Experimental creativity

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Abstract
When organizations innovate, they want to gain as much knowledge as possible to be added to their new inventions, and they want the knowledge to be diverse. In that situation, they face the problem of professional, social and cultural habits or patterns, existing in the organization, as a result of past problem solving and business strategies. If they want to innovate outside these patterns – away from the straight line of past innovation, they need ways to collect and use new knowledge, without being controlled by the dominating patterns of the past. In this paper it is suggested, that the "new" knowledge they need - to some extent, is already present in the organization in terms of tacit knowledge. The tacit knowledge is distributed knowledge hidden in different places such as in the bodies, the social relations and the common understanding of the organization. As a way to make use of the tacit knowledge, it is suggested that *play* is introduced as a new institution where it is easy to let go of the dominating patterns and thereby releasing existing tacit, as well as explicit knowledge in the process of innovation. Playing is an isolated process that adds creativity to the innovation *if* it is done properly, and it is suggested to use play as a prototyping tool not only limited to product innovation, but spread out to all different areas of innovation.

1: Impact
Innovation has become one of the most used words relating to globalization and to change, and the whole idea that it is possible to improve your innovation skills to ensure the companies' ability to grow and even to survive, is no longer a question of why, but now it is more a question of how. To make optimal product development, is to make the right decisions at the right time, but the dilemma in a fast moving world is that the decisions are made at a time in the process, where the knowledge related to the project is poor as illustrated in figure 1.

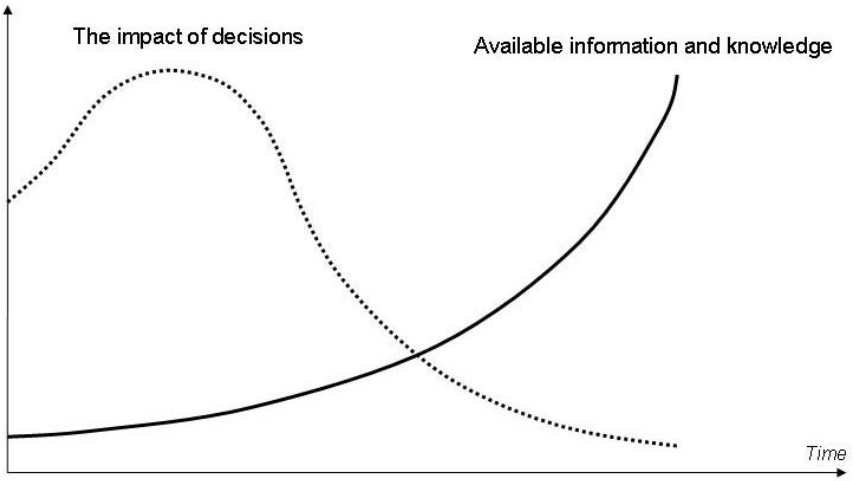

Figure 1: The dilemma in project management (Mikkelsen & Riis, 1989)

The dilemma illustrated in figure 1 is not easy to solve. One strategy is to postpone decisions until we gain more information and knowledge. Another strategy is to accelerate an increase in information and knowledge. In this paper we suggest to do both. We suggest increasing the quality of the innovation process by allowing it to be creative in terms of playing with ideas in a non judgemental environment. By doing this we believe it is possible to accelerate the gaining of new knowledge. Not only the kind of knowledge we usually would expect, but diverse knowledge that would allow us to innovate at a higher level.

Innovation should focus on more than pure product innovation

Innovation is no longer synonymous with product development, and is not limited to technology and product development. The process of making an idea product development stronger, better, more documented etc. is not sufficient. Now the innovation process is to move from product innovation to concept innovation, where differences in culture, behaviour, systems and political approaches can be added as a part of the innovation. It is not only the best or newest technologies that provide the greatest possibilities for the future, but more how they are put into a conceptual frame. Working with a conceptual frame instead of only product development is one way to accelerate the gaining of diverse knowledge.

2: Presentation (the use of prototyping in innovations)

Prototyping is an activity through which it is possible to gain more knowledge about a topic even before it is made for real. In this aspect prototyping is a way of gaining knowledge by playing with ideas. The knowledge gained from prototyping can be of different types. It can be closely related to what we already know, often structuring questions that need answers. This type of thinking is an approach to problem solving that usually involves selective, analytical and sequential thinking. This thinking follows the rule of logic and a line of arguments that is coherent. In contrast to logical thinking, there is lateral thinking (de Bono, 1967) where the knowledge we gain bring new ideas or perspectives that might motivate us to make more radical changes. New things are discovered, and we need to play and explore the possibilities – if it is more radical we need to play even more to explore the potentials.

