

Connected Sustainability: connecting sustainability-driven, grass-roots communities through technology

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ABSTRACT

Recently, global economic turmoil has led to the rise of many grass-roots movements and communities that share a strong sustainability agenda and the desire for political, economic and societal change in the world. Digital technologies play a role in supporting these growing communities in achieving their goals, maintaining and extending their practices and connections. This marks a new area of research for HCI, that of *Connected Sustainability*. In this workshop, we seek to understand the values and practices of such communities; the role of digital technologies in shaping and sustaining identity and community action; and existing challenges and opportunities.

Categories and Subject Descriptors

H.5.m.: Miscellaneous.

General Terms

Design, Economics, Human Factors, Theory, Legal Aspects

Keywords

Sustainability; communities; digital technologies;

1. INTRODUCTION

Due to recent global economic turmoil, there have been significant societal shifts. Many people have turned towards building their lives around more sustainable ways of being that involve considering their local communities, their local natural environment, and small-scale production and consumption [6]. This is evident in the rise of grass-roots movements that aim to decrease ‘food miles’, make cities greener and enable people to reconnect with each other and the environment. Examples include small scale and urban farming in response to factory farming, or local currencies to keep money in the local community by supporting local businesses (e.g. bristolpound.org). The emerging communities that grow out of these movements with their

collective commitments, interests and actions are to a great extent sustainability-driven; that is, they are concerned with the mindful management and conservation of resources [4] and waste elimination [8]. But most importantly, they aim to enact political, economic and societal change [7,10].

Collective action towards sustainability objectives depends on building and maintaining social networks that connect individuals with their communities and others who share similar aims and commitments. Sustainability-driven communities typically do this by leveraging various, in some cases mundane, digital technologies (e.g. email, Google Docs, mobile devices, social platforms, and open source hardware). The uptake and importance of technology in such movements is also demonstrated by the many and rapidly growing collaborative consumption services – such as couchsurfing, taskrabbit, and Tendertree – that harness the power of online peer-to-peer technologies in ways and at a scale not seen before.

There is great variability in the form of digital technologies and their degree of adoption among these communities. It is time to start building an understanding of who these communities are, how they work and connect and the role of digital technologies in shaping their identity, enabling collective action and sustaining community engagement.

2. CONNECTED SUSTAINABILITY

There is already a significant body of HCI research on sustainability [3], but what the focus of this research should be and the role of technology in long-term community engagement is still contested. Brynjarsdottir et al. [2] proposed moving our focus beyond the individual to the wider contexts in which individuals work, socialize and live. Dourish [4] similarly critiques the focus on persuading, changing and motivating the individual as well as the lack of appreciation of political, cultural and economic factors in the design of technologies for sustainability. Balestrini et al. [1] identified the need for HCI to move beyond novelty and short-term deployments and instead work towards technology handovers that empower communities in the wild and sustain long-term change.

Here, we propose the term *Connected Sustainability* to emphasise a focus that extends beyond the individual, towards communities, with shared commitments, interests and practices, that are considered within their social, political and infrastructural context. Furthermore, *Connected Sustainability* addresses the challenge of integrating digital technologies to connect communities and promote sustained positive change. For example, technology integration is still at an early stage, which means that HCI is in a strong position to not only facilitate it, but also to influence and understand how such systems might shape and be shaped by political, economic and environmental action, and impact debates around use and best practices [9]. New sets of values that challenge widely accepted systems are also unfolding within and across these communities. Understanding how these communities work and their value systems can provide insights into how to support and extend their practices. It can also inform the design of new digital technologies for sustainability and the development of theories that will enhance our understanding of similar phenomena [5].

3. WORKSHOP GOALS

This workshop aims to establish a forum for discussion of theories, methods, real world practices for the use, design and evaluation of connected sustainability. We hope to bring together researchers and practitioners from multiple disciplines in HCI, community development, social psychology, sustainability, architecture, business, economics, education, media and communication studies, and social sciences to exchange ideas and establish new collaborations across disciplines and topics and set out a new research agenda for connected sustainability.

4. WORKSHOP TOPICS

Submissions should cover topics around the issues of sustainability and community, including but not limited to:

- The role of technology and related social, political and cultural factors in supporting connected sustainability.
- Empirical, theoretical, and critical methodologies, concepts and tools for the study of connected sustainability.
- Designing digital infrastructure to foster sustainability aims and to sustain community engagement by understanding and supporting, for example, factors such as community championing.
- Challenges and opportunities, design, use and evaluation of digital technology in communities with sustainability aims.

5. PRE-WORKSHOP ACTIVITIES

We have launched a mailing list and begun an online conversation with list members around the workshop topics. This lays the groundwork for a community of practitioners and researchers who are interested in the workshop and who can spread the word to other participants. We will also set up a website (<https://connectedsustainability.wordpress.com/>) and a twitter hashtag to attract people to the workshop call. Prior to the workshop, participants' names and research statements will be circulated and we will host discussions via the comments section on the website about the upcoming workshop's goals.

6. WORKSHOP OVERVIEW

9:00-9:30 Opening: Agenda, and key issues summarized from the position papers.

9:30-10:15 Introductions.

10:15-2:45 Presentations: Participants present position papers with time for Q & A (includes a break for lunch).

2:45-3:30 Interactive small group discussions. The discussion themes will be based on the participants' submissions.

3:30-4:00 Summary of small group discussions: Participants share insights from their small group conversations with the larger group.

4:00-5:00 Future work and closing: Reflect on key ideas surfacing from the day's discussions and summarize avenues of further research.

7. POST WORKSHOP ACTIVITIES

Slides from the presenters and summaries of the workshop outcomes will be posted on the workshop website. This will also host ongoing interactions between authors and members from this developing community.

8. SOLICITING AND SELECTING PARTICIPANTS

We welcome diverse submissions with the aim of making links across practitioner and academic perspectives, technologies, contexts, data and methods. Interested researchers and practitioners will be invited to submit a position paper (2 to 4 pages) in the ACM Extended Abstracts format about work in progress, recent results, study methods, case studies, or perspectives related to the workshop topics. Papers will be peer-reviewed by the workshop coordinators and 10-15 participants will be selected based on how well their position papers address and extend the workshop topics. Submissions should be in PDF format and emailed to the organisers by the 1st of May.

9. WORKSHOP ORGANISERS BIOGRAPHIES

Nadia Pantidi is a lecturer in Applied Psychology at University College Cork. She conducts research on HCI with a particular focus on understanding people's interactions with technology in the real world.

Jennifer Ferreira is a post-doctoral researcher on the 3DaRoC project, exploring the ways digital connectivity shapes the relationships of users of local currency and peer-to-peer lending through design research.

Mara Balestrini is a PhD candidate at the Intel Collaborative Research Institute for Sustainable Connected Cities at University College London. Her research explores the design and deployment of novel technology interventions for social action to enable meaningful and sustained community engagement.

Mark Perry is a Reader at Brunel University, looking at ubiquitous and mobile computing from a user-centred and ethnographically-informed perspective. Mark is PI on the 3DaRoC project, exploring new media formats for alternative and peer-to-peer financial services outside the banking sector.

Paul Marshall is a lecturer in Interaction Design at University College London. His research focuses on the design and evaluation of ubiquitous computing technologies in the wild.

John McCarthy is Professor of Applied Psychology at University College Cork. His research is concerned with the design and experience of technologies and services to support people who are vulnerable (e.g. the elderly, people with dementia). He is also interested in the potential of technology to support participation in community activity and in digital civics.

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