

Architecture - Participation of users in design activities

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1. Introduction

1.1 The Scandinavian experience

This article builds on experiences of participatory design in architecture throughout three decades, mainly in the Scandinavian countries. The focus of the article is on different stages for participation, each stage being described separately. Of course in real life we do not find clear distinctions between these stages of participation, since they often overlap. Nevertheless we can discern a sort of evolution of the notion of participation in Scandinavia from what I call "power-oriented" to more "knowledge-oriented" processes. In terms of the outcome, we can discern a shift from an "object-oriented" to a more "process-oriented" view. Simultaneously we can discern a global movement from "producer orientation" towards "customer orientation" that has put participatory design on the agenda today.

1.2 Users

In this article *users* means those who actually use the building in their everyday activities. In this sense all people working in a building including staff, management and service personnel are users. A kind of user that is not included in the *user category* in this article is those who are some sort of visitors or use the building as a part of a service provided in the building. Such groups are students, patients, and visitors. Groups excluded here are also owners, politicians, union representatives and public officials if they are not users in the above sense. As representatives for important groups their participation is important and their roles are therefore discussed in relation to user participation.

1.3 Inherent tension in the architects profession

The attitude to user participation is ambiguous among architects. Architecture and the architect profession embody both an artistic dimension and a social dimension. The artistic dimension can sometimes inhibit users from involvement in the design process of architecture. This is a result of the conception that art is a private and not a collective activity. On the other hand, the social dimension of architecture and the social visions of the architect profession encourage architects to constantly try new methods to involve users in the design activity so that the resultant architectural artefacts might attain a more appropriate and effective design.

2 Participation in design and participation through design

Participation of users in the design process can be interpreted in two different ways:

- i) To design architecture in such a way that it supports participation in the use of architecture - participation through design
- ii) Participation of users in the actual design process - participation in design

2.1 Participation through design

Architecture in itself can however prevent or support participation from users. This has to do with accessibility, understanding, appropriation and ownership. It is important to understand that our built environment is designed, both by expert designers and by ourselves. We use it and live in it and by doing that we design the environment.

2.2 Participation in design

Participation of users in the actual design process could be discussed from different points of departure. In architectural practices and research in Scandinavia there has been three stages of development in the participation process motivated by

- i) democracy, (fig.1)
- ii) quality of the product and, (fig. 2)
- iii) improvement of the client groups through learning (fig. 3).

Participation of users in the actual design process has developed over the last three decades. In the late sixties Professor Johannes Olivegren was one of the pioneers in the field of housing design. His involvement in user participation had mainly democratic motives but was also a search for more appropriate housing design. The process of user participation has not been linear but there is, at least in Scandinavia, a major line from participation as driven

by democratic reasons, through quality driven, towards participation for organisational improvement. If we look at single design projects, however, we can find early single instances of all three kinds, and at the moment we see participation of users as a way of achieving quality in terms of all three aspects.

2.2.3 The benefits of participation

Democratic involvement is in itself an important factor in our society. The main reason for setting up legislative procedures in the seventies was to ensure that the basic work environment quality was met in the design of work places. This was an improvement in terms of original goals as early 1970th participation praxis had attempted to turn participation into a matter of power instead of an activity that added value to the outcome of the design. The last step in the development of the notion of participation is to improve the performance of the user groups . We can find explanations for endeavour in the fact that information society has come to see the employee as a company's most valuable resource today; this in contrast to the view of the employees in the sixties and seventies. In the information society context, the participatory design perceives the employees as a more dedicated, more knowledgeable group. Employees are seen as capable of designing, redesigning and managing production recourses such as the built space they occupy. Participatory design has become a step on the way to a learning organisation. A participatory process has developed where

- i) the user through *participation in design* can achieve a design solution that
- ii) supports *participation through design*; on the way they construct
- iii) knowledge that makes them able to take active part in the redesign and management of the designed environment as demands change

3 Participation and democracy

3.2 Importance of the context

We will now look at two contexts that somehow overlap: Direct participation and participation through representatives. Typical for the first context is that the stakeholders are well defined. In the second context a number of stakeholders are involved, with different possibility to act. The first context is represented by the work-place design in relatively small or local private companies. The design of municipal buildings and workplaces of large companies, where the decision-making process is centralised, represent the other. The reason for distinguishing between these two contexts is the democratic systems that work within them. In private work-place design, we are mainly concerned with two parties; the employer and the employee.