Prototyping is a well-known activity in *product* development. But in a process of concept innovations, other factors like branding, marketing, design, business model, system integration, financial transaction, social acceptance, culture, politics etc. have at least the same influence for developing a total concept. To innovate in these areas, the creativity known from prototyping is needed, not only as psychical prototypes but also mental prototypes like scenarios, movies, role-plays or the like. In this paper we present a model, in which we think of prototyping in innovation as a *way* from which we gain both more and new knowledge about multiple aspects before we have to make irrevocable decisions in the further innovation process. We will call the process of developing a conceptual frame through both physical and mental prototyping for *experimental creativity* as a quality that can be added to the innovation process.

Using the experimental creativity in the process of innovation can be done by adding a step between the divergence and the convergence activity – a step with playing. This added step in the model models serves two objectives: The decision making is postponed because the convergence activity is postponed through a process of playing with the created ideas without making a decision or evaluation. And – this playing with *moment by moment* movement (de Bono,1967) provides each idea with a lot of new and possibly even astonishing knowledge. This process is described in figure 2.

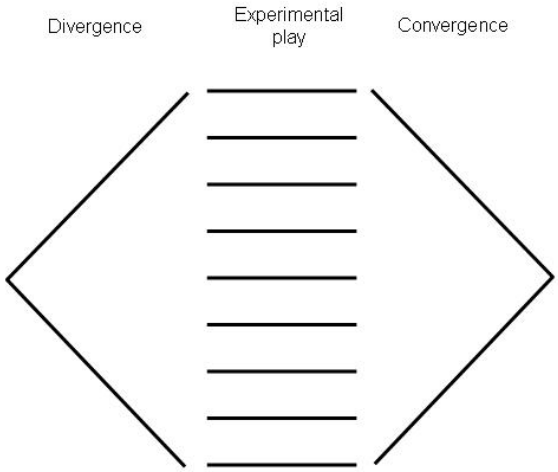

Figure 2. The divergence and convergence process separated by experimental play

Each project has a divergence activity followed by a convergence activity – or the project has several of such activities. This to work with possibilities to create new possibilities followed by an evaluation, which is basic in most models for innovation, and our aim is to develop this model by demonstrating how play can be used in different ways to create better ideas and to work with these ideas before they are evaluated.

Playing and gaming

Play has always been a part of human activity in a lot of areas like social activities (e.g. parties like masked balls), drama (e.g. theatre), private life (e.g. sex), etc., and even today, play is an accepted way to gain more impact. The National Institute for Play in the USA is creating a clinical, scientific framework for play and defines four areas: Health & Wellbeing, Relationships, Education, and Corporate innovation, which shows the big range of areas where play can be and is implemented.

When play becomes structured, with a clearly defined goal, it is often called a game. The activity in games is structured or semi-structured, and usually undertaken for enjoyment or entertainment like in sports or computer games (Crawford, 2003). There is not a clean cut between play and games, and well structured games are used to re-enact activities or real life situations for various purposes like training, analysis and prediction, which all involve the use and creation of knowledge. Such games could be role-playing, war games or simulations. Games are normally distinct from work and from art, which more relates to play, and with the expression of ideas, and contrary to play, games are goal-oriented. Games are therefore very suitable for involving mental and physical stimulation in developing practical skills, exercising and performing educational, simulated or psychological roles. However, play can be structured as well- such as in stage-plays- like classic plays by Shakespeare, but still the term play can refer both to the written works of playwrights and to their complete theatrical performance. In play there is an element of danger. As there is no goal and maybe not even a direction, the end can be everything and nothing. In some play the danger is even organized as part of the game like in extreme sports (action sport, adventure sport and adventurous sport) and in stunt play (sky-diving, frightening play and stunt skiing). Here the activity involves a very high degree of danger and often speed, height and a high level of physical exertion, where the purpose is to induce a kick of adrenaline and give the participants a rush. This link to adrenaline and extreme sport is tentative (Brymer & Gray, 2004). Extreme sport was defined, contrary to marketing hype, as a leisure or recreation activity, where the most likely outcome would be a mismanaged accident or where the result of a mistake could be death. The difference between extreme sports and conventional sports – or play – has to do with perceptions related to the level of danger or the amount of adrenaline generated. Nevertheless, marketing and preconceptions have some influence, e.g. snowboarding has a more extreme image than skiing due to being a newer sport and therefore having a different marketing strategy, even though skiing is a faster and at least equally dangerous activity.

Most games include play or elements of play, but play does not include games. Games have a structure and a goal, there is also a time-relation and enjoyment (entertainment) involved, and the direction is certain. A football match is a game – very structured and with a clear goal. Time and direction is given, but even during a match there can be play – players doing something unexpected, which can be followed by dramatic consequences. Because this is the nature of play: It happens instantaneously, this moment, without a past or a future, as being the source of flow (Csikszenentmihalyi, 1991) or peak experiences (Maslow, 1976). Time stops existing when all our attention is focused in play. The boys playing with a ball on the beach might not fit into a well structured game, and even if they succeed in structuring eleven players in a game, the outcome can be very frustrating.

