PETER KRUSE IS INTRIGUED BY HOW THE BRAIN WORKS. HIS EXPERIENCE IN THE FIELD OF BRAIN SCIENCE INSPIRED HIM TO WORK WITH ORGANISATIONS THAT HAVE THE AMBITION TO CHANGE. HE SEES COMPANIES AS INTELLIGENT SYSTEMS IN WHICH EVERY INDIVIDUAL COUNTS. HE DOESN'T BELIEVE IN READY-MADE SOLUTIONS. HE BELIEVES IN GENERATING A DYNAMIC IN WHICH THE PEOPLE IN THE ORGANISATION MASTER THE PROCESS OF CHANGE IN A STRUCTURED INTERPLAY OF BOTTOM-UP RECOMMENDATIONS AND TOP-DOWN DECISIONS. ON A SUNNY DAY AT THE END OF APRIL, WE MET PETER KRUSE AT HIS CONSULTING COMPANY NEXTPRACTICE NEAR THE OLD HARBOUR OF BREMEN, WHERE HIS OFFICE IS LOCATED. WE HAD AN INSPIRING CONVERSATION ABOUT THE WORLD OF CHANGE, SYSTEM THINKING AND THE USE OF NEXTPRACTICE-TOOLS TO SUPPORT THE PROCESS OF CHANGE.

Disturbing the system

An interview with Prof. Peter Kruse on fundamental change and learning in organisations

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The strongest 'yes' of the day was given in answer to our first question, "do learning and change really go together"? Peter Kruse nods fervently and explains, "There is no change without learning and no learning without change. Without learning, sustainable change is not possible". Kruse distinguishes between two different kinds of learning: optimising the existing patterns and learning new patterns. Optimising means to avoid mistakes and pattern change means to accept mistakes. Kruse illustrates this with the example of learning the Morse alphabet: "At first people understand the meaning of a message by recognizing single letters. After a while they start to directly translate words, then sentences, and in the end they just listen to the message. At any stage of performance the learning curve reaches saturation after some time. Further improvement seems to be impossible". "However," Kruse adds, "when people are nearly perfect at a certain stage of learning

something interesting happens: they make mistakes like a beginner. By playing around they intuitively start to destabilise themselves". Kruse explains what happens. "The saturation phase of a learning curve indicates that the system has reached the optimum of a pattern. The system is in a stable attractor state as it is called in self-organisation theory. In order to leave this stability it is necessary to disturb the system". As far as making mistakes goes, Kruse is very clear. "To change a stable pattern is nearly impossible when making mistakes is not allowed". Kruse himself is intrigued by this disturbance phase. It is this principle of disturbance which Kruse and his colleagues constantly use in order to foster change in organisations. "For us any organisation is like a social brain. The capabilities and resources necessary to create solutions are usually present but the tendency to stabilise in old patterns suppresses learning capabilities. Therefore we are always looking for ways to facilitate the complex dynamics in organisations". Kruse believes that fundamental change in attitudes,

Nextpractice was founded by Prof. Dr. Peter Kruse. The consultancy focuses on the strategic and practical support of cultural change as well as strategic branding. Today, some 40 psychologists and software engineers are grouped around the three central management tools the company has created to trigger and assist change programs. Their light and open office is located in the maritime city of Bremen, but most of the time the employees are elsewhere, working with customers. Their main tools for intervening in change processes are nextqualifier, nextexpertizer and nextmoderator.

These tools don't offer organisations a solution for their ambition to change. They help to create the right dynamic; the system itself will then create the change.

- Nextqualifier – Change starts with finding the most interesting and influential people for a certain topic within an organisation. This internet-based algorithm helps to find these 'hidden experts' in an organisation who are then interviewed.
- Nextexpertizer – Having collected the important people within an organisation and having established the change parame-

ters, it's time to uncover the people's value-systems and to find out what they think. In personal interviews, people get the opportunity to explain their thoughts and evaluations of the organisation in their own words. After the interviews the nextexpertizer-software compares these various views and ideas. Differences and equalities in the subjective assessments are presented. The result of this phase is a story visualized in a range of three-dimensional graphics in which the patterns in the data are unfolded. Most of the time this story is confronting for the organisation. It works as a wake-up call and disturbs the organisation. From this story the direction of the change will evolve.

