Sheffield Hallam University

Envisioning futures of practice-centered computing

ERICKSON, I., LEWKOWICZ, M., LIGHT, A., CIOLFI, Luigina
<http://orcid.org/0000-0003-4637-8239>, KRISCHKOWSKY, A. and MULLER, M.

Available from Sheffield Hallam University Research Archive (SHURA) at:

http://shura.shu.ac.uk/26450/

Published version

Copyright and re-use policy

Sheffield Hallam University Research Archive
http://shura.shu.ac.uk

Envisioning Futures
of Practice-Centered Computing

Ingrid Erickson[1], Myriam Lewkowicz[2], Ann Light[3],
Luigina Ciolfi[4] *(Speakers)*
Alina Krischkowsky[5], Michael Muller[6] *(Moderators)*
[1] School of Information Studies, Syracuse University;
[2] Université de Technologie de Troyes;
[3] University of Sussex/Malmo University;
[4] Sheffield Hallam University;
[5] Center for Human-Computer Interaction, University of Salzburg
[6] AI Experiences, IBM Research;
ierick@gmail.com[1], myriam.lewkowicz@utt.fr[2], Ann.Light@sussex.ac.uk[3], L.Ciolfi@shu.ac.uk[4], alina.krischkowsky@sbg.ac.at[5]; michael_muller@us.ibm.co[6],

Abstract. In this panel, we will engage with the conference's membership and friends to consider directions for the *possible futures* of *practice-centered computing*. This panel is not targeting or aiming to result in a single, agreed "universal" vision, nor to ask for a shared vision among the panelists and the audience. Rather, we offer several and diverse vision statements by distinguished and innovative ECSCW scholars, being experts in their specific domain or context of research. These statements will be necessarily incomplete until the ECSCW membership has joined the discussion, offering their own, additional visions of the futures of the field. With this, the panel aims to engage in a discussion that foresees exciting future research directions for the field of ECSCW but likewise also unveils potential hurdles the community might face.

Introduction

Computer-Supported Cooperative Work (CSCW) is a well-established field of research, being beyond its third decade of existence. As part of its quarter century jubilee in 2013, scholars that have played a leading role in developing the field put together a jubilee issue in the CSCW Journal on "What has been achieved, and what issues remain as challenges for the field?" (Schmidt and Bannon, 2013). For instance, Blomberg and Karasti (2013) discuss the important role of ethnography to understand collaborative activity in past research, arguing that due to expanding temporal and spatial horizons of inquiry and new domains of collaborative activity, ethnography will continue to provide invaluable perspectives also in the future. Likewise, Fitzpatrick and Ellingsen (2013) reflect on healthcare, being a work context that CSCW was concerned with, since its early days. One key-challenge they identify is that in the context of understanding the work of healthcare, deeper research into the larger policy level is still lacking. Other papers in the jubilee addressed topics of awareness (Gross, 2013), coordination (Cabitza and Simone, 2013), knowledge management (Ackerman et al., 2013), infrastructures (Monteiro et al., 2013), and scientific collaborations (Jirotka et al., 2013). During the same year an analysis of participatory community engagement in computing futures appeared (Chamberlain et al., 2013). Thereby, the ECSCW community is particularly concerned with understanding and designing for *cooperative work practice*, as informed by the research domains listed above; also recently stepping outside the context of 'work' into other domains of *practice-centered computing*, as well as societal concerns such as marginalized groups and online collective political action.

No research discipline stands still. The concept of *work* is continually being redefined by organizations and by workers. Scholars bring new perspectives and methodologies to the study of work. Venues and publications for scholarly work in CSCW are undergoing rapid and complex reconfigurations. Schmidt and Bannon (2013) noted that CSCW was "peculiar" because it was "a remarkably heterogeneous research area, with a diverse array of research problems." We invite ECSCW members to join in a community discussion of that diversity, and of recent developments and potential futures.

This panel is specifically concerned with how highly distinguished and innovative ECSCW scholars *envision possible futures of practice-centered computing*, reflecting their own experiences and also their broader view of current and past ECSCW conferences and the journal of CSCW. Examining past research, reflecting on - and potentially also questioning - the status quo and our own assumptions, can help to unravel exciting future research directions, but likewise also may unveil potential challenges that the community might face. The panelists will represent current trends in practice-centered computing and by extrapolation, we hope to engage in a discussion that envisions future

developments with an attempt to be plausible (Blythe and Encinas, 2016). Speculative and fictional approaches have a long tradition in HCI and design related techniques, such as, scenarios, prototypes, forecasting, and envisionments (Wakkary et al. 2015). What all of these approaches unite is that they can aid research to *"peak into a possible future"* (Korsgaard, Nylandsted, and Bødker, 2016; p.71). As part of this panel we hope to provide a diverse set of different peeks into the future, composed of the following visions:

Ingrid Erickson: *Embracing Different Ways of Studying Practice*

We are ever more integrated with the machines and tools in our midst. We live alongside of them, in them, around them, through them. The boundaries are blurring constantly and are also ever changing. Against this backdrop, it is of continuing importance to study practice—aka, to study the verbs as well as the nouns. But this tight coupling sometimes makes it hard to differentiate practices, to separate the socio from the technical, the individual from the collective, the micro from the macro. This begs the question, do we need to embrace a different way(s) of studying practice that builds on our past, yet also challenges us with new questions and methods as we move into the future? If so, what does this look like and what does it mean for us as researchers?