When companies model, prototype, and simulate to innovate, they often do it for managing risk and create value (gaming). To seriously play they have to focus on play instead of gaming. (Schrage, 1999).

The use of prototypes in innovation

The idea of prototyping is to add knowledge to the innovation. In rapid prototyping the knowledge comes from the use of more senses. We can look, feel, move, etc. the object. In sports, we find many examples of prototyping. Besides ordinary training there often is a practice match. Even though a lot of time and effort has been spent in developing the physiological and mental possibilities, training the skills and discussing different systems, it still has to be tested as close to reality as possible. The basic idea of using a practice match is

to postpone decisions until we have more knowledge. We do that by playing with different possibilities until a few minutes before the beginning of a match. At this time we have the highest level of knowledge, and the coach is able to make the best decisions. Even during a real match, the experiences from experimental creativity are valuable, especially if changes are required. We know that the use of our senses gives access to a very rich source of knowledge. The task is to involve as many senses as possible *and thereby the body* in the process of development. The body contains an incredibly rich source of knowledge and the access to that knowledge is called perception and works through the senses.

In the area of both physical and mental prototyping, we need to add our experiences rather than cognitive knowledge to the process. And to add experiences we need the body, because this knowledge is distributed through the body. Doing something, playing with things or situations and getting reflection from the body instead of the brain, is the basis of working with prototyping. We need to use our body in the process of combining knowledge and experiences to offer the necessary postponement of decision (Dewey, 1997) as described in figure 3.

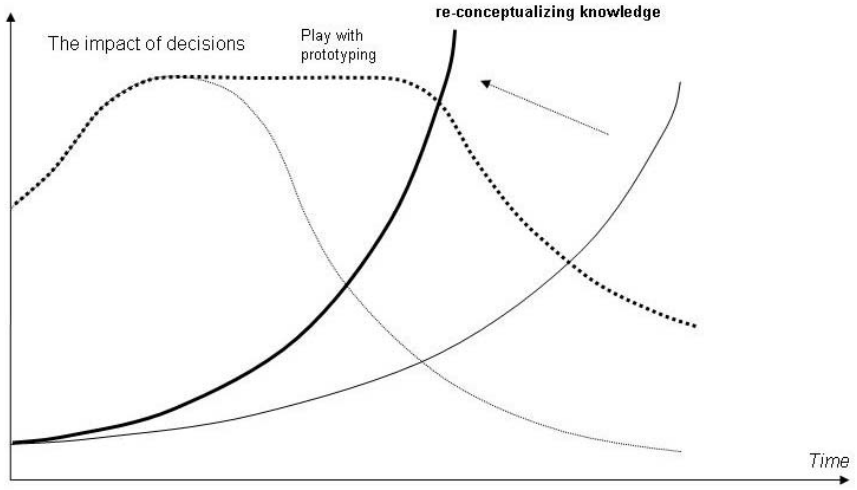

Figure 3. By playing with prototypes knowledge creation is both accelerated and enhanced in terms of adding diversity

Usually when more knowledge is added it becomes more difficult to change direction in thinking (see fig 1). What we want is to make the decision of greatest influences at the time where it would have the greatest effect.

3: Elaboration (an extended approach to learning)

Prototyping means *doing* something which involves more knowledge than *talking* about doing it. The basic idea is that by *working* with prototypes, *doing* something with them, being *aware* of our senses and feelings, we get access to more knowledge than by pure brain (cognitive) activity. Doing something involves other types of knowledge besides cognitive knowledge. One way to illustrate this is to differentiate between tacit and explicit knowledge on one hand, and individual and collective knowledge on the other hand (Baumard, 1999).

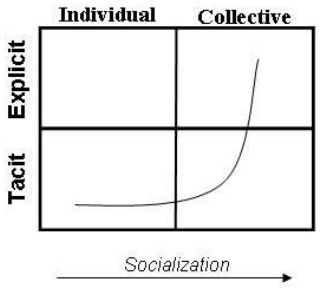

Figure 4: Individual and collective knowledge (Baumard, 1999)

Tacit knowledge includes all kind of knowledge which we are either not aware of, or we cannot express in a formal linguistic way. It includes body expressions, feelings, and all that we can sense through our senses. The motivation for researching tacit knowledge is illustrated in figure 4. In an organization we want the individual tacit knowledge to be transformed into explicit collective knowledge. This transformation involves two steps. The first step is a process of socialization where people in the organization share an experience. The next step is an externalization where the collective tacit knowledge becomes explicit by using analogies or metaphors. The overall objective is to develop a common understanding or consensus in the organization. This is often a difficult task, and involves long discussions because people interpret the same experience in different ways. This is due to the fact that people in the organization, due to their different courses of life, add diversity to the common description of the same experience. As a result we get multiple representations of the same experience and not the common understanding we wanted about a clear vision or whatever the purpose might be.