- Nextmoderator –Now the direction of change is indicated, it's time to brainstorm collaboratively about activities. The interactive software of nextmoderator allows large groups of up to two thousand participants to brainstorm and interact with each other. Everybody is actively involved. All the ideas that are generated within the system are being visualised, and the ones that return most often are put on top. The outcome helps to define next steps.

behaviours and skills can only be achieved by going through a phase of instability. In organisations the creative process of disturbance sometimes needs an impulse from outside. Especially in very hierarchical cultures, it is difficult to destabilise the system while being part of it at the same time. No one likes to be disturbed and therefore the personal risk is high. The different tools developed by nextpractice are all based on insights like this. They are created to stimulate the internal resources of a system and to support the transition to new stable states of order.

FINDING THE HIDDEN 'EXPERTS' OR 'NODES'

"Trust the self-organisation capacities of a system. Most of the time systems are much more able to create new solutions than any external competence". This is a sentence that we heard quite a few times during the interview. Kruse has a nearly unlimited belief in the regulatory power and creativity of systems. Diving deeper into the tools and techniques he uses in organisational change processes, the personal credo evolves into a fascinating and elaborate approach. "In order to fully use the intelligence of a social system you have to fulfil three basic requirements:

- first of all, it is necessary to find and activate the relevant players;
- secondly, to avoid energy consuming resistances in the process. The expectancies and valuation systems of the people involved have to be made transparent;
- and thirdly, an unrestricted flow of information has to be guaranteed by combining all resources in a high connectivity network.

Based on Kruse's experiences as a consultant, the first requirement would appear to be anything but trivial. "The really relevant people to solving a problem are not necessarily the ones with the corresponding job description or responsibility in the hierarchy." Following the idea of self-organisation, Kruse uses a very simple but efficient principle to get access to the maximum competence in an organisation. He stimulates social systems to unfold the informal relationships by using the principle of chain letters. He initially asks some people to send an e-mail to some of the top-experts in the organisation who they think could be of most help. In these e-mails the chosen experts are also invited to nominate their favourites and to send e-mails with the

same request to these next experts. This creates an avalanche in which any single impulse triggers multiple reactions. The activities are traced by a software-tool developed by nextpractice which is called "nextqualifier". On the one hand, the tool prevents information-overflow by suppressing recurrent e-mails and on the other hand, it detects the nodes in the internal networks by counting the references. The nodes are the people most often addressed in the chain letter algorithm. To be a node or a hidden expert in a social system is not a matter of strategic targeting or individual power but a question of attractiveness. To be a node is not a status one can achieve but an emerging quality of the dynamics of the social system which may go as quickly as it comes. Such resonance phenomena can be very strong and can lead to surprising results. As an example, Peter Kruse tells us the story of the German author Cornelia Funke. For about ten years she has been writing books for children. Her first international best seller "The Thief Lord" was published in the USA in 2002. In 2005, Time magazine nominated her as one of the hundred most influential people in the world. Nextpractice's tool 'nextqualifier' simply uses the snowball effect of chain letters. The tool helps to detect the persons who have a high degree of connectivity. In network theory these persons are called superspreaders. Knowing these nodes does not make developments more predictable, but involving them in processes enhances the impact of interventions dramatically.

