers grouched outside the simulation space, while taking a break to have a cigarette. In balancing the tension between determination with emergence, emphasis was on determination. Several barriers hindered adequate actions. Conformity and secrecy were stressed, nurturing an atmosphere of distrust. Most individual players showed a lack of strength. Power relationships dominated the scene. Communication was stratified, formal, and centralized.

Planning was rigid, and cost driven. Most importantly, the managers endured a continuous lack of information and time. This became most manifest during phase 3, during which BoD lost complete control over the rapidly evolving sequence of events. The situation became chaotic, and the simulation dynamics were nearing an inflection point. The simulation time table did not allow this to happen as phase 3 had to be finished at a certain moment in time.

7.3. The Network Arrangement

Most recently, the managers playing the roles of BoD triggered a collective management structure. They stressed the big picture, set the context and conditions for new ideas, and provided general rules to manage the process. By doing so, they provided a flexible and workable framework for simultaneous interactions between teams and members of the teams. They shaped conditions for trust to emerge. The gamed company was outer-directed. The company culture they shaped is characterized by the following keywords: tolerance, variety, adaptability, flocking and mobility between teams, and resilience in managing time.

The group managed to level out many barriers. Due to the freedom to move around, the managers were not inhibited and spontaneously expressed their ideas and objections. Emphasis of power relations was on mutual respect and emergence. The concern structure was flat, and consequently communication patterns horizontal, enhancing direct interactions. “Doors” were not closed, and the Concern Staff acted as a viable and reliable information resource, much appreciated by everyone. Organized complexity was managed through simultaneous actions within a mutually accepted communication framework. Many processes ran in parallel due to an effective partitioning and coordination of actions. Consequently, time management was effective. Even during phase 3, handling the rapid sequence of events was efficient and effective.

The added value of each team, and each team member in the overall results was high. The spirit was high during the simulation, and the managers expressed a feeling of accomplishment and satisfaction.

During the debriefing the managers stepped out of their roles and took a boundary position. Through questions such as: “What happened?” “Why did it happen?” “How could what happened be avoided?” “If you would start all over again, how would arrange things differently?”, the managers were invited to reflect on the unique and specific course of the simulation session took through a variety of potential sequences spaces, as well as to think about the way they constructed organized complexity of a special kind. Although in theory it is easy to understand the difference attractor patterns as depicted in figure 4, in practice, such as in a simulation session, it turns out that habits are not broken easily.

8. SUMMARY

In this paper, I have paid attention to three forms of complexity: algorithmic, organizational and organized complexity. Strategic HRM in a company in transition, implies dealing specific forms of organized complexity. Therefore, I have elaborated on this question, presenting notions on attractor models, and various attachments that impact on three modes of coordination: market competition, technological performance, and sustainable human relations.

The management simulation PERFORM™ has been presented as a vehicle to train managers to deal with and learn to understand the underlying dynamics of the business landscape they have to deal with. Moreover, they learn to handle organized complexity, which is a “product”

of their own making. I have wrapped up observations made, while facilitating/coaching and debriefing several in-company simulation sessions. They illustrate complexity theory-in-action. Two different attractor patterns are presented, one referring to the distributed one-boss arrangement, the other to two network arrangements. They form the framework for different gamed organizations that have emerged. Their dynamics are briefly sketched, showing that organized complexity is a more or less a voluntary attempt to overcome unnecessary obstacles.

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