Using the body and the attitude to bring tacit knowledge into action

From the above discussion, the problem appears to be how to find a way to explicate tacit knowledge among team members and thereby make better use of their diversity. When the task, on the other hand, is to involve knowledge in a creative process, it is not necessarily desirable to make it explicit all at once. It is in the multiple representations or interpretations of common experiences that new ideas arise. It is not when we agree on everything. Because of that, an innovative process should involve a huge amount of diverse knowledge, both tacit and explicit. The task is now to find a way to release and play with this organizational knowledge-in-action and at the same time, avoid endless discussions in reaching a common understanding. This is the reason to involve play as a working method in the creative process.

Normally we do not think about it, but it takes some effort to make an arrangement where we only make use of cognitive knowledge in a discussion. We must make sure that the body is trapped on a chair and behind a table in a way that make it difficult to use and watch the bodies' kinaesthetic movements. In such an arrangement we can also be pretty sure that our senses are blocked and that our perception is limited. If we, on the other hand, allow the body to be active, we get access to all the knowledge stored in the body, and we get access to the creativity that arises from playing with the perceptual feedback provided by our senses when they are allowed to work. The meeting place for the brain and body, is the experience. This calls for an arrangement of experiences besides/instead of mutual (brain to brain) reflections. For this purpose, the definition of brain and body does not need to be very precise. We think of the brain as responsible for cognitive thinking and verbal expressions. The body, on the other hand, takes care of anything else we can demonstrate, show or express as a represent for experiences.

Experiences are always influenced by the immediate attitude in the given situation. Our attitude controls, to some extent, what we are able to *perceive* from an experience. The attitude can be located somewhere in between brain and body and all three of them influence each other and thereby our perception of an experience. From this, it can also be suggested that instead of having a purely brain to brain (cognitive) communication, innovation should be dominated by communication that includes brain, body and attitude. This is illustrated in figure 5. This approach is coherent with Nonaka (Nonaka and Takeuchi, 1995), who emphasizes the oneness of body and mind in innovation.

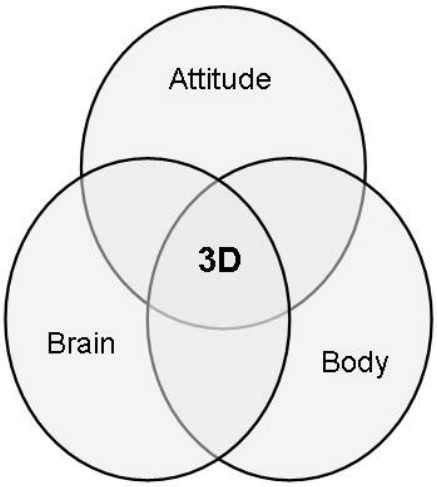

Figure 5. The ingredients in a 3D case

By allowing body and attitude to collaborate with the brain, we include tacit knowledge in the process of development. To that purpose, we developed a new kind of *mental prototype* that we would like to introduce in the following.

We call them 3D cases.

4: Point Of No Return (The nature of 3D cases)

A 3D case is a mental prototype of something we want to know more about and to investigate for further possibilities, and as for physical prototypes, they are not the final version, but something we can play with to learn more. 3D cases are always constructed with a specific aim e.g. to teach team members to delay judgement, to develop the potential of an idea, to break dominating patterns of thinking, to make it easy for people with different professional, social or cultural backgrounds to work together. 3D cases allow a team to be creative by removing the barrier, that mainly have their origin in the fear on making mistakes, prejudgement and dominating patterns of thinking.

3D cases are built on the condition of play, and there are always elements of activity, fun, movement and interaction – which in its nature, can seem like a contrast to normal business activity. Therefore some people find 3D cases to be childish. As in play, 3D cases involves some danger: You have to leave or change your status and position or even your environment, change communication style from talking to acting, and maybe even change clothes, outfit, décor or equipment. 3D cases have to be constructed for each purpose and

have to implement all the effects necessary for gaining a result, and it can take from a few minutes to several days – maybe even months depending on the purpose – to do a 3D case. Usually – both in teaching and as reflection on new business concepts – it may take not only one 3D case but several - each with a different purpose, task and set-up. Like all other prototypes or cases it is important from the very beginning to define purpose with the case. Basically a 3D case will include one or more elements as shown in figure 6.

- *3D energizers* are a way to prepare and get ready. It is like the sportsman, musician etc. who warms up to be ready, or it is like the welcome drink at a party. They have no other meaning than they make you ready, provide energy and stage the focus.
- *3D relation* is how connections and relations between people are created. The purpose is to make relation, create the right atmosphere or eliminate barrier.
- *3D reflection* is the learning or understanding of a situation, a statement or a possibility. Its often just another way to describe the written or spoken word.