UNCOVERING PEOPLE'S UNIQUE VALUE-SYSTEM

"The fact that it is more and more impossible to predict developments in business and society is due to the high degree of connectivity in the global markets. The worldwide networks are at any time ready for resonance effects. We are confronted with an enormous complexity and speed of change. Therefore, decision making under conditions of uncertainty is no longer exceptional but simply normal. In situations like this the only way people have a chance is by acting more and more intuitively. Decisions are made on the basis of unconscious criteria based in the limbic system of the brain. These criteria are the result of the lifelong learning process of a person. The basic valuation system

> Brain research indicates that the limbic system is most responsible for decisions for action and not the rational, conscious cerebral cortex. This is where emotions and values are learned and formed.

is the only thing one can rely on in a highly demanding situation." Kruse starts to explain his second basic requirement for successful change. "For good results it is of major importance to make the subconscious expectations and valuations of the limbic systems in the people involved in a change process transparent. You cannot change what you cannot measure." But this is not an easy task to carry out. How to measure criteria which are buried in the deep structures of the brain and which are most of the time not consciously accessible? After more than fifteen years of research, Kruse has created a methodological solution – easy enough to be used in practice but sophisticated enough to meet the requirements.

Kruse and his colleagues developed a laptop-based interview technique which makes it possible to uncover and measure people's value-systems while they use their own words. The tool nextexpertizer doesn't work with predefined answers. "A questionnaire", Kruse points out, "is only as intelligent as the one who created it." Qualitative interviews are generally better suited to grasp subjective assessments but difficult to compare. The tool nextexpertizer combines the validity of qualitative interviews with the structure and comparability of a quantitative analysis. This means that intensive, individual interviews of 1,5 hours with the previously identified 'attractive experts' are held. The goal is to find out how they think about the proposed change in a company or about a certain brand, for example cars or sports.

How does this tool work? In the case of SportScheck (see box IV for more information) nextpractice performed what they call a 'limbic scan' around the central question: how do customers decide what to buy and what not to buy? To answer this question you have to find out what their value system towards sports is. What do people have in mind when they think of sports? What is the position of sports in the world? How do people see SportScheck? Nextpractice interviewed (potential) customers of SportScheck. There was no need to find 'attractive experts' in this case. The only criterion for people being interviewed was that they were interested in and experienced with the world op sports.

The interviewee was given a pair of items which they had to compare. In the case of SportScheck they were asked to compare elements around the topics sports, fashion, brands, and competitors. The interviewee was asked to compare items such as: "sports as it is today" versus "my personal lifestyle";

"SportScheck as a company" versus "a sports company where I would buy my sports articles". The interviewee was then asked to enter into a computer programme how similarly or differently they viewed these items.

In the second step, the interviewed expert created concept dimensions to describe the similarity or difference of the compared elements in their own words. One interviewee might find SportScheck more 'energetic' in contrast to another company which he views as more 'boring'. Another person might view the two companies in terms of 'modern' and 'conservative', or in terms of 'trendy' versus 'steady'.

Brain research indicates that the limbic system is most responsible for decisions for action, not the cortex.

In the third step of the nextexpertizer, all the other elements, brands, competitors etc., were rated by the interviewee in the concept dimensions which they had just defined for themselves. Thus, a third company that sells sportswear could be rated as either 'more energetic' or 'more boring'. So in the course of the interview, the participant had constructed his own questionnaire and assessed the relevant aspects in his own words.

In the analysis of the data, the relationship of items in a system relative to each other becomes more important than the exact labelling. Nextexpertizer points more to the way a word is used to evaluate e.g. SportScheck in comparison to another company than to the semantics of the word itself. This interview appeals more to the intuitive than to the rational thinking of the interviewee. "This is precisely what the goal of this method is", Kruse explains. "Brain research indicates that the limbic system is most responsible for decisions for action and not the rational, conscious cerebral cortex. This is where emotions and values are learned and formed. The reason the interview relies more on the usage of the words than merely on their meaning is because the limbic system works subconsciously. The associative character of the interview makes it possible to grasp these 'soft factors'."

