Words and images for exploration and communication of concepts in the early stages of the design task

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ABSTRACT

The problem with the design process when carried out collectively is, on the one hand, the linguistic barriers that make interdisciplinary dialogue difficult, and on the other hand, the diffuse conception of the future artefact on the part of the actors during the early stages of the process. From this perspective, the process of designing is regarded as a transition from a diffuse sphere of concepts towards a sphere of concepts of more concrete character. An abrupt transition from the verbal formulations of those commissioning to the architect's graphic representations may hinder, or be the reason why, the participants are not able to develop their own comprehensible images and visions. One means of eliminating this unsatisfactory state of affairs is to construct a dialogue able to be carried out between the actors involved, before the architect comes into the process. This article deals with the development of a method that uses images or pictures for discussing aspects or phenomena considered to be important for the situation in question. The objective is to provide a richer content for the commission, and a good point of departure for a stimulating dialogue with the architect.

Keywords

Design, participation, dialogue, diffuse concept

INTRODUCTION

In rough terms, the purpose of the dialogue in the early stages of design may be perceived as an attempt at formulating the problem the architect or designer is to solve. The verbal dialogue has its limitations, particularly when discussing something that is ultimately of visual character. One comes to a situation where the discussion is unable to continue unless something concrete happens to revive it. One way of getting out of this deadlock is to allow the architect to come into the process. Based on the discussion initiated, the architect will produce concrete proposals causing the participants to react. The discussion acquires a

new breath of life. These concrete proposals are meant to help the participants formulate their problem, thereby providing a fresh basis for the architect's continued production of new proposals, which in turn lead to new discussions. One disadvantage of this approach is the abrupt change over from the verbal to the graphic. The ability of the architect to quickly respond with graphic illustrations may have a hampering effect on the participants' perception of the problem, particularly if they have not had sufficient time for closer reflections about the situation in question. Also, experience shows that even the architect is not free from having fixed ideas. As part of his/her professional experience, the architect has a large repertoire of ready solutions, which may provide a barrier from seeing the specific in the new situation (Birgerstam 2000). It may therefore be important for the client to reflect, and think through what is really needed.

Common understanding through expansion of concepts

A constructive dialogue during the early stages of a design process should involve participants examining a mutually chosen key concept within in a field, and show for each other in concrete terms what the concept in question is referring to. Such an expansion of concepts does not lead to a consensus of opinion, but to knowledge about other insights. A confrontation of insights may free people from the world of concepts that they are bound up in. It does not need to provide a result that is immediately applicable. The immediate result is the new spectrum of the concept. This is desirable if the new spectrum is to be able to open new associations, and new perspectives. In many instances the group may have to come to an agreement. It is possible that certain insights will dominate, while others will be eliminated. However, in any case those eliminated will remain in the minds of the participants throughout the process, if not longer. They may also be appropriate at a later stage, or receive attention in other contexts during the term of the project. The dialogue should be structured so as to encompass as much as possible of the knowledge potential of the organisation.

The phenomenology of concepts

Concepts referring to the concrete and objective world, and used in the context of the natural sciences, are more clear

cut than those referring to experiences, aesthetic and ethical values, or desired but not existing realities or conditions, and used in the context of the social sciences, politics and ideologies. Ramirez (2000) differentiates between *compact*, *diffuse* and *ideological* concepts. *Compact concepts*, according to Ramirez, are those concerned with things and material reality. They have a well-defined definition covered by words or terms. However, sometimes our words stand for *diffuse concepts*, which can only be made more precise by a concrete situation and our experience. Other words stand for *ideological concepts*. These are concerned with idealised notions i.e. situations that are desired, and situations not existing in reality (and perhaps that never will exist), but may be realistic. The relationship between words and concepts is changeable; the same word may sometimes stand for compact concepts, and at the next moment for more diffuse or even purely ideological concepts.

The design process as a transition from diffuse to compact concepts.

All three types of concepts are applicable in a design activity, in particular if this involves a concrete physical artefact as the end product. In the earlier stages of the process, it is mostly the diffuse and ideological concepts that are in focus. When the artefact begins to take shape, the thought process transgresses from diffuse concepts to more compact ones. The transition from the one type of concept to the other is not sharp, and still less definitive; rather it is iterative i.e. is repeated many times during the process. The role of the architect is to interpret and process the diffuse concepts of the client, and to give them a somewhat concrete, but at the beginning, makeshift form. For this purpose, the architect possesses of one powerful tool, namely the sketch. Architectural activity serves as a bridge between the two conceptual spheres. To hide possible discrepancies between results and expectations - a component of the professional competence of the architect - is also a certain social and rhetoric ability to be able to convince the client and user.
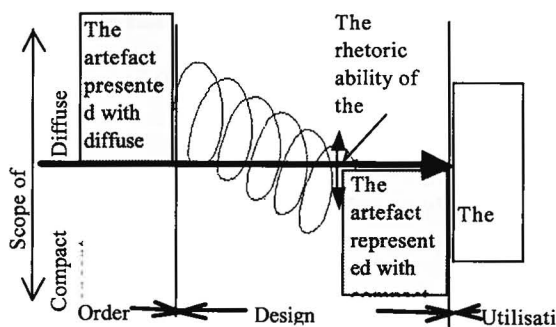

Figure 1. The figure shows the design process as a transition from a commission formulated as diffuse concepts to a form represented with compact concepts.