3D cases

Type:	**3D Energizers**	**3D Relations**	**3D Reflection**
Gives:	Add energy	Add energy	Add energy
Why:	Make movement	Establish relations	Create reflection
What:	Stimulate body and change	Make it possible to make mistakes	Learn by seeing and acting the case
When:	When low energy	When people have to work together	When people have to learn something
Provide:	Make ready	Create peace of mind	Play with knowledge
Result:	Fun and relaxation	Make distance between people shorter	Debriefing

Figure 6. Different areas and purpose for using 3D cases

The key to creativity is *awareness*. In a 3D case, it is therefore important to develop awareness in every step. Awareness is the opposite of identifying with the mind, which holds all our existing patterns of thinking and doing. In this respect the *mind* is not only a place for cognitive thinking. Instead we think of it as the oneness of body and soul presented by Nonaka (Nonaka and Takeuchi, 1995). *The function of the mind is to present all thoughts, feelings, emotions, hunches, mental pictures or whatever we are able to register inside ourselves*. When we identify with our mind, we identify with our *reaction* to a specific stimuli or situation, which is only one out of many possible interpretations of the actual situation. A reaction contains a learned pattern, a habit. In this way the mind controls every thought and movement we make and makes it difficult to interpret in a new way.

Due to its pattern generating behaviour the mind is always concerned with what happened in the past and what might happen in the future. The mind is therefore a very useful tool to stay alive by remembering to eat and not being run down by a bus. In the state of awareness the existing patterns is dissolved and all the knowledge they hold are released. When playing in a state of awareness, all our knowledge and experiences is accessible without the normal restrictions from the established patterns of thinking and doing. In this way, we can use the

mind in a creative way. Awareness allows us to be in contact with our body and through that with our feelings, emotions and senses.

We all have a certain amount of attention to our disposal. This has quite a fixed size, and by using some of this attention on anything else but our task, focus on the task becomes smaller. As we want to have focus on the 3D case, elements like past, future, fear etc. have to be eliminated so that we can be on the 3D case. This is also what happens in extreme sport.

Awareness is possible when the mind "lets go" and stops bombarding us with thoughts, feelings, sensations or impressions. One way of letting go, is by satisfying the mind by inviting it on a guided tour that leaves no room for its passion of bombarding us with possible dangers or needs. The tour should involve as well brain, body and attitude, and at a pace that keeps it interesting for the mind to follow. Making awareness possible is one of the main principles of building up a 3D case that liberates the creative (knowledge) potential of the participants in an innovative process.

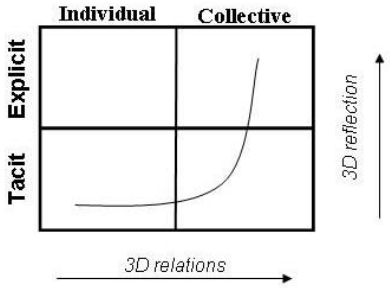

Figure 7. The result of different uses of 3D cases

5: Conflict escalation (The structure and use of a 3D case)

As a 3D case is a way to create possibilities or to work with already created possibilities, the purpose must be to search for limits. Like in a football match – the practice match is for testing a new system; see how far you can go etc., and the stage of a 3D case must include this element. A 3D case can be structured like the dramaturgic model for making spectacles and movies, described the first time by the German critic Gustav Freytag in his book Technique of the Drama (1863). He created the Freytag´s Trangle or Freytag Pyramid, where the story has a beginning, middle and an ending. At the top in the Triangle we have what Freytag called "Peripeteia", a word Aristotle had defined as "a change by which the action veers round to its opposite, subject always to our rule of probability or necessity". It is the time in the story with reversal of circumstances or turning point, with the crisis and the climax. The most common model to describe the dramatic structures in the story is the "Telling"-model (Olsson, 1982) – also often called "Hollywood model", because the model is recognizable in many American movies. Even a lot of other models are described like the Plot Point model (Field, 1984), with more dramatic plots and the Contract-model where the basis is places in the description of the social contract between the principal characters and the society. The "Telling" model involves a lot of the ingredients we are looking for to compose a 3D case. An example of this is this article, which also is structured after Olsson's model.

By using the telling model the possibility of making mistakes is part of the story or where" the unexpected happens," maybe even by the way it is structured. The "point of no return" is

really where everything can happen. It is possible to implement mistakes and faults as part of the experiences and learning. An example is the ordinary map for finding the best, shortest etc. route plan to follow. This will be printed, and as long as the reality fits the map, everything is fine. But if you miss the direction in the map, there is a serious problem. Today a lot of people have a GPS. This will find the way like the printed map, but the advantage is that the GPS-computer will direct you in a new direction if you get lost. Mistakes even bring new experiences and discoveries, and soon it will even be planned to "make mistakes" and search for new experiences by going in unknown directions – simply because you know the GPS afterwards will guide you in the right (planned) direction. The fear of making mistakes is gone.