Finally, the individual results are analysed mathematically as well as qualitatively and presented in three-dimensional graphics. The answers of up to 400 persons can be processed and create a common semantic space. In this space, the relationship of the elements that have been compared and the description is also visualized. It shows for example that people feel that the dimensions 'energetic' and 'modern' are closely related or that 'old-fashioned and 'conservative' are grouped together.

Areas in which this complex tool has also been applied include reflection on leadership behaviour, team development, cultural analysis and change processes, to name just a few. The result not only reveals valuable management information and uses all the intelligence in the system, but when applied in a change situation, it creates transparency concerning the subjective evaluations of everyone affected by the change.

DISCOVERING PATTERNS AND INVOLVING PEOPLE

For the nextpractice-consultant, the real work starts when the data is collected. Due to the large and rich data set, it is possible to find patterns. Patterns that can reveal meaningful information to the company. In the case of SportScheck this meant that Kruse found patterns in the answers the customers gave when they compared the elements around sports, fashion and other brands. In the case of SportScheck this story was about the way their customers viewed sports. Whereas SportScheck had always been successful with selling the newest trends in fashion as soon as a new trend in sports popped-up, this was not what the customers wanted. The story Kruse told them after seeing patterns in the data, was like this:

SportScheck used to be very successful and innovative. When there was a new sport, SportScheck was the first one to bring it to the people. SportScheck used hypes in sports to sell the fashion. But all of a sudden they realised that something had changed in the market. They did everything they could, but the sales were dropping. The customer interviews with nextexpertizer showed that the value system of sports was drifting. The idea of a sports-hype no longer resulted in positive associations for the customers. For the customers, the fact that a sport is 'new' is not enough to be attracted to it. According to the customer, it also has to be meaningful. SportScheck had played with trends and this was successful for a long time. Lately however, the customer had new ideas about sports: sports is something that you do for your health and to find relaxation; sports is what can make life more meaningful. SportScheck needed to find ways to react to the customer's values in order to regain success in the market.

Kruse concluded this story with his observation that "what SportScheck needed to do was no longer 'good management' but was rather to re-invent themselves in an entrepreneurial way". After such a story, the reactions of people show Kruse if his observation is right. "If I'm right, they start to nod and smile and that is nice. If I'm wrong, it is also good because it triggers people to come up with their own solutions. This is an iterative process. It is more important that the clients discover their own truth than me telling them. The art of the consultant is to understand the system, not to overtake it. The client needs to be able to give meaning to what the system comes up with."

This is a process of inter-subjectivity, as opposed to the traditional linear way that strives for objectivity. An advantage of these large group interventions is that the employees are informed. Transparency is, according to Kruse, a key ingredient for lasting change. "If people know why, they can understand and focus on the how, and subsequently they can become involved.

The story is something that disturbs the system. After telling the story it is time to work on solutions. That is when the third and last tool is used. The tool nextmoderator addresses the intelligence of the system as a whole. Kruse believes that to facilitate a lasting pattern change, the intelligence of the entire system needs to be used. Nextpractice facilitates this by physically bringing together large groups of people from the organisation to collectively brainstorm. Kruse remembers sessions with up to 1600 participants. The results of the analysis-phase (in the form of three dimensional graphics) are being presented to the audience, the story is told, and then the participants are asked to brainstorm possible solutions. Sharing a laptop in groups of five or six people, the employees are asked to come up with ideas and possible actions. In between the different steps, the input is assessed and communicated back via the computer screens. The statements and ideas that have the most resonance within the system, are put on top of the brainstorm list. But most importantly, every input is used and nothing is thrown away. Nextmoderator uses group intuition and keeps group dynamics out. "When you are working on the future, you can't use group dynamics. That disturbs the brainstorm".

