Great Expectations - Does worker participation in design enhance the integration of working environment and work life issues into design? - DTU Orbit (10/11/2019)

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Does worker participation in design enhance the integration of working environment and work life aspects into design? The interrelation between worker participation in design and the integration of working environment or work life aspects have been studied for decades within different traditions. I have departed in some of these traditions, i.e. the participatory ergonomics approach, the collective resource approach and participatory design. Empirically I have studied two cases that differ from the participatory ergonomics approach, the collective resource approach and participatory design even though I have departed in these three traditions. Contrary to the collective resource approach both participatory design processes have been initiated by the management in the two companies. Contrary to the participatory design tradition it is the workers not the future users that have participated in the design process and the object of design have not been computer artefacts or systems but workplace design and redesign of product series. The design process in the two cases has included physical working environment aspects but contrary to participatory ergonomics, psychosocial working environment and work life aspects have been included in the participatory design processes. Perhaps the most important difference between the participatory design process in the two cases and the three traditions is that working environment and work life aspects were implicit at the agenda of the participatory design processes and that other subjects were important in the cases as well. The search for an answer to the overall question "Does worker participation in design enhance the integration of working environment and work life aspects into design?" has gone through several questions related to the processes of design, and through questions related to learning processes in design. I have found it interesting to examine why and when working environment and work life issues are raised in participatory design processes. I have also found that it is interesting to examine who put the working environment and work life aspects at the agenda in the participatory design processes. Another interesting aspect is when and why working environment and work life issues leave the agenda in the participatory design processes. I have also examined whether the learning processes, which occur in participatory design processes, enhance or limit the integration of working environment and work life. Rather than searching for an integration of different theoretical approaches I have chosen Morgan's methodology i.e. to analyse the same cases within different theoretical perspectives. Theoretically the search for an answer has been based upon theories of learning and design processes. Learning processes can be conceptualised in many different ways. I have chosen two different conceptualisations namely the interrelation between reflection and action and individual behaviour and organisational constraints, and another based upon learning as participation in practice. Design processes have been studied as processes of interaction between the designer and the materials of design and as negotiation between various groups involved in the design process. The perspective 'Organisational learning - changing behavioural models' provides an analysis of individual and organisational learning as either single-loop or double-loop learning processes. The perspective also provides an analysis of the organisational constraints and the behavioural models, which influence the possible learning processes. The difficulties of changing individual behavioural models, when the organisation does not change, are shown in both cases. In both cases the participants were engaged in design processes and single-loop learning processes. However, the process consultants/ action researchers were not able to support double-loop learning processes in any of the participatory design processes. Some of the participants did get engaged in double-loop learning processes but it was not due to the support of the process consultants/action researchers. The perspective 'Learning in and between communities of practice' conceptualises learning as participation in a community of practice or between communities of practice. The analysis within this perspective points at how important the transference is from daily practice to a new context of action i.e. the workshops. The transformation between daily practice and the workshops initiates learning processes, which extend the understanding of the daily practice. The choice of boundary objects to enhance learning across boundaries between communities of practice is also very important. The last perspective 'Design - a process of negotiation and interaction' provides an analysis of the negotiation between the designer and the objects of design. This analysis describes that design seldom is fully conceptualised at the beginning of the design process. The perspective also provides an analysis of how different actors in the design process negotiate and how these actors depend upon their background, schooling etc. i.e. their object worlds. However, none of the perspectives can explain the impact of the political processes in the organisation upon the participatory design processes. The concept of the social constitution of the company shows some of the limitations within a changing organisation and some of the possibilities provided. The concept of the social constitution can explain why certain working environment and work life issues were raised in the participatory design process while others were not. The last theoretical perspective combines theories of learning processes with theories of political processes. This perspective focuses upon three different spheres which define the learning space: the work and the work organisation; the formal system of negotiation and cooperation; the informal social relations and values. The perspective provides an excellent explanation of the interrelationship between the three spheres in the daily work and how these spheres have influence on the possibilities of learning. The role of technology is dismissed in this perspective and as I find that technology is an important factor in the learning space, I extend the perspective to include technology. The analysis of the two cases within the different perspectives proved in both cases that although the espoused theory of management was that the workers should be able to influence their new workplace, the cases showed that the workers were not involved in the important decisions related to the design of the new workplaces. There was not always consistency between the managements' theory-in-use and espoused theory. The process consultants or action researchers' difficulties with supporting double-loop learning processes or learning processes that extended the local theories of working environment and work life pointed at yet another problem. This problem is closely related to process consultants or action researchers' role in participatory design processes i.e. what role should an action researcher or a process consultant chooses in participatory design processes. The process consultants or action researchers' role in participatory design processes raises yet other question related to the planning of
participatory design processes. I raise the question: “How would an idealised but realistic participatory design process be planned and how would the process evolve?” This question I answer through a description of an idealised but realistic participatory design process at Danfoss as I would imagine it. There is no simple answer to the question “Does worker participation in design enhance the integration of working environment and work life aspects into design?” The outcome of the participatory design processes is dependent upon those who plan and support them e.g. process consultant, action researchers or change agents and the support of management. The planning and conceptualisation of the participatory design process itself is also very important for the integration of working environment and work life aspects into design. And the political processes in the organisation, in which the participatory design process is initiated, influence the possibilities and limitations of articulation of working environment and work life issues in the participatory design process. Though it is difficult to establish participatory design processes which focus upon working environment and work life aspects, working environment and work life issues are articulated in the participatory design processes. In the two cases some of these working environment and work life aspects were integrated if not into the physical design then into the work organisation.

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