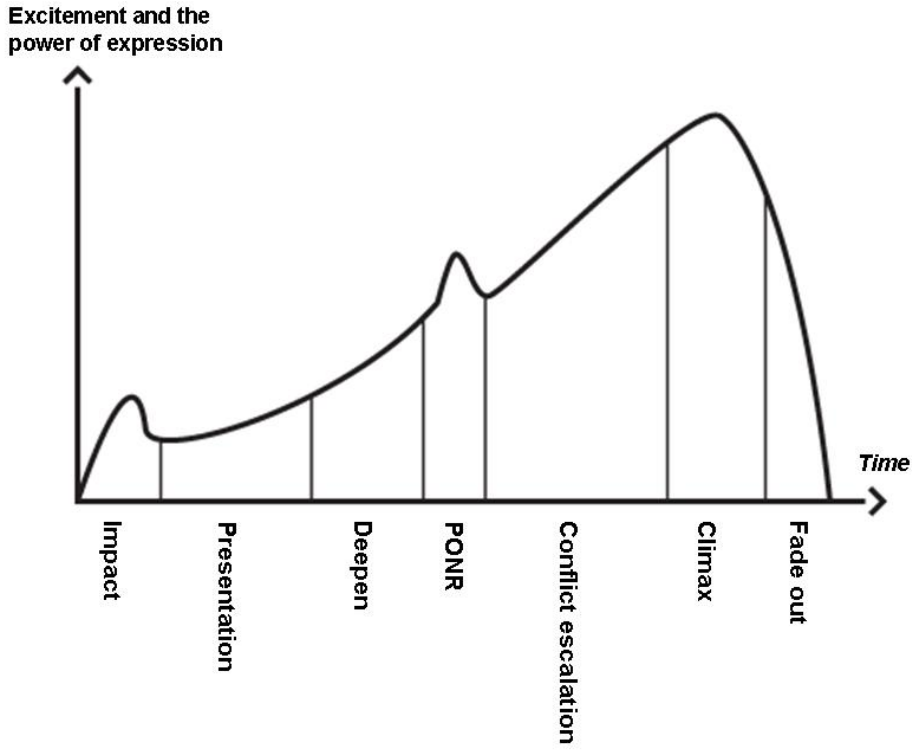

Figure 8: An example of structure a 3D case (Olsson's model, 1992)

Impact – or in music called prelude. Here the topic or the problem is described so the rest seems interesting to work with. For example, to make a lot of mistakes, which is the opposite of normal behaviour. In a movie, this is the place for the first murder, and in 3D cases this is where the aim and idea is introduced as a necessary component of the following process. Here the stage is introduced and there might be some equipment, dress etc. that will be mentioned here.

Presentation is a description of what it is all about. In a movie the principal characters will be presented, and in a 3D case, it is the place to describe the method, the process or the tools to be used. In a 3D case it is here that the coach, facilitator or teacher will introduce the case and distribute the roles – maybe even by demonstrating it.

Deepen is where the conflicts start to be clear. The motive and plot begin to take form, and in the movie you know who is good and who is bad. In the 3D case it is the point to start practicing. Here the participants get the first experience with the 3D case. Conflicts related to how the others react, participate and understand appear, and sometimes it is even possible

that some persons want to get out of the scene they are placed in, which should always be possible, even if we are very careful in organizing 3D cases.

Point of no Return (PONR) is the experience of what was presented at the impact. Here is the point where there is no return – no going back, no excuses or explanations about how it should be. We just have to accept what happens. In a movie it might be where the second murder occurs. In 3D cases we now know how the reaction is, how much we will achieve with this exercise and whether it will succeed at all. Still – at this point – no knowledge has been added and we do not know how much further we can go, but if PONR has created an expectation of whats next, it is easy to explore more. Therefore, PONR has to be well prepared so that it is easy for the participants to continue.

Conflict escalation is now possible. Here less probable suggestions and directions can be added, and the way of how and with what we see each other can be changed. As the case is accepted by trying, it becomes possible to play with other factors at the same time.

Climax is where the feeling of understanding takes place. In a movie it is here that we have the final battle between the principal characters. Often in 3D cases it is the place, where it is not possible to go any further – no more can be attained by this 3D case. It is important to stop a 3D case at the point where people start to be bored or talk about their experiences – or even worse – about something else.

Fade out is the ending. To stop playing and get back to reality. In 3D cases this is usually a time for debriefing. It is important to notice the difference between debriefing as help to reflect on the experience as an element in the process, or evaluation of what the participants think about the 3D case. The latter should be avoided, as it introduces judgment into the process, which again introduces fear and thereby erosion of The Creative Platform the 3D case is building. The fade out in 3D reflection is usually much longer than in 3D relation, and is normally called *debriefing.*

Looking back at the model in figure 4, this 3D case creates a (new) tacit common experience in a process of socialization.

