

Space, participation and voice

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1. INTRODUCTION

This paper aims to contribute to the participatory tradition in by presenting a model for reflective participatory design. The model brings together two established processes in novel ways: systems development and user participation. Within each process three concepts are presented to facilitate discussion and reflection at the concept level, the process level and the integrated process level.

2. SPACE, PARTICIPATION, AND VOICE

In this section we discuss the concepts of participation, voice, and space, presenting various dimensions aimed at clarifying and conceptualising the concepts.

2.1 Dimensions of Space

Both participation and voice are shaped within a certain space, so approaching participation democratically means creating and fostering a space where users can express their voice and be heard. To facilitate this, shared multi-dimensional spaces for emergent relations and knowledge creation need to be designed (Nonaka & Konno, 1998) and can be in the form of physical space, virtual space, design space, or mental space.

Each space has its own boundary that includes two dimensions: placement, which involves a positional change in a boundary; and permeability, which represents the ease with which relevant information, behaviour, or presence leaks across a boundary (Shapiro, 1998).

One example of placement related to design space and mental space is the change occurring with participants' *weltanschauung* (Checkland & Davies, 1986), or worldview during the development process. Reflecting on hidden assumptions and value systems among the participants through structured dialogue is one effective way of uncovering peoples *weltanschauung*, giving project participants, including the older persons, a sense of what matters in their local moral worlds.

2.2 Dimensions of Participation

The phenomenon of user participation is renowned for diverse and multidimensional illustrations (Karat, 1997), which can result in a lack of clarity, thereby opening up the potential for misunderstandings. Over the years attempts have been made to reduce this confusion by building theoretically sound and verified concepts such as 'participation' and 'involvement' (Barki & Hartwick, 1989). In a similar way Baroudi et al. (1986) defines the concept of influence as the extent to which users affect decisions related to the final design of the information system.

Some researchers such as Cavaye (1995) aim to clarify participation and its related practice by defining the concept using a number of features or dimensions. In her analysis of 19 published studies (from 1982 to 1992) Cavaye identifies six dimensions of participation: type of participation (the proportion

of users that participate in the development), degree of participation (the level of responsibility), content of participation (the design focus), extent of participation (the type of system development activities the users participate in), formality of participation (the organising approach), and influence of participation (the effect participation has on the direction and outcome of the process).

Since participation can be seen as the foundation for both involvement and influence, and since user participation studies can seldom be pigeonholed into one of the three concepts, we apply the framework from Cavaye as a base for describing the shape and character of user participation.

2.3 Dimensions of Voice

Communicative actions are the foundation for shared and mutual understanding (Habermas, 1995) and the basis for human interaction. Communication is essential for self-understanding as well as understanding the life-world and civic society that we live in. For this understanding to take place we need to invite different voices and facilitate the communication process in diverse ways.

Reflecting on how to facilitate the communication process is important in systems design where professionals/experts interact with people who often lack expertise of ISD methods in favour of knowledge and experience of the context and use of the system to be developed. If the different voices are not listened to, respected and understood there is a danger that one single voice, seen as representing one single truth, becomes too dominant. It is therefore important to reflect on how voice is given and taken by different contributors in different situations, and how the communication process can be facilitated to assist understanding between different voices. As such, communication involving a multitude of different voices is a crucial part of information systems development.

Within ISD communication between stakeholders has long been identified as crucial for successful development, despite this, Gallivan and Keil (2003) argue that the communication process between different contributors, especially developers and users, remains under-researched. Few studies have focused on how to facilitate communication where heterogeneous user contributors have been replaced by a purely need-based and use-oriented context, and where the possibilities for preparatory education are limited. As new types of development situations emerge, the importance of effective communication between developers and users is more crucial than ever.

3. A MODEL FOR REFLECTIVE PARTICIPATORY DESIGN

Reflecting on the development and participation process of different projects made us realize the need to illustrate a participatory design process through two different but integrated processes. Moving between understanding and disentangling the

individual dimensions of the design and partaking process and understanding and relating these dimensions to each other and the development process as a whole facilitate reflection and debate about the past and future direction of a development project (Boland Jr, 1991).