Myriam Lewkowicz: *Transforming Workplaces*

I would like to emphasize that practice-centered research, and then computing or socio-informatics, are essential in a world facing a flood of digital technologies. Work practices are radically transformed, and practice-centered research is a way to deconstruct either too idealistic (open factories, with a production on demand, local production and circular economy, …) or too dramatic (the end of work, IA running the word, …) discourses on this transformation of the workplace.

Ann Light: *Enchanting Tools for a more Sustainable Culture*

What justifies the big energy footprint of innovating technology? One answer may be tools that enchant us with our world and connect us with the other living beings in it, particularly to support active and activist appreciation. I will consider networked technology for what it can offer to a more sustainable culture, drawing out some thoughts on how to design well for the rapidly changing times of the 21st century.

Luigina Ciolfi: *Reflecting on our Practice as Researchers*

I will argue how, as part of envisioning new frames, approaches and concerns towards practice-centred computing, we should include a more critical self-reflection on our practice as researchers: how we position ourselves towards our

research context, what is our own relationship (epistemological, ideological, cultural, political, or emotional) with the practices we study, what the impact of our research and of our way of doing it will be on those whom we study. At a time when, as a community, we are reflecting on the social impact of research and on how to decolonise subsets of HCI, such as participatory design scholarship, the concern of CSCW researchers should engage in self-critique of our own practices as researchers. I will illustrate these points with some short examples from my work in the field to highlight the tensions and challenges of being a self-reflective practice-centred researcher, and to propose a set of open questions for discussion by the panel and by the audience.

Methods

This panel will be composed of (1) *panelists* that are distinguished and innovative ECSCW scholars, being experts in their specific domain or context of research; and (2) *the ECSCW membership* as active participants in the discussion. With this panel composition, we aim to gather vision statements from the panelists from their specific research perspectives, framed with their broader understandings about the future of practice-centered computing. These statements may then be reflected upon, challenged, and questioned by the ECSCW membership, in order to open up the communities' thinking towards new future perspectives.

With this setup we are confident to ensure an engaging discussion and debate between the panelists and the plenum. In inviting distinguished scholars we anticipate the emergence of contrasting views, and therefore, also do not ask for a shared vision of the future as an outcome of this panel. We rather seek diverse, contrasting, divergent viewpoints about how the future of practice-centered computing may look like and ask the plenum to engage in this discussion.

We will begin the panel with a brief introduction to the panel by the moderators, followed by short vision statements from each panelist. After all of the panelists have provided their vision statements, a short discussion session among the panelists will follow. Afterwards, we hope to directly open the discussion to the entire plenum. If necessary, the moderators will also have provocative questions for the panelists and the audience to ensure a smooth transition from the panelist discussion to also involve the plenum into this conversation. By opening the discussion to the entire plenum, we hope to identify further, diverse viewpoints and perspectives that will complement and/or question the statements being made by the panelists. After this general discussion phase among the panel and the plenum, the moderators will then close the discussion by concluding with final remarks. As an outcome of this panel we aim to draw a kind of "landscape of practice-centered futures" that may help the community to foresee interesting research directions but also anticipate issues that we may need to tackle with in the future.

After the Panel

Having two moderators allows us to carefully document the discussions among the panelists, discussants, and the audience. These notes will provide the basis for an article for the next ECSCW conference in terms of an exploratory paper that more formally discusses potential future directions and challenges for practice-centered research initiatives from diverse but likewise contiguous perspectives. We can also envision continuing the discussion initiated during the panel, by for example, creating an online space that allows to further share, discuss, and question diverse futures of practice-centered computing. With this we hope to facilitate continuous engagement among researchers being interested in further shaping a research agenda for a practice-centered, socio-technical future; working towards a changed world where future technical possibilities help in resolving pressing societal, ethical, political, as well as sustainability concerns of the future.

Panelists

Ingrid Erickson is an Assistant Professor at the School of Information Studies at Syracuse University. An ethnographer and organizational scholar by training, her research centers on the way that mobile devices, ubiquitous digital infrastructures, and artificial intelligence are influencing how we work and communicate with one another, navigate and inhabit spaces, and engage in new types of sociotechnical practices. Together with colleagues, she is responsible for overseeing the NSF-sponsored WAIM research collaboration network, which focuses on generating intellectual convergence amongst a wide range of disciplinary scholars on the broad topic of 'work in the age of intelligent machines.' She received her PhD from the Center for Work, Technology and Organization in the Department of Management Science & Engineering at Stanford University.

