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The Ecological Underpinnings and Future Contributions of (E)CSCW

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Abstract. When times change rapidly, the transformations around us ask us to consider whether our practices of research and scholarship are keeping abreast. Multiple crises are bearing down on us and only a change in Global North lifestyles and values will begin to address the world's course towards major catastrophe. In this highly interactive panel, we unravel the ecological underpinnings of (E)CSCW to understand how it could contribute more fully to different sustainabilities and alternative futures. We consider (E)CSCW to offer a strength in its practice-oriented roots and its ecological understanding of socio-technical relations. We revisit these qualities in light of the need to embrace interdependence in all aspects of life and invite others to think with us about possible futures and the contributions (E)CSCW scholarship is poised to make in working toward them.

Introduction

With its interest in groups, organizations, practice, and the impact of socio-technical developments, CSCW is an intrinsically ecological discipline. National Geographic defines ecology as *'the study of organisms and how they*

interact with the environment around them'[1], thus emphasizing the relations between living things and their habitats, between biological and socio-technical systems.

Further, in a world that can be characterized by the concept of polycrisis and consequent concern for worsening political, socioeconomic, and environmental conditions, we see relations between living things and their habitats as a matter for research across all disciplines — and especially those with a commitment to design (Light et al., 2017). To understand life on Earth and its future is increasingly to wrestle with the future of technology, its demands on resources, and its impact on how humans conduct themselves in relation to human and non-human others. With its interventionist stance and focus on design, the ECSCW community bears important responsibilities in this regard, in that *ecological* means concerned with the entanglement of practices and their impacts in particular settings. In this panel, we unravel the ecological underpinnings of ECSCW to understand how it could contribute more fully to different sustainabilities and alternative futures.

Isabelle Stengers talks of an *'ecology of practices' and the 'production of values, (. . .) of new modes of evaluation, of new meanings'* in the context of this ecology. These values, evaluations and meanings do not replace older ones in any absolute sense, but *'are about the production of new relations that are added to a situation already produced by a multiplicity of relations'* (Stengers, 2010, p. 32). This destabilizes our truths and long-term knowledges, turning us back to an analysis of practice and emphasizing the instability of realities. It also speaks to the body of work emerging on planetary change that eschews technical solutions and superficial behaviour change models for system change and a rethinking of relations between species. It speaks to staying with the trouble (Haraway, 2016). To engage with these discourses is to question practices of design and the work we are designing for. It begs us to ask about the future of our technical structures and how we understand agency.

The study of collective and collaborative practice has been relevant to CSCW since its early days (Kuutti and Bannon, 2014) and has become a characterizing agenda for the European community, reflected by the number of anthropologists, ethnomethodologists, and sociologists who work in the field. Echoing Kuutti and Bannon's call to (re)consider human-computer interactions through a practice-based agenda, we argue that it is now time for ECSCW research to reinvigorate these approaches with an emphasis on how the community can attend to the challenges of intersecting crises. It has never been as important to encompass more just, socially, and environmentally sustainable futures, and CSCW offers both analytical lenses and generative models for doing so. Reflecting the two-folded agenda of the ECSCW research community, we see this as both an analytical and design endeavour, where concerns for understanding go hand in hand with the interventionist approach that has characterized much past work.

[1] https://education.nationalgeographic.org/resource/ecology

Related Literature

The practice paradigm has traditionally been a distinctive focus of ECSCW research. Primarily framing workplace studies, different approaches to practice have been central to the research community. Nicolini (2013), for instance, has identified six different theories of practice, namely, the prexeology, practice as community, practice as activity, practice as accomplishment, practice as 'the house of social', and practice as discourse. Building on this, Kuutti and Bannon (2014) have unpacked how each of these theories has been influential to ECSCW to empirically illustrate: i) how structures, institutions, relations of power, or norms can be understood by the connections between different sets of practices; ii) the processes of becoming a central member of a community, where participating in core practices interweaves with learning skills, abilities, and with developing a sense of belonging; iii) core structures of activities and how they are shaped by tools and context; iv) how practices are locally and temporarily produced; v) how practices are historically formed; and vi) how they become manifest in the social organisation of conversations. Despite their differences, all these approaches draw attention to the performativity of organizations and institutions (they are enacted through situated practices), the materiality and agency of both humans and tools (both inevitably shape practices), and how knowledge can enable practices but also be produced through them.

In parallel to ECSCW's concerns for investigating technology-mediated collaborative practices in the workplace, over the last fifteen years, HCI scholarship has developed a research focus on more sustainable computing in general, and on how to foster sustainability in and through design more specifically. Even HCI conferences need technologies for more sustainable activities, argue Shneiderman et al. (2023), as they point to the importance of developing a positive ethos, where *joyful sustainability* requires *'innovative thinking to alter behaviors of individuals, communities, corporations, cities, national, and international organizations'*[2]. Attention to system change, the impact of technology, and the potential of collapse appear in yet another strand of technology-related work (Light et al., 2017; Nardi and Ekbia, 2017; Tomlinson, 2020).

Yet, despite well-consolidated critiques addressing persuasive technologies and a focus on individual behaviours, and despite calls to understand the socio-cultural, political, ecological, and infrastructural aspects underlying more environmentally sustainable computing, studies tend to disregard the collaborative work that enables care for the environment and makes it work. First, everything from legal regulation to waste management relies on collaborative practice. Second, mobilisation relies on arts, politics and civil action, all of which are, again, collaborative. As Dourish (2010) notes, there are possibilities to bring people together, not just for energy management, but to tackle progress on climate measures as a political activity. Where there has been a focus on changing small

[2] https://interactions.acm.org/blog/view/joyful-sustainability-now-is-the-time

aspects of people's lives (with tools that, for instance, monitor energy use, help people recycle and buy to reuse, connect with the wildlife and living things around them, and detect pollutants), it is less common to find technology designed to support system change as a whole, or to counter the impacts of the system changes that networked computing, social media, and other innovations are inadvertently introducing, with knock-on effects on civil action and resource use. It is also less common to find technology based on considerations of how changes towards more sustainable futures might require the interconnection and co-operation of several actions aiming at environmental care (Rossitto et al., 2022).