6: Climax (3D cases in the process of creation)

The innovation process has to be staged without being institutionalized (Jakobsen & Rebsdorf, 2003). Exactly as in playing: Play can easily be staged – and often should be, but as soon as it gets institutionalized, it becomes a game. The term institutionalization commonly applies to the behavior of individuals, groups as well as organizations, where structures and mechanisms of social order and cooperation are constructed in a social system created or constructed by the participants in a certain society or culture that exists - people agree to follow certain conventions. This social construction over time provides typological classification or mental representations of people's actions, and these classifications eventually become habitual into reciprocal roles played by each person in relation to each other (Berger and Luckmann, 1966). When the reciprocal roles become routine, the typified reciprocal interactions are institutionalized and a pattern is created.

The process of structuring activity and making sure pattern is re-produced is in some areas the right approach – especially when dealing with the past in order to find, collect and structure information. A discovered pattern, a customer response or a follow-up on an internal or external activity in the company or organization (such as suggestions from

employees or observations from the market or from a salesman), are to be considered as possibilities which can be implemented if you want, and if you think they meet a desire: As it concerns the past all information is available.

The deterministic approach does not provide any new thinking which is crucial when we are dealing with problem in the present. There has to be a change in the unbroken chain of prior occurrences including human behavior and thinking. By changing the human relations and providing new knowledge, even tacit knowledge, it becomes possible to find new ideas to solve a problem. Bringing different knowledge together in a new context to provide ideas (brainstorming) results in a solution that can be measured against the problem: Is the problem solved?

A lot of innovation is not based on problems or customer and user needs, and even problems cannot be solved by removing their cause (de Bono 1967). Often the purpose is turning a good situation into an even better situation. This is a strategic approach to innovation without a clear goal, but with a direction – to ensure growth and future survival. Working with the blue ocean strategy (Kim and Mauborgne, 2005) is a possibility. The difference in approach to innovation is shown in figure 9.

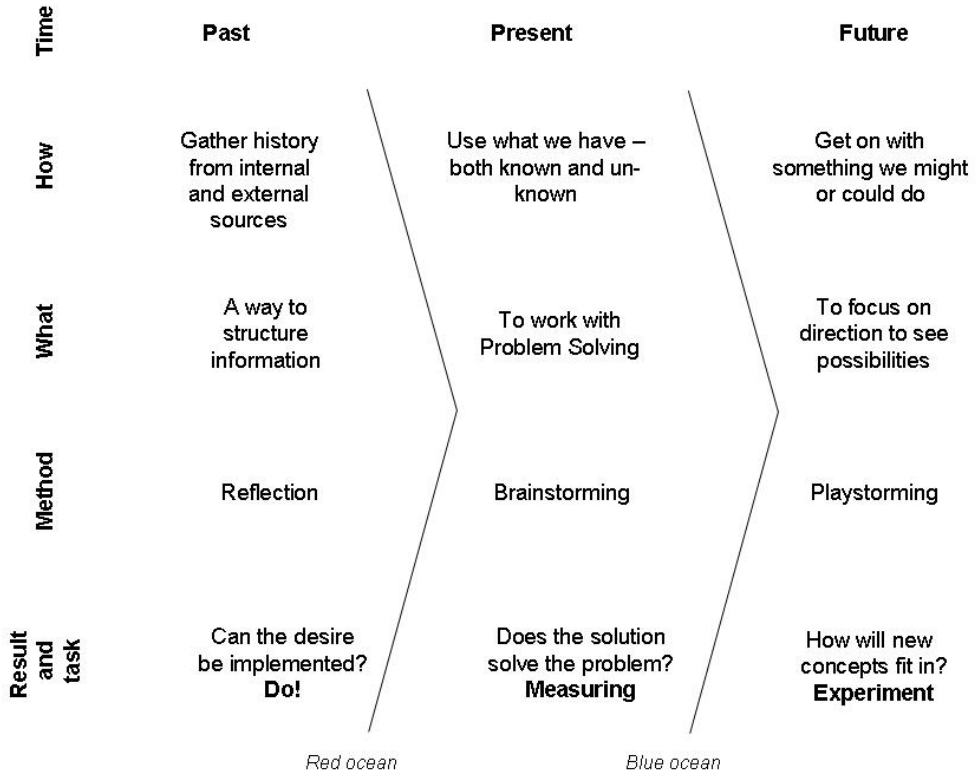

Figure 9. Different argumentation for innovation

A way to work with creativity in the innovation process is brainstorming as described by Alex Faickney Osborn. It is a creative technique to generate a lot of ideas for the solution to a problem (Osborn 1953), and this method has become a popular group technique. However, in such a group process, there is a tendency for individuals to block or inhibit other people. There is also a tendency for social loafing, where people make less effort to achieve an objective when they work in a group than when they work alone. Therefore there has been several attempts to document the effectiveness and to improve brainstorming with more

effective variations of the basic technique e.g. Bodystorming (Oulasvirta & Kankainen, 2003), Synectics (Gordon, 1961) etc. Brainstorming and its variations are based on problems, where the brain can provide a solution.