A dialogue with pictures

The method using images or pictures as advocated in this paper is intended to play its part within the framework of the sphere of diffuse concepts in a common task of work, and long before there is any question of any actual design. The process initiated with the aid of this method in a broader context is also a design process, but not aimed at producing a design as such. It is a conceptual reflection, resulting in an insight among the actors involved about their shared situation, and what is possible to change. With the aid of the picture, the verbal communication is intended to acquire more shade of meaning, and that the actors have the opportunity of reflecting about what they want to say, creating shared insights into common reflections.

Narrative versus imagery

If we compare a purely verbal communication with a purely visual such, we discover an interesting phenomenon that reveals how our comprehension is influenced when we shift from one means of communication to the other. The interesting thing with this phenomenon is if you first relate something, and then show it in pictures for someone, you will get a certain effect. On the other hand, if you show the picture first and then relate you get another effect. In the first case, the person in question forms two notions, or images around the same content. In the second case, the visual experience dominates, and hinders the receiver of the message from forming a personal version from the narrative. This is what happens when we see a film and read the book afterwards. The French architect, Jean Nouvel, uses the effects of this phenomenon to increase creativity at his office. He turns the architects' traditional way of working upside down. Instead of sketching images and showing how he conceives the future design, he uses language, describing verbally for his colleagues at the office how he perceives things.

The concepts communicated in the early stages of processes involving change are diffuse in so much as they are not aimed at concrete and fixed phenomena able to be illustrated in graphic terms. These concepts are aimed at reaching the qualities of the phenomenon. They do not exist in their own right, but together with something having a concrete form. Cooperation, happiness, flexibility do not exist, but cooperating happy and flexible people do. Is it possible, with aid of pictures, to show what cooperation or happiness is? This can be achieved by showing pictures of cooperating or happy people, or also by pictures that enable us to experience happiness. The number of possible images able to be considered suitable for describing a single concept, such as happiness or cooperation is infinite. In this instance, it is *the word that says more than a thousand pictures*. The participants in my experiments chose completely different pictures in order to communicate to others what cooperation means for them. In one case, the

concept of cooperation was extended to also include interaction and harmony.

However, does not the picture have a locking effect when showing it takes place before the narrative? Here I claim it is just the reverse; it is the narrative that has a locking effect. In the experiments I conducted, I deliberately allowed the participants to look at the pictures for several minutes before each in turn started to relate what they wanted to say about them. The idea is that the participants are given the opportunity of indulging in the content of the pictures in order to form their own associations, before beginning to say what the pictures are intended to represent. This is done purely for the purpose of avoiding the effect of feeling tied up or locked. When the picture is used to communicate diffuse concepts, it is the association and not the designation that is crucial as regards meaning and importance. A picture arouses a multitude of different associations and feelings for different people. In this case, the picture enriches the communication.

Design activity deals to a large degree with managing pictures and words through the creation and interpretation of meaning. It is a practise that transforms a verbal formulation of a desired situation to a visual representation of an artefact. Differentiating between compact and diffuse concepts has meant that I have been able to regard pictorial and verbal communication from a fresh perspective. It has also shown that the design process can be seen as an activity growing from a situation where a commission is placed, and outlined as a more or less diffuse concept, to an unambiguous and clear-cut representation of a design. In addition, these two types of communication can be utilised in such a way that the process is promoted by the enriching effects at the beginning, and the locking up effects in the final stages.

PRACTICAL METHOD DEVELOPMENT
The development of the method advocated here is based on work of experimental nature. The hypothesis as a point of departure was that the use of images in an associative way would provide enrichment in communication, and make it possible for the actors to better express what is tacit, implicit or difficult to articulate with everyday language. I wrote a scenario for the design process, which I divided into several stages and carried out four experiments to successively test the stages of this scenario. The scenario gradually took form. It finally became a description of the successive stages in the early phase of a collective design process. These stages are: i) to inform the participants; ii) to consult the participants to determine the topics for discussion; iii) to make a synthesis of all the topics discussed, and to choose some of these for the participants to illustrate with images; iv) to bring together the participants for an initial collective reflection (during this stage each participant would present

images followed by comments to the other participants); v) to get the participants to choose images representing the collective impressions of the group; vi) to bring the participants together for a second collective reflection in which they would present the images illustrating their collective impressions to another group or professional e.g. an architect, outside from the group.