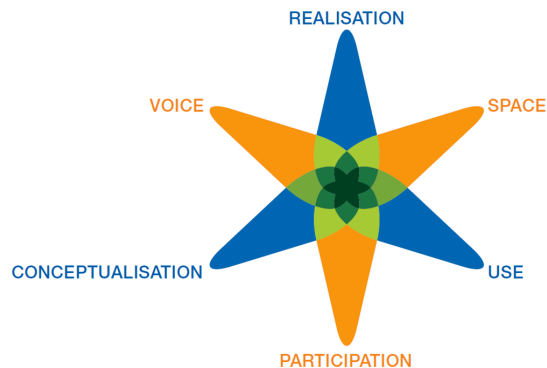


Figure 1. A model for reflective participatory design

Combining the two processes of systems development and user participation generated the model of reflective participatory design (figure 1). The model assumes that a change in one dimension will affect all the other five dimensions, as well as the central kernel. Using the metaphor of a kaleidoscope to describe our model means that as each change is made, the central picture also changes. Disentangling important dimensions of the design and participation process facilitate reflection and debate about past and future activities along with directions of a project. Using the RPD model for reflecting on and critically examining the project highlights a number of issues related to participation, including some persistent challenges and new lessons.

4. CONCLUSION

Illustrating the development process and the partaking process in two separate but integrated processes enabled us to move between the parts and the whole. It made it possible to understand and disentangle the individual dimensions of the design and partaking process and relate these to each other and the development process as a whole. Disentangling important dimensions of the design and participation process facilitate reflection and debate about past and future activities and directions of a project.

Furthermore, reflecting on the three concepts: participation, space and voice in relation to information systems development we see

that while both participation and voice are concepts well represented in existing literature, space has received limited attention, except in relation to context.

Participation is well studied from many different perspectives, covering topics such as what it is, why it is important, how it can be accomplished and who should participate. Voice is also well represented in studies focused on power, empowerment, and communication. However, space is largely treated like a one-dimensional concept focused on physical space in the form of context. As we have illustrated, space - as well as participation and voice - needs to be designed. It is therefore important to start contemplating issues such as the different dimensions of space, how they integrate in design situations, and how different types of space can facilitate or hinder participation and voice.

5. REFERENCES

- Barki, H., & Hartwick, J. Rethinking the Concept of User Involvement. *MIS Quarterly*, 1989. 13(1): 52-63.
- Baroudi, J. J., Olson, M. H., Ives, B., & Davis, G. B. An Empirical Study of the Impact of User Involvement on System Usage and Information Satisfaction. *Communications of the ACM*, 1986. March 232-238.
- Boland Jr, R. J. (1991). Information Systems Use as a Hermeneutic Process. In H.-E. Nissen, H.-K. Klein & R. Hirschheim (Eds.), *Information Systems Research: Contemporary Approaches and Emergent Traditions (IFIP)* (pp. 439-458). North-Holland: Elsevier Science Publishers B.V.
- Cavaye, A. L. M. User Participation in System Development Revisited. *Information & Management*, 1995. 28311-323.
- Checkland, P. B., & Davies, L. The Use of the Term 'Weltanschauung' in Soft Systems Methodology. *Journal of Applied Systems Analysis*, 1986. 13109-115.
- Gallivan, M. J., & Keil, M. The User-Developer Communication Process: A Critical Case Study. *Information Systems Journal*, 2003. 1337-68.
- Habermas, J. *Communication and the Evolution of Society*. Polity Press. Cambridge: 1995.
- Karat, J. Evolving the Scope of User-Centered Design. *Communications of the ACM*, 1997. 40(7): 33-38.
- Nonaka, I., & Konno, N. The concept of "Ba": Building a Foundation for Knowledge Creation. *California Management Review*, 1998. 40(3): 40-54.
- Shapiro, S. Places and Spaces: The Historical Interaction of Technology, Home, and Privacy. *The Information Society*, 1998. 14275-284.

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