In the case of SportScheck, several nextmoderator brainstorm sessions were conducted starting with the management team. They created a new vision. First there was a team of managers who did their best. Now there is a team of entrepreneurs who do the new. After creating this vision, a session with the lead-

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Box II: The Otto Group case – creating an avalanche to change the system

The following example illustrates a change intervention which involves the entire system. The Otto Group (123 companies, 54.000 employees in 19 countries) is well-known for its many mail-order-companies. About seven years ago they started a programme to create a feeling of belonging to Otto Group among the employees. Peter Kruse collaborated with them: "The idea was to build an intelligent network". Since the Otto Group works in a highly developed market in the area of retail, the people working there have unique abilities, and they wanted to use that potential fully. "We wanted to create a common identity because without a common identity, it is hard to connect. That's why we started this initiative to make everybody aware of the Otto Group".

Kruse explains their approach. "Normally you would send someone across the world telling a nice story. That is very expensive and not so effective. We are more interested in creating an avalanche-effect, using the resonance of the system. And then we had this crazy idea. Everyone in the company was asked to look for a nice stone and to paint it. The people were asked to paint on the stone something that for them represents the Otto Group. The Otto Group would pay € 3 per stone and the top three winners would get this sum of money to fund a positive social project. More and more people were inspired to paint their own stone. Within three months, 33.680 stones were painted and more than 66% of the people who work for Otto Group worldwide were involved. It really became a hype through the system. Everybody felt part of the Otto Group. And no wonder", says Kruse. "Everybody spent hours finding a nice stone and designing it according to their own view of the organisation". Kruse attributes the success to the fact that the idea of the stones connects directly to the company's core values: passion, creativity and sustainability. "And also", he says, "we really managed to create an avalanche-effect of the system's resonance. In the end, this 'crazy idea' created a new common background. People call this 'culture'."

ing managers followed and in a third step, one with 150 colleagues to think further about the future. In these sessions everything the people came up with was recorded. On the basis of all the ideas being clustered by the nextpractice team, they created the '10 steps to heaven'. It showed that the group already had a way in mind. At the very moment SportScheck is busy with implementing these ideas and working with them. They are now not focussing only on fashion anymore. They support people in making sports a part of their lives.

TRUSTING THE SYSTEM

We are curious as to whether the client feels abandoned if Kruse and his team immediately leave after the intervention. Kruse points out that he takes his role as outside consultant very seriously. "I can show people the street, but they have to steer the car. If you trust the system, you don't do anything for the people yourself, but you create the right dynamics. If you wish to compare it in very simple terms, it works the same for adults as for children: get them to wake up, create goal alertness, capture their interest, give them more than they can handle to create instability, and then confront them within this uncertain situation with guidelines and a working process. In the case of SportScheck, sales showed that something had changed and become different to before. But internally, the company was still following the same strategy they always had and just tried to work harder. Things only started to change when the managers were shown a mirror with the results of the interviews. It was only when they saw the changed view on sports of their customers that they worked out a new vision for the company." We were wondering if his methods are not too technical to provoke lasting change. His answer is short but clear. "Without

measurement no change". However, "never define procedures and don't facilitate people but help them to arrange themselves." He trusts the tools and has invested much time and money to develop them. Kruse sees them as an advanced medium to trigger change in the system instead of focussing directly on the change. "All we do is make the landscape of resistance-points and solutions visible in a three-dimensional graph and in the story which shows the recurring patterns. The actual change is taken care of by the organisation (read: system) itself. The strength of the tool is that it gets everyone in the boat. This boat sets out on a new course. Using the tools works better than directly addressing the issue. It creates room for the process."

WHAT'S NEXT?

If this is the next-practice of today…what will be the following step in organisational development, the next-practice of tomorrow? Is there anything like a general insight that can be drawn from these experiences? "We live in a world with complex relationships where hierarchical organisational structures and linear management methods do not work anymore. The best way to cope successfully with complex and dynamic environments is to build and use networks. The solution system has to have the same flexibility and diversity as the system defining the problem. "Therefore", Professor Kruse states, "let us take the human brain as a role model for understanding the new management challenges. In the brain it is the interaction between the cells involved which creates the intelligence. Every single cell contributes but the result is always more than the sum of the parts. It is not possible to predict the order formation processes by looking at the level of single cells. Translated into business

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Box III: Who is Peter Kruse?

