

Purposes in lieu of goals; enterprises in lieu of things.

Jurgen Faust

The design process

'To achieve quality of design in a management environment we have to organize the movement and not the shape'. This statements recalls a time when I began to realize that designing of material objects was not enough for me (1), and that idea of founding and designing complex systems or environments for living, working, playing and learning(2), was more exciting and dynamic. Founding and designing a non-profit private institution, an art school, which is now accredited as a University of Applied Sciences was 'Learning by doing'. In my experience this is typical for a design process; one improves design capabilities by including the experiences ones has just had.

Studying the design of a non-profit enterprise in reality, which was conceptualized and constructed through a dialogue between colleagues and myself has advantages and disadvantages. But it would be misleading, if I would give the impression that the method of designing was mainly inductive and dialogue based. Working for years on a 'theory of sculpture', gave me the theoretical and analytical concept to understand the implications of actions, i.e. initiating, conceptualizing and, if you want, managing as designing. The enterprise by itself was a research place, where we studied, invented and constructed on a daily basis, including the study of designing an organization and it will not be surprising, that 'complexity', 'chaos', self organization had been a vocabulary used in order to describe our object of research.

'The theory of sculpture, as a metaphor to understand design processes'

People who study art and design are visually introduced to a few color theories, only a small number have ever heard about 54 existing theories³. Even less know or read about a 'theory of sculpture' as an analogue model for the 3 dimensional world.

My art and science background generated enough curiosity to ask the question, why such a theory was developed only in the late sixties and whether it is possible to expand such a theory.

My research led me to a theory Joseph Beuys developed from the basic principles which alchemists used in the middle age: sal (salt), sulfur and mercury⁴).

Applying and working with his model, I had to enlarge it further, in order to describe the entire phenomenon I observed and constructed (5).

Such a theory, model, or image, metaphor or however we call it doesn't directly ensure good design, but rather it is like a 'map of the landscape' which doesn't replace the need for a good driving. Such a theory helps to establish conditions we are working with and within. It creates an abstract layer, which allows us to integrate a position of an observer of a second order, which is necessary if we auto surpass a pure subjective reason (6).

All the natural and artificial objects, we see and we potentially can think of and perceive and construct, are based on two types of evolutionary structures and an endless sum of in-between qualities, where we find aspects of both extremes.

Generating process 1:

Objects and conditions, moldable and shapeable, are moving through meta-forms (metamorphosis), continuously changing a form, not adding and subtracting material or complexity. To understand it visually, we can think about wax or clay that goes through many stages of physical properties without adding or subtracting.

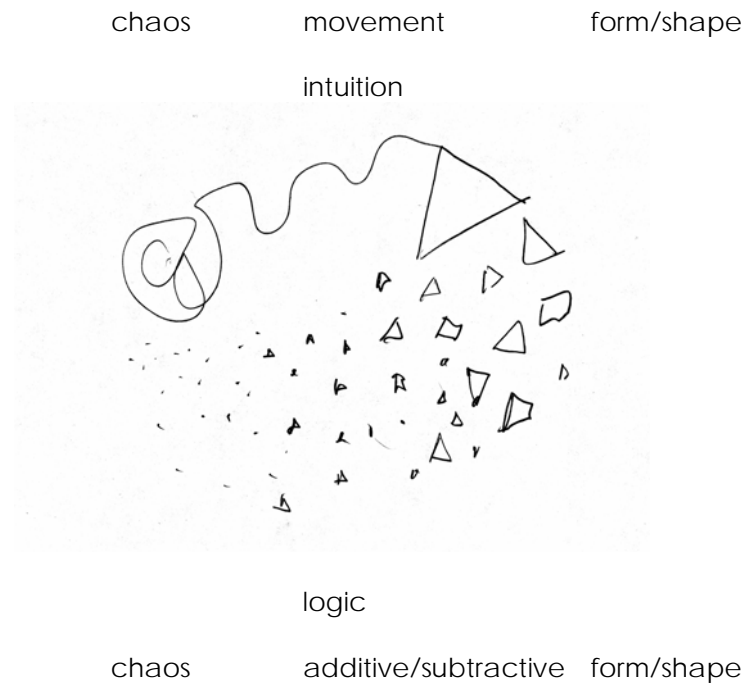
Generating process 2:

In the opposite process, objects and conditions are changed through additive and subtraction in order to reach the state of a new shape whether continuously, or in steps.