This panel seeks to bring together the practice trajectory of traditional (E)CSCW with the radical care needs of the next decades. Here, radical means 'from the root' in the sense that we can no longer expect business-as-usual but are on a long journey into the unknown. We may have an appreciation for the socio-technical but no conviction that our infrastructures will serve us well. (And it must be noted that present infrastructures serve some parts of the world a lot better than others.) Here, care means more than the act of support and management that speaks to dependencies, encompassing instead also a change in our understanding of relations, placing interdependencies front and centre.

Our questions for this panel, then, are large and demanding. We seek to set a direction for a practice that not only proves its relevance but puts (E)CSCW in the driving seat for intellectual and practical advances in a future of polycrisis. In particular, we ask:

- How partnerships and coalitions develop between the many actors (e.g., individuals, public institutions, private actors) that become involved in concrete acts of care for the environment.
- How collaboration unfolds over time between these actors.
- What capacities and motives drive participation while broadening inclusion.
- How care for the environment, which requires a long-term, arguably multi-life spam perspective, can be framed so that we can collaborate over time.
- How we understand the role of other species and the balance of practices that might emerge if we include a wider constituency in the idea of collaboration.

Panelists

- Ann Light will chair the panel, setting the scene for an ambitious discussion about an ecological, relational vision for CSCW research.
- Chiara Rossitto will focus on environmental sustainability and environmental stewardship, in particular, drawing upon her research on waste management.
- Airi Lampinen will highlight social sustainability, drawing upon her expertise in ecologies of community initiatives and the work of sharing.
- Andrea Botero will share bits of an exploratory practice that combines walking, off the shelf video conferencing, good old locative media and forms

of feral environmental data to speculate on collaborative ways of caring for forest futures.

Session plan

We have deliberately planned this panel to be highly interactive with the audience. The talks that open it (5 minutes from each panelist and the chair) are there to act as provocation for discussion in the wider room. The chair will manage the transitions between parts of the session and keep time. We are not seeking controversy at the podium, but to present a range of stimuli to highlight both how (E)CSCW is well placed for taking serious issues of practice and complexity forward and what diverse aspects of sustainability can be invoked. The session will be structured in this way:

- Opening by chair
- Position statements from three panelists
- Questions of clarification
- Breakout time, where small groups can discuss issues and form their own positions/questions
- Comments from groups to the panel
- Panel responds
- Further discussion in room on questions set by chair (e.g. see above)
- Reporting back
- Final comments from panelists and chair as a summary to the session.

Biographies of panelists

The panel is organised by a group of scholars with significant experience in the collaborative work involved in fostering different sustainabilities, along with a longstanding engagement with the CSCW community:

Ann Light addresses the politics, ethics and agency of design, and especially co-design in communities, exploring social activism at neighbourhood level, investigating the design of sharing structures and questioning the boundaries of participation. She is Professor of Design and Creative Technology, University of Sussex, UK, and Professor at Malmö University, Sweden. Regarding the social and ecological as inextricably linked, Light has turned to consider the stress that current systems put on the planet, believing creative remaking of relations is needed for liveable futures. She is co-creator of the CreaTures Framework, prepared as part of the European Union project Creative Practices for Transformative Futures (CreaTures: https://creatures-eu.org/).

Chiara Rossitto is Associate Professor of Human-Computer Interaction at Stockholm University, Sweden, and Visiting Professor at the Centre for Sustainable and Digital Transformation, at Aalborg University, Denmark. She has

extensively investigated the role of digital technologies in fostering care, civic engagement, and people's participation in initiatives seeking more sustainable futures. Her research has investigated the use of digital technology to support and structure environmental stewardship and care for the environment, waste management practices, and political dialogues. Moreover, it has problematized scale as the only notion often associated with technological development and the long-term impact of technological interventions aiming at social change.

Airi Lampinen studies interpersonal and economic encounters, peer-to-peer exchange, and algorithmic systems. Her recent book *The Trouble With Sharing* (Lampinen, 2021) addresses the interpersonal challenges inherent in peer-to-peer exchange. Lampinen is Associate Professor in Human–Computer Interaction at Stockholm University, Sweden, and Docent in Social Psychology at the University of Helsinki, Finland. Currently, Lampinen is the co-PI of the WASP-HS project *Ethics as Enacted through Movement – Shaping and Being Shaped by Autonomous Systems*. She is also part of the Digital Futures faculty and co-leads two projects within the centre: *Layering Trust in Intimate Digital Health Technologies: Learning from Challenging Experiences* and *Digital Futures Drone Arena.*

Andrea Botero works with the possibilities, and contradictions of participating in the creation of environments, tools and media that afford more relational and caring interactions among, and between, people and their environment. She is Associate Professor at the School of Arts, Design and Architecture of Aalto University, Finland, and conspirator at the collective design studio Suo&co.

A provisional plan for running the panel virtually

Should the panel need to be run virtually, it would be possible to conduct the same process with the use of a video conferencing platform, such as Zoom, and open break-out rooms for discussion at the points noted above. In this case, the chair would be in charge of opening and closing these rooms and, instead of talking to neighbours, participants would be randomly put together in small groups.

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