The first thing that strikes the eye is Professor Kruse's stately beard. But as soon as he starts speaking about his passion, about change in systems and the intelligence of networks, the association with a conservative German professor is immediately forgotten. Mr. Kruse's eyes twinkle as he shares his insights into brain research and organisational behaviour with a serene voice that draws the listener into a fascinating world of innovation, change dynamics, and complexity theory. Throughout this, the narrator never gets stuck in abstract concepts or static theory.

Peter Kruse is professor for general and organisational psychology at the University of Bremen and managing partner at nextpractice GmbH. As a researcher, he is most interested in the processing of complexity and the autonomous order formation in intelligent networks. As a business consultant, he has designed change processes for a variety of well known international companies in the last ten years. Many of the top-100 German companies can be found in his reference list. In 2005, he was voted among the 40 most influential personalities in HR Management (by 'Personal-magazin').

Box IV: The SportScheck case

To illustrate what it means to achieve a process pattern change, we look at the Southern German sports-wear chain Sport-Scheck, a part of the Otto Group. They have experienced all of the three methods nextpractice uses (see box I for information on the methods). The company has specialised in offering innovative sportswear at a low price to the customer. If in the past a new sport was introduced, SportScheck was among the first to market the appropriate sportswear. However, at one point sales and market share declined. When they realised that something was changing in the market they approached nextpractice with the request to analyse and redesign the process.

They started to conduct interviews with their customers to find out how they thought about SportScheck and sportswear using nextexpertizer. Then a workshop followed which showed that, in fact, the company did everything they could, but it was the customer who was rejecting the product. The value system of sports was shifting. SportScheck had always focused on the sports hype to sell their fashion. The interviews showed that the customers didn't buy sportswear any more because it was new and cutting-edge, but it had to be 'meaningful'. Peter Kruse calls these customer-interviews 'lymbic scan', because people intuitively decide what to buy and what not to buy. People now view sports more as an investment in their health, as good relaxation. And that is what makes life more meaningful for them.

When nextpractice presented these results to SportScheck, their message was that the company should no longer strive for 'good' management, but suggested an entrepreneurial re-invention. First, a new vision had to be found as 'lifestyle' was not the common trend anymore. The new vision was formed in several nextmoderator sessions with up to 150 people.

Not only fashion, but sports too are a part of the customer's life. SportScheck had re-created their basic identity. Eventually, after creating a sense of urgency and instability, the result was a process pattern change. Where there used to be a team of managers who "did their best", there is now a team of entrepreneurs who "do the new".

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terms, this leads to a fundamental shift in the definition of entrepreneurship. Following the idea of the brain, all neurons are important, have their own intelligence, and are vital parts of the system. Therefore, modern change interventions need to be modelled after the brain. The neurons in the brain are small self-starters, firing information into the network. Compared to an organisation this means an increased level of intrapreneurship (being entrepreneurship within an organisation), with individuals being the neurons which trigger innovation and activity".

Reflecting at the end of the interview on what the future could bring, Kruse thinks aloud, "while the last decennia were about optimizing the management process, the next focus of management will be on entre- and intrapreneurship. Companies realise that they have to make stronger use of their human and social capital to be competitive. Stimulation of personal drivers and an organisational context which allows the pursuit of new initiatives are an essential part of this. The challenge is to create more professional entrepreneurship. Up till now, man-

agers were busy concentrating on optimising current processes. Now, the new question posed to consultants is 'how can we change and increase participation?'. However, participation means taking the risk to unsettle a system and that still feels dangerous to organisations. Managers are busy with optimising instead of daring to change fundamentally. Instead of solving problems themselves and thus investing in their own learning, managers should involve their employees more and invest in their learning as well." Therefore, post-next-practice interventions should focus even more strongly on using the intelligence in network systems.

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