I carried out four experiments to test the scenario. The experiments succeeded each other from the simplest one, with only one person, to the most complex one gathering two groups of actors. The goal was to successively explore the complexity of the process. In the first experiment involving only one person, I could concentrate myself on the practical problems, such as the difficulty in finding images, if a large number of images is problematic, how to inform the actors, how to choose topics raising interesting aspects to discuss etc. The images used in the experiments are from a commercial photo stock directory presented in ten catalogues with a total of ten thousand images.

The last experiment was the most complete. It was based on a real project. The university planned to build a multimedia centre connected to the library. Three architectural students took the opportunity of working with this, since architectural training is invariably based on concrete projects. This project was specific in character, since the artefact in question is rather uncommon. What is multimedia? To find out I set up the experiment in which the students acted the part of the future users of the multimedia centre. The library staff were also interested in taking part in the experiment. They also had no clear idea of what the multimedia centre could be. The staff at the library comprised of three persons, the manager, chief librarian (both of whom with physicist backgrounds) and a system administrator. The concepts that has been discussed in this experiment where, *multimedia, communication, learning centre,*

What I have learnt from these experiments.
The experiments gave rise to an interesting observation. During the choice of images procedure, I observed the actors performed in an unexpected manner when choosing their images. They examined the images, made a preliminary choice, compared the images, and replaced certain images by new ones. The actors appeared to have a dialogue among themselves, as if they were thinking aloud. I observed this procedure every time I had occasion to witness their choice of pictures. I also felt that the participants, when browsing among the catalogues, were looking for something but did not know exactly what until they found a particular image.

At the beginning of the development of the method, I made the distinction between two types of communication. I distinguished, on the one hand, the interdisciplinary

communication within the company restricted by linguistic barriers i.e. a problem of language game, and on the other hand, the communication between the architect and the actors of the company restricted by the asymmetry of the means of communication i.e. words versus the architect's drawings and sketches. The experiments were based on these two types of communication. It was first afterwards I became aware of a third process of communication at the individual level. It became clear to me that this complex process of communication consists of three types of dialogue, an 'inner dialogue', an 'inter-subjective dialogue' and an 'inter-personal dialogue'.
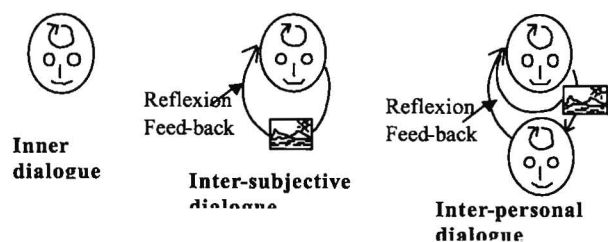

Figure 2. A simplified illustration of the three dialogues.

Some results of the experiments. [1]

The experiments have shown that communication is not only a transfer of information between individuals. The choice of images i.e. browsing in picture catalogues, is also in a certain manner a communication process in itself. The actors often do not seem to know exactly what they want to express at the beginning of the process. Even if they do know, they will probably modify their initial ideas after the first reflection, or even abandon them altogether. The images were used as a stimulus for the actors' thoughts. The images helped the actors to think and develop ideas in a more complex way than would have been possible solely with verbal language. One person said: *"I see new things in my picture each time I'm asked to describe them"*. In one of the experiments, I noticed the visionary aspects were much more accentuated in the images presented by the actors, whereas the problematic aspects were expressed verbally. The actors had expressed many more aspects than they were asked to do. They also found other topics because of the images, and in this manner were able to explore and express a wider aspect of the concept in question than they would have done solely with the spoken language.

The last and the most complete experiment conducted with students and library staff showed that the concept of *multimedia* represents different things for these two groups. For the staff of the library, the multimedia concept is

[1] The experiments has been described in detail in my licentiate thesis (Rehal, 1997).

firmly associated with the data processing and the computer. Most pictures chosen by the staff show computers or pictures of phenomena simulated by the computer, or pictures processed by a computer.
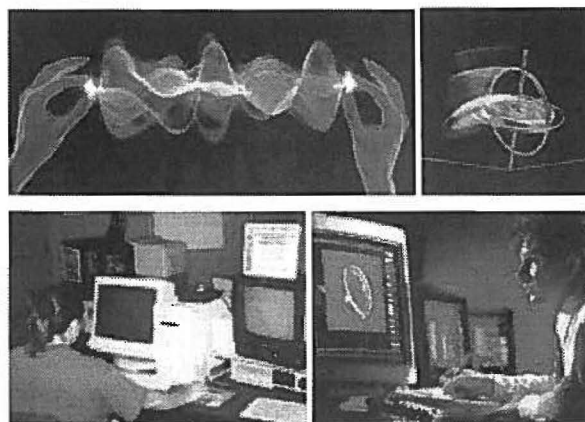
Some of the images selected by the library staff to illustrate the concept of "multimedia"