In municipal building design projects it is often more complicated. Here there are politicians who represent the people in society but they might also be the owners and financiers. There is also the manager of the activity that takes place in the building and the employee. These two last groups are the actual users of the building. In most cases like for hospitals, schools and other public buildings there is a third group, namely the patients, students or visitors who also are users in a different meaning. In many cases the actual users are not yet employed when the design takes place and those who will visit the building when it is finished is not a well-defined group. Therefore the participation mostly becomes a matter of formalised democracy involving politicians and municipal officials in public building or representatives for managers and employee from the corporate headquarter in private companies.

In practice it has proven to be difficult to deal with participation by the actual users in this second context. There are, however, cases both in municipal building design projects and private industrial work-place design where the actual users have taken active part in briefing and designing the buildings. In many such cases there exists an ambiguity for the designing architects concerning the input from the actual users and that from the representatives of different groups.

3.2.1 Shortcoming of a formal participation process

In formal participatory work-place design, participation takes place through union representatives, the counterpart being the employer. The crucial point in this setting is the overall relationship between the two parties. In many cases where there is a fruitful the relation, also the design process has been rewarding to both parties. In other cases the participation in the design process has been a matter of power (fig.1).

In municipal building design projects a formal participation process might be sufficient from a political point of view. Direct user participation in this context is more difficult than it is in private companies if we are talking about participation as a way to real influence on the outcome. To accommodate direct user participation, an adaptive design process has been developed. This means that the architects base design proposals on information from elected representatives. These proposals are then presented to the users, if there are any, or to people in the community, on specific occasions throughout the design process so that they may have the opportunity to comment on the presented proposal. The architects can then adapt the design to accommodate these comments, if these do not have a major impact on cost and time or other policy decisions made.

One of the shortcomings of this participatory process is that the users seldom get involved in the project early enough to have a chance to influence the conceptual design phase. They may only suggest detail changes for a more or less fixed design. This entails that the more important conceptual input from the users is seen as negative from the point of view of architects and elected representatives since it affects the costs, delays the project and maybe even is perceived as ignorant or at least out of place. From the architects' point of view, the users' comments often affect the

architectural quality of the project as it forces them to make changes to their conceptual design. These changes could easily have been accommodated within the design if they had been part of the brief or taken into account during the conceptual phase.

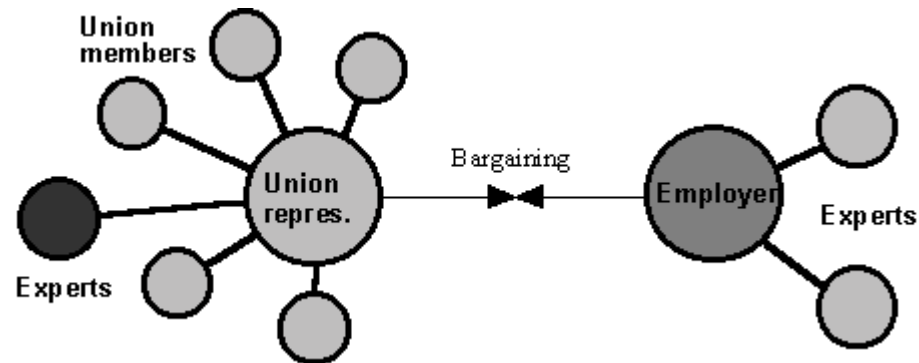


Figure 1. The bargaining model of communication

4 Participation and quality of the outcome

Another argument in favour of user participation is that it improves the quality of the outcome. The democratic ambitions to involve users in the design process resulted in the production of design handbooks, pedagogical tools and education programmes. These enabled users to take part in design processes. Many practising architects realised what a tremendous source of information and knowledge the users represented. New methods to retrieve this information from the users into the design projects were therefore developed (fig. 2).

Most commonly architects had extensive interviews with users to understand the essence of the organisation they were designing for. They soon realised that the group of involved users was not restricted to union representatives, and the focus of the participation process was shifted from the democracy motivation and the rights to influence the design effort in order to achieve an appropriate high quality building.