The object or complexity expands or contracts in order to change. (Reductionism and Holism) To get a sense for such a process, we can think about changing the shape of a stone or a piece of wood. Here we would have to add or subtract wood or stone in order to change the shape.

Both processes form the basis for the theory.

Generating process1: metamorphosis



(composite Joseph Beuys and Jurgen Faust)

Applicable terms:

chaos	movement	shape
gas	liquid	solid
mercury	sulfur	sal
birth	live	death
future	presence	past
nerve system	rhythmic system	metabolism

Generating process 2: additive/subtractive

We usually know the purpose of a design assignment, but we don't know where and when it will end, that's a value in a traditional design process as it is in the management area. We call a process successful, if there is a solution, if we reached a shape/form which is convincing in regards to the assignment, or which fulfills the parameters we defined with the problem.

The beginning phase is quite a bit more difficult to describe, because everything is still intangible, it is still 'up in the air'. Let us call it chaos in the sense that the deterministic systems is so sensitive that the measurement we do will appear random (?) or from another perspective, the greek word for something which is not solid is chaos.

These four aspects build the poles, the extremes: chaos and shape/form connected through movement, with its opposed different processes, described earlier on. Because of its abstract nature, we can use it as a metaphor for the realm of thinking or we can use the metaphor within the realm of management.

In the realm of thinking we also tend to achieve shapes/forms, which we call categories also in two different ways: logically and intuitively.

The logical way to create means deducting, adding (subtracting) or linking existing categories as we see it in Wittgenstein's early work ⁽⁸⁾. Or as Dewey states in one of his four senses of thought: "Each term leaves a deposit which is utilized in the next train. The stream or flow becomes a train, chain, or thread." ⁽⁹⁾

The intuitive process may appear more difficult: suddenly the idea, the concept appears as an *immediate apprehension or cognition* ⁽¹⁰⁾, "a note of invention" but we don't really know where it came from. It also happens unpredictably, at places and in times, when and where we didn't plan or expect it. In order to integrate this concept, the idea of a modern society 'being at work' and 'not at work' seems quite inadequate. This division of activity has not worked for a designer and it will not work for a manager designer either. You never know when you are going to get an idea.

But a concept which integrates both, which relates to Bergson's contrast of intuition and intellect as a means by which we manipulate reality for purposes of action, can end with a category, with a form, which is defined, or which can be defined. ⁽¹¹⁾

The next question is: does the model relate to a category as a fixed shape by itself, or does the model reflect itself?

Is it a fixed entity or can it be molded through our use and application?

Is each category an entity, which had been molded through its history and what do we get if we revisit its creation?

If we look at the drawing again we can see that we have a further metaphor to understand the different cultures of art and sciences. Analysis, adding and subtracting are the thinking processes that are appreciated in the science world. The art and design field is obviously more driven by imagination, inspiration and intuition. The opposite is for both communities still suspicious, but a serious and closer look will show us that creative scientists think intuitively ⁽¹²⁾ and a lot of artists use logic and analysis to verify the work and to place it in the right context.

Managing as designing

Chaos: All new design assignments within an enterprise, within the management lab or studio start after a clear definition of the assignment. In the beginning the designer, manager, really cannot know the form, the shape, which has to be achieved. And if the manager-designer starts with the precondition of a clear achievable goal – for example to make a certain amount of profit, then the form/shape is clearly defined and the design assignment shifts. How to design a process to achieve a clearly defined goal is now the task.

'Chaos' is the precondition for all generating processes, because it is the moment in time where the ideas can and should compete. But we all know that chaos as a necessary condition for a creative process is for many designers and managers the biggest challenge on a personal and on a professional level, especially if somebody feels responsible for an enterprise, for a social environment. Manager designers would have to use and implement chaos as an important strategic phase in achieving quality design. This presupposes a clear knowledge of the properties of chaos and how to use it to solve the assignment. The observations I made over years tells me, that if we prevent chaos in

the creative wellspring, we end up later with chaos in a place where we don't want to have it and where we don't need it.

Movement: If we organize the shape/form instead of the movement or the context for the movement, we organize extreme spatial and physical parameters, which will prevent a new solution. We have the 'old concept' manager who knows and has the solution before hand and uses meetings mainly to distribute information. The structure is 'hard' and centralized. Design solutions, if they happen at all in such circumstances happen within the traditional studio, in the mind of the manager before he enters the meeting room.

If the manager designer organizes the movement within an enterprise, he organizes and prepares the lively part of an organization. He cares about the conditions to supporting creative platforms; he cares about the rhythmic systems and the forms, which keep the enterprise together.

