Socio Informatics – A practice-based perspective

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The book will propose a practice-based approach to socio- informatics, a research paradigm in applied CS which suggests building a corpus of contextually situated design case studies. This practice-based approach builds substantially on work in CSCW, but notably on the socio- technical approaches sometimes associated with European CSCW. Our position is that a major lacuna in CSCW thus far has been the absence of adequate means to deal with the problem of transferability of insight across different case studies. That is, although a growing corpus of studies has demonstrated the importance of socio- technical insights, conceptual and theoretical competition has restricted their value. We aim to begin the process of rectifying this situation by proposing a systematic approach to the problem of interdisciplinarity.

The last twenty five years have seen a small revolution in our approach to the understanding of new technology. It has become a founding assumption of CSCW that in the future, if not already, most computer applications will be socially embedded in the sense that they will become infrastructures for the development of the social practices which they are designed to support. This will be true in an ever increasing variety of domains and living conditions. Assuming that IT artifacts have to be understood in this socio-technical way, traditional design criteria in CS (performance, correctness, stability or usability) need to be supplemented by methods and perspectives which illuminate the way in which technology and practice are mutually elaborating.

This has involved, inter alia, new methodologies for the investigation of patterns of use and the gathering of requirements (including ethnographic work; 'living labs' and so on); new methodologies for design (methodologies which place flexibility and user involvement at the centre) and new approaches to the product lifecycle (which recognize the complex and long term nature of appropriation of technology by users and hence implicate a different understanding of evaluation). Nevertheless, these developments remain piecemeal. In our view, the field has to a degree been restricted in its development by a competition between theoretical perspectives largely founded in their disciplinary origins in sociology and psychology. The growth of a systematic and rigorous approach to practice- based, or human-centred, computing requires new foundations.

These foundations, we suggest, will be predicated on the resolution of a number of issues:

1. A clearer understanding of what we mean by practice and how it is socially embedded.

2. A more nuanced view of the different ways in which processes of empirical investigation and of construction may be linked to each other.

3. A better understanding of the way in which new design methodologies link to investigative approaches and of effective mechanisms for supporting stakeholder involvement.

4. A systematic approach to the use of technology which extends from early investigation into domains of practice through to investigation of the ways in which practices become embedded in social and organizational life.

Our proposal, then, is for an edited book structured to reflect these issues and concerns. More specifically, this will be done by linking key methodological chapters to empirical chapters which illustrate these themes. To elaborate on this, the book will be divided into four parts. The first one elaborates on the theoretical foundations of design-related work, specifically on the concepts of practice, design and appropriation. In the second part, different methodological approaches and how best to utilize them in design-related enquiry will be presented and discussed. Again, the focus will be on the tailoring of investigative strategies for specific kinds of design problem (business ethnography, grounded design, integrated organization and technology development, mobility, cross- cultural work, inter-organizational collaboration). The third part presents a sample of design case studies originated in different social and organizational contexts which can be understood as exemplars of more general problems. That is, each will orient in turn to the problem of comparability and ways in which cross-cutting issues can be identified. Design case studies are understood as investigations into the practices before and after introducing the IT artifacts and the design process in support of these practices. They develop on a three phase research model, linking: *empirical prestudy*, the IT *design* and the investigation into its *appropriation*. We argue that design case studies or fractals of them should become a key element in Socio Informatics. In this sense, 'Socio Informatics' is epistemologically distinct from traditional approaches to CS in the sense that it creates highly context specific results and its findings are only valid in the context of their emergence. CS and even the traditional approaches to Human Centered Computing assume a context-independent validity for these formal, algorithmic and design-oriented findings. If research-findings are context-specific we need to find new ways to reason about their transferability.

While the book is an edited volume, the individual chapters are written by authors active in EUSSET and European CSCW community, a core group is working University of Siegen or have work relationships with the Siegen group. Therefore, the book will develop a highly coherent perspective on the design and appropriation of IT artefacts. The chapters will be written specifically for the book, they will be reviewed, if necessary twice, by two external experts and one of the editors.

Proposed Table of Contents

1. Introduction

Part I: Conceptual Foundations

2. The Concept of Practice (K. Schmidt)

3. The Concept of Appropriation (Stevens, Pipek)

4. The Concept of Infrastructuring (Pipek, Wulf)

5. Two more ?????

Part II: Research Methods

Key chapter

6. Ethnography and Design (D. Randall)

Supporting chapters

7. Business Ethnography (Nett)

8. Grounded Design (Stevens, Ramirez)

9. Living Labs: A comparative approach to the design and appropriation of Home IT (Hess, Ogonowski, Randall, Rouncefield, Stevens, Wulf)

10. Integrated Organization and Technology Development: A critical evaluation (Rohde, Wulf)

Part III: Design Case Studies

Key Chapters

11. Critical Reflections on the Design Science Paradigm and its alternatives (Rohde, Stevens, Brödner, Wulf)

12. Critical Reflections on Participatory Design (S. Bodker)

Supporting chapters

13. Landmarke (Ramirez, Dyrks)

14. ERP – Mash Ups (Spahn, Pipek)

15. Location Tracker (Müller, Wulf)

16. Configuration Sharing (Draxler, Stevens)

17. Come-In-Net (Schubert, Weibert, Wulf)

Part IV: Reflections and Directions: a systematic approach to the socio-technical

18. Cross-Cutting Issues: Comparing cases – gaining insights (Wulf, Stevens)

19. End User Development: Dealing with differentiated practices (Pipek, Stevens, Wulf)

20. Design Case Studies: Documenting practice based research in human-centred computing (Wulf)

21. Transferring research findings in a practice based research paradigm (Randall, Ikeyu (my Japanese colleague, currently working with Hitachi)