When we use participation as a tool to achieve better quality, the architect's ambition as an artist might also be an obstacle that needs to be overcome. Artistic values might positively influence the architect's interpretation of the information communicated from the users, but many also create conflicts between the architect's artistic values and the user's perception of the design.

The strength of focusing participation of the user on quality of the outcome is that both employees and employer can get something out of it. The employers can communicate with the architect directly and therefore may have an impact on the outcome. To influence the quality of the building is in the interest of employers wherever they own or rent the building. The problem is, however that the focus of participation is restricted to the quality of the building. Later we will discuss how participation of users can enhance the quality of the outcome of the design process in more ways than getting a better building.

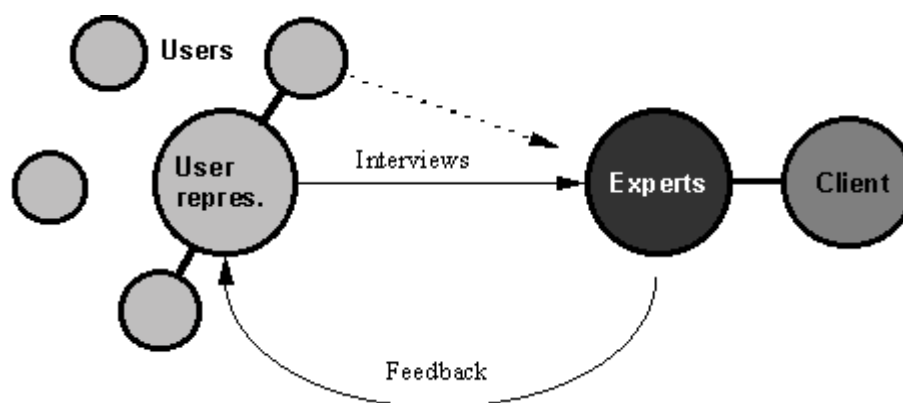


Figure 2. The data collection model of communication

5 Participation and learning

5.1 Participation - an adaptive or a generative process

The experience of user participation in architecture design has been mixed. Many writers on the subject argue that

the outcome of participatory processes have not always been received better by users than outcomes of a more “artistic” design process where the architect has played the most dominant role. To understand this we have to elaborate two issues.

- i) What qualities represent a positive outcome of a participatory design activity?
- ii) What are the significant qualities of interaction between different actors in participatory design processes.

5.1.1 Value of the outcome

First we have to realise that the above-described stages of participation in architectural design all have their own standards for value of the outcome. From a democratic point of view the procedure of contacts between the parties and a result in terms of a having an impact on the result might be enough. A satisfying result in terms of quality of the product might be better working conditions, e.g. lower noise levels, ergonomical equipment. From the point of view of the employer it might be important that these improvements are advantageous for the production and for the overall social atmosphere of the company. If we, however, look at the outcome of participation from a learning point of view, both parties will value individual growth, creativity and better overall performance. The focus has shifted from the building itself to the design process and the development of the organisation that uses the building (fig. 1-3).

5.1.2 Interaction between actors

User participation based on formal democratic procedure often lacks direct contact between users and architects in the early conceptual phases of the process. Politicians, local officials or union officers may represent the users in the dialogue with the architect. In this case the discrepancy between the users' needs and what they get is mainly a matter of how well the representatives actually represent the organisation they are meant to represent.

Often, however, the participation activity is set up mainly to gain knowledge from the actual users. In most cases the architects collect information through interviews with personnel and through studies of the previous situations, if there are any. They then *interpret* this information into design solutions that goes back to the users for their comments. Even in these cases, there may be problems.

Users are often badly prepared for participation in changing processes. The point of departure for their conceptions of the future is often limited to the existing situation with its restrictions and possibilities. Being asked about what they want, they may have problems *conceptualising* their wishes, *articulating* them even to themselves and even more *communicating* them to colleagues. To communicate something in an interview with architects is more difficult. Architects on the other hand often have very early preconceptions of the design solution or they will formulate them after a few interviews. This is one of architects' strongest professional abilities, but also one of the obstacles in participation. They will have these preconceptions in the back of their heads and they will, together with architects' professional and cultural values function as *interpreters* to what the users try to communicate.