Ann Light is Professor of Design and Creative Technology, University of Sussex, UK, and Professor of Interaction Design, Social Change and Sustainability, Malmo University, Sweden. She is a qualitative researcher specializing in design for social wellbeing, the politics of participation and social innovation, with a particular interest in creative practice for transformations to sustainability and the social impact of networking. She also studies how grassroots organizations use design and technology. She has worked with arts and neighbourhood organizations and marginalized groups on five continents, in local, transnational and international development settings and run an international charity devoted to cultural exchange using digital media.

Myriam Lewkowicz is Professor of Informatics at Troyes University of Technology (France), where she heads the teaching program ''Supporting the Digital Transformation'', and the pluridisciplinary research groupTech-CICO. Her interdisciplinary research involves defining digital technologies to support existing collective practices or to design new collective activities. Her main application domains are healthcare and Indutry 4.0. In 2017 she was elected next chair of the European Society for Socially Embedded Technologies (EUSSET).

Luigina Ciolfi is Professor of Human Centred Computing in the Faculty of Science, Technology and Arts at Sheffield Hallam University (UK). Luigina is a HCI and CSCW scholar researching practices around cultural heritage, collaborative work settings, and participation in design. She is concerned with the design of technologies to support human interaction within the physical world, based on an understanding of the relationship between people, activities and their locales. Luigina participated in national and international research projects on the topics of cultural heritage/museum technologies, interaction in public spaces, mobile and nomadic work, and she has published her work in HCI and CSCW conferences and journals, as well as social science, design and heritage studies venues. Her latest book (written with Eva Hornecker) is "Human-Computer Interactions in Museums".

References

Ackerman, M., Dachtera, J. Pipek, V., & Wulf, V. 2013. Sharing knowledge and expertise: The CSCW view of knowledge management. Computer-Supported Cooperative Work, 22: 531. DOI: https://doi.org/10.1007/s10606-013-9192-8

Blomberg, J. & Karasti, H. 2013. Reflections on 25 Years of Ethnography in CSCW. Computer-Supported Cooperative Work (2013) 22: 373. https://doi.org/10.1007/s10606-012-9183-1

Blythe, M., & Encinas, E. 2016. The Co-ordinates of Design Fiction: Extrapolation, Irony, Ambiguity and Magic. In Proceedings of the 19th International Conference on Supporting Group Work (GROUP '16). ACM, New York, NY, USA, 345–354. DOI:http://dx.doi.org/10.1145/2957276.2957299

Cabitza, F. & Simone, C. 2013. Computational coordination mechanisms: A tale of a struggle for flexibility. Computer-Supported Cooperative Work 22: 475. https://doi.org/10.1007/s10606-013-9187-5

Chamberlain, A., Crabtree, A., & Davies, M. 2013. Community engagement for research: Contextual design in rural CSCW system development. Proceedings of International Conference on Communities and Technologies - C&T '13, 131. DOI: 10.1145/2482991.2483001

Fitzpatrick, G. & Ellingsen, G. 2013. A Review of 25 Years of CSCW Research in Healthcare: Contributions, Challenges and Future Agendas. Computer-Supported Cooperative Work, 22: 609. DOI: https://doi.org/10.1007/s10606-012-9168-0

Gross, T. 2013. Supporting Effortless Coordination: 25 Years of Awareness Research. Computer-Supported Cooperative Work, 22: 425. DOI: https://doi.org/10.1007/s10606-013-9190-x.

Jirotka, M., Lee, C.P., & Olson, G.M. 2013. Supporting scientific collaboration: Methods, tools, and concepts. Computer-Supported Cooperative Work, 22: 667. DOI: https://doi.org/10.1007/s10606-012-9184-0

Monteiro, E., Pollock, N., Hanseth, O., & Williams, R. 2013. From artefacts to infrastructures. Computer-Supported Cooperative Work, 22: 575. DOI: https://doi.org/10.1007/s10606-012-9167-1

Schmidt, K. & Bannon, L. 2013. Constructing CSCW: The First Quarter Century. Computer-Supported Cooperative Work, 22: 345. https://doi.org/10.1007/s10606-013-9193-7

Ron Wakkary, William Odom, Sabrina Hauser, Garnet Hertz, and Henry Lin. 2015. Material speculation: actual artifacts for critical inquiry. In Proceedings of The Fifth Decennial Aarhus Conference on Critical Alternatives (CA '15). Aarhus University Press 97-108. DOI: https://doi.org/10.7146/aahcc.v1i1.21299