The risk involved is the limited control over the outcome; it may happen that in one of the 'chaotic sessions' there is movement in thinking and in acting that travels in unexpected directions. But the reward is high: we don't end up with a dead organization in the first place. Such processes maintain the vitality of an enterprise, because the members of such an organization are included in the vision, mission and goals. The members are convinced, because they have been included in developing the movement in the 'right direction'. Such a manager as designer is a coach, who is able to organize the team and who knows how to position the best players within the team. Hierarchy in such a 'post heroic' era, as Dirk Baecker¹³ stated would include knowing where hierarchy is necessary and where it isn't.

The stability of an enterprise immediately will grow with such a movement, like the stability of a bike rider who speeds up to a certain pace.

Form/shape:

The movement is repeated, the new form is established and rhythm appears. After a certain amount of time, the shaping force in the first place ends up being the blocking energy, which prevents further movement – this phenomenon has an interesting and a problematic side.

Nonprogrammed decisions have the tendency to end up as programmed decisions ⁽¹⁴⁾. That's not a pitfall, if we know it and if we utilize this phenomenon, because we need all three different layers (chaos, movement and form) in an enterprise.

But nevertheless how we can best work with the 'over-forming over-aging' in an enterprise is a mystery if we don't know where the programmed decisions have to be and where the places for new sub-enterprises within the enterprise should be initiated in order to keep enough growth energy within the organism. We all know that sooner or later the entire organization will be in danger, because of the inflexibility and dominance of the programmed decision. The entity is not flexible enough anymore to adjust to changing conditions. Then the enterprise can even break apart or dissolve and disappear in general or into other entities.

Temporal and spatial metaphor

We can read the developed theory horizontally and temporally or we can read it spatially and vertically. I wouldn't favor one over the other, but I also understand that the dominance of the spatial consciousness is sometimes annoying and might keep us away from necessary progress. ⁽¹⁵⁾ We must know, in the spirit of Jean Gebser, when and where spatial thinking is needed which allows us to differentiate. But we also and we need to know where and when temporal, integrative thinking is necessary ⁽¹⁶⁾.

If we think the theory vertically and spatially as Herbert A Simon in 'The New Science of Management Decision'¹⁷ we can realize that such an entity like an enterprise has at least three different layers: "In the bottom layer, we have the basic work processes – in the case of a manufacturing organization, the processes that produce raw materials, manufacture the physical product, warehouse it, and ship it. In the middle layer, we have the programmed decision-making processes, the processes that govern the day-to-day operation of the manufacturing and distribution system. In the top layer, we have the nonprogrammed decision-making processes, the processes that are required to design and redesign the entire system, to provide it with its basic goals and objectives, and to monitor its performance."

Although I am excited by the similarity of Simon's description, I don't see the programmed decision making process, the automation as the last step (Simon P. 34). We can hardly block the flow from chaos to form. But in order to keep the enterprise alive, we have to maintain all three layers:

the layer which incorporates the moments and places where we need no regulations, where the chaos can happen, where ideas get developed. We also can call it the layer of the senses, the nerves. It's the spiritual part of a living being, where the future of the enterprise appears.

The second layer, which connects the nonphysical with the physical, is the layer of movement. Here the repetitive, rhythmic and programmed decisions feed, regulate and carry the enterprise on a daily base. It is the stream of fluid within a body.

The third layer, the physical environment is always a product of the past. It hosts the enterprise and supports the rhythmic and the spiritual layer. The word layer, which itself connotes spatial dimensions, is misleading. These three 'layers' are not separated they are all interconnected, mutual like in a living being.

My idea and my intuition say that an enterprise is a living being of the highest order, which has to be lively and flexible enough to change its form in order to achieve its purpose. Such an enterprise has to have senses to perceive and to think; it has to have rhythmic circulation processes and an adequate metabolism. Such a model has to include an entity that is bigger than the parts which belong to it. At this point we discern a major difference between the traditional design process of an object or information and the design process envisioned here. The management design process contains a social community which has to be actively included to design the whole.

The management structure of the past is based on a system and metaphors abstracted from the spatial and physical observation. These structures are objective and clearly definable, because we can describe their place and within a space.

The 'new' management design process is temporal and implies change whenever it is necessary. The concept of 'roving leadership'¹⁸ is an example of this design process. In such an environment where we perceive the issues, context and the needs, we are focused on organizing the movement and not the shape. Then we are designers and artists in the management field and the new studio is between human beings.

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