Architects' tacit understanding of the situation will be imbedded in the designs that they feed back to the users. These designs are mostly beautifully packaged as rendered perspective drawings, elaborated layout drawings produced in CAD or by hand. Maybe even a three dimensional real model or a virtual computer model accompany the architect's interpretation. It is mostly very hard for the users, given their problems of conceptualising, articulating and communicating their needs, to determine whether the suggested design will really facilitate their future activities

From research and practice in Scandinavia one knows that the users often do not understand the suggested designs until they have moved in and started to use them. Disappointments at this stage not only discourages the users from further participation in architectural design, but also discourages the architect, who may have had strong intentions to listen to the users in order to design a well-functioning building for them.

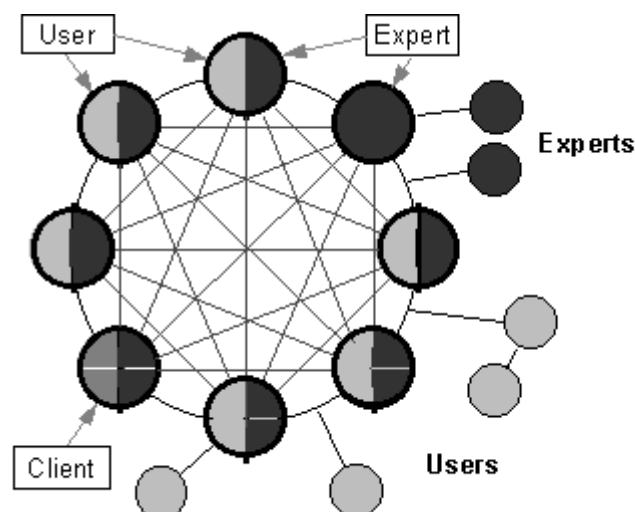


Figure 3. The collective learning model of communication

5.2 The user as designer

Another kind of user participation is to recognise the user as a co-designer. This process is sometimes called *the collective design process*. The idea is to form cross-disciplinary groups within a company. This group, which includes architects and other external experts as resource persons, drives the design process. In this design setting the focus is taken away from the building itself. The focus becomes the performance of the organisation and how to design a building that supports better performance. The integration between the design of built space, technical systems and organisation of work becomes natural in such a setting (fig.3).

However, such a settings calls for the development of new behaviour and new methods. The creation of a mutual language within the design group and mutual understanding of the situation might be the single most crucial factor. The roles of the participants in a collective design process are dual. All participants are experts in their own professional field. Whether they be nurses, teachers, assembly workers or maintenance workers, they can contribute hard facts and experience to the design process. The in-house participants are also users in the traditional sense and as such they have demands on the future design. Experience has shown that the group views the participants *as users* and allows opinions on almost anything concerning the design, based on the fact that their situation will be directly affected by the outcome of the design. If the group participants, on the other hand, see each other only as experts they tend to be more polite and respectful of each other's expertise. They are, however, both experts and laymen. This makes it easy to everybody's good ideas into account, even if it is not based on expert knowledge. The usual interdisciplinary tacit understanding that often stands in the way of creative solutions can be overcome by the intervention of the kind of "disrespect" only laymen can show towards state-of-the-art solutions. In their role of field experts can the participants directly influence details in the outcome without the interpretation by architects or other external experts.

There are, however, problems involved in this kind of participatory design. One of these problems is related to the fact that the design group becomes very skilled to the disadvantage of those not participating. They develop group knowledge with its own repertoire of experiences and sometimes its own internal language. The pedagogical problem is then to ensure that everybody knows what is going on and has the opportunity to contribute to the process. It must not become a closed process. The design activities should preferably take place on the premises of the user organisation or close to the user organisation. It is especially important that management, unions or other groups that are policy makers or have power to manipulate the process or the end result can participate in the manner they feel is appropriate. These groups might otherwise be alienated from the design process as well as the design solutions with all the negative effects that might have.

Another problem is to set up the actual design process. Professional language barriers, professional roles and the preconception of knowledge and design behaviour are obstacles to these kind of participatory processes.

Index words: Participation, architecture, collective design, design, learning