The result of a non-problem oriented process is very difficult to measure, because there is nothing – no problem – to reflect on. The difference between Brainstorming and Playstorming is shown in figure 10.

Brainstorming	**Playstorming**
Real problem	No problem
Focus on result	Focus on having fun
Immediate possible to realize	Not immediate possible
Short incubation period	Permanent process
Stress	Positive experimention
Search for solutions	Search for insight

Figure 10. Brainstorming versus Playstorming

Playstorming is not similar to play. Playstorming is a way to generate ideas – lots of ideas, but in the context of possibilities. Playing is a way of comprehending the different possibilities. In the problem solving process, objectives are found, and at the end, acceptance is found in the context of the problem. If the outset for innovation is not a problem but instead to look for new potential possibilities, playstorming is one of the ways to create new ideas without a well defined direction. After a process of playstorming, 3D cases is one of the ways to explore the potential in different ideas before action is taken to reach an evaluation. Using 3D cases is a method for experimental play.

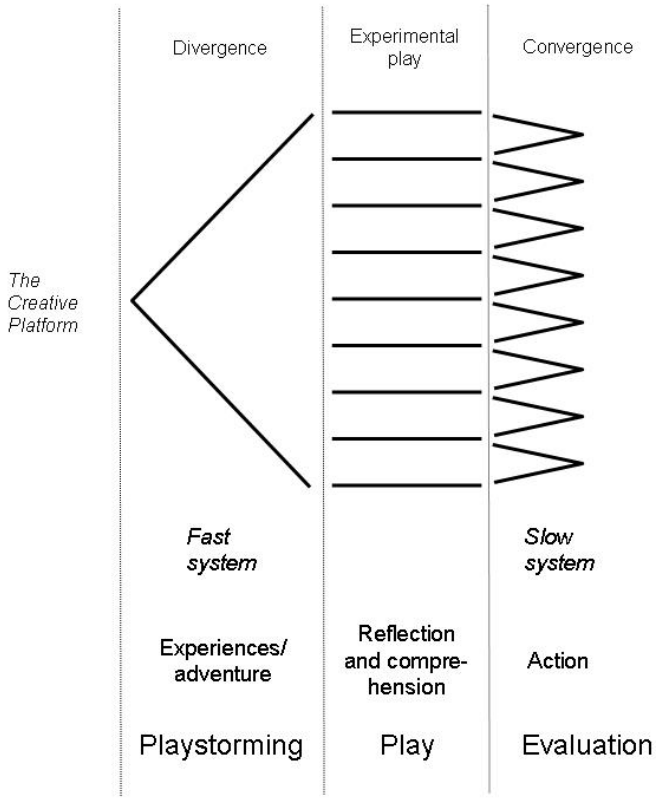

Figure 11. Playstorming lead to new possibilities that must be examined in a process of experimental playing before they are evaluated

Playstorming is a group process just like brainstorming, but there is no problem to solve. It is a search for new potential possibilities as a starting point for a creative process. The diversity and the ability to stimulate and provoke people in the group define the comprehensiveness. After playstorming, a process of playing with each of the generated ideas follows. It is a process of adding knowledge and further ideas, to explore the full potential of the initial idea. Many aspects have to be implemented, changes in direction and even changes in the way of constructing the 3D case. As the 3D case as well as a prototype is constructed for making mistakes possible and maybe even for them to happen, and as it is also constructed to have a Point Of No Return (go to the limit) and even to have a climax (break though), the 3D case offers the possibility to discover potentials not found without using the body and the planned search for PONR. In contrast to playstorming, playing can as well be an individual process, but as in playstorming – time is eliminated. Play does not lead to *one* solution, but to many possibilities.

7: Fade out (3D cases implemented)

The innovation process is not necessary as simple as having a divergent part followed by a convergent part. There is permanently a shift between the two, and even between these two separated activities there is a process of playing, where tacit knowledge is implemented. This is a process involving *experimental creativity,* carried out as a number of 3D cases.

Typically a project organization is created on the basis of the main organization to ensure that things done in the project can be implemented. This deterministic approach where the same people follow certain conventions in a social construction is not suitable for starting up new

projects, where the goal is to explore beyond existing patterns. The early step of a project organization is not institutionalized, not a part of the organization's pattern, not based on historical relations and not focused on deterministic approaches. It is an organization based on playstorming followed by experimental play with the staged possibilities to experiment with creativity to create new concepts in the organization. For this purpose we need to implement 3D cases as a basic for collaborative knowledge creation beyond the existing patterns.

In Denmark 3D cases has been successfully implemented in a number of settings which have in common, that students and professionals with different background meet for a fixed period of time in a process of experimental play.

- As a didactic approach to interdisciplinary and intercultural group work at the university.
- As a method to establish collaboration between students and companies where interdisciplinary groups of students find new solutions to specific problems in companies.
- To build common R & D units for companies with different products and marked.
- As an alternative to brainstorming in starting up new projects.

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