The student architects, on the other hand, do not have any picture associated with data processing. Their pictures mostly illustrate human activities, such as work, games, leisure and human contact. Some of their pictures show a group of people playing music, or conversing, working or doing some thing. One picture shows an adult's hand caressing a baby's foot, and another picture shows an adult playing with a child.
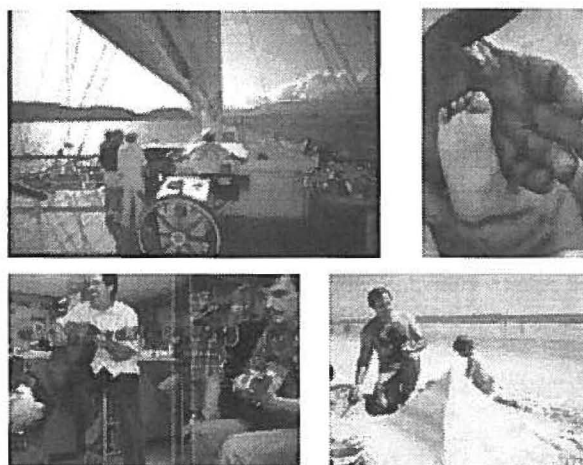

Some of the images chosen by the student architects to illustrate the concept of "multimedia"

During the interdisciplinary dialogue, the two groups, while confronting their respective pictures, became aware of what the 'multimedia' concept really represents for each group. This experience confirms that the concept of multimedia is a diffuse one. For the staff of the library, with physicist backgrounds, the computer and data processing provides the opportunity for the physicist to visualise physical

phenomena that up to now can only be represented by a mathematical language. For the student architects, on the other hand, visualisation is an obvious part of their profession, as they work with images all the time. From their point of view, 'multimedia' seems to stand for human communication in its various forms. The images together with the discussion narrowed the gap between the views of the participants. The library manager said at the end of the experiment, *"we're talking the same language... of course multimedia isn't only computers... we have to take advantage of new technology without losing the human contacts, all our images show that"*. I heard an architectural student say after the experiment, *"It's incredible... just write a formula on the keyboard, and you can see it on the screen."*

Another concept discussed with the means of pictures was the *"learning centre"*. This concept was related to the character of the future multimedia centre and was chosen to be discussed by the library staff only. By comparing and discussing the images, the participants from both groups distinguished two concepts that could be associated with the pictures; *learning* and *teaching*. Terms such as *'one way communication, centralised teaching, cross communication, activities that cross each other, chaos, self learning,* have been used by the participants of both groups during the brainstorming sessions.
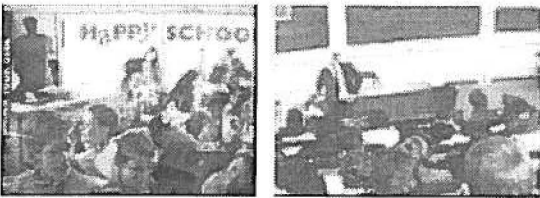
Images chosen by one participant from the library staff illustrating a chaotic learning situation in contrast with one illustrating a disciplined situation.
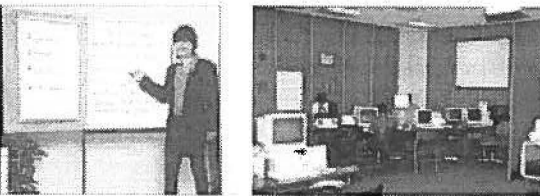
The images come from the library staff illustrating a traditional learning situation and a computer aided learning situation (self learning).

Finally, the participants came to a common agreement; the multimedia centre will not be some kind of library, nor a laboratory, but a place where all kinds of activities can meet. The concept of *'positive chaos'* was used for describing the

character of this place, and one image was chosen collectively to illustrate this. The image chosen is the one above, which illustrate the chaotic learning situation. This concept may seem very diffuse for the reader, who has not participated in the brainstorming, but not for the participants who created it. For them the concept of *positive chaos* was the fruit of a long discussion where both groups explored and expanded the field of the concept learning centre.

CONCLUSION

The image as means of communication for exploring and communicating concepts is relevant in the early stages of the process. This is especially because it is less conventional than the spoken language, and it forces people to reflect on what they are saying, and to sharpen their attention with regard to what the others really mean. The spoken language is used in an unreflective manner; people interpret or understand the content of a concept automatically through their own way of seeing things, and without thinking about it. The experiments have shown that images stimulate reflection at the individual level. They also show that images in combination with words are a powerful instrument for bridging the interdisciplinary dialogue, but also for exploring and enriching the field of the diffuse concepts concealed behind the verbal formulations of the commission.

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