

Championing Environmental and Social Justice: *Embracing, embedding, and promoting broader notions of sustainability in HCI.*

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Big question: *what will it take for sustainable HCI to really make a difference?* As was pointed out by the forum's editor, continuous dialogue is key [6]. It is clear that the digital systems designed by the HCI community have increasingly powerful and complex effects on the more-than-human world and on humans who adopt our systems [1]. Many HCI researchers, including the authors of this article, believe that we should interrogate the use of technology 'for good' [2, 3], especially when confronting urgent social and environmental challenges.

Countless reports, articles, and documentaries tell versions of the same crushing story, how globally intertwined and digitally mediated economies exploit peoples around the world. It is too easy to become numb to endless reports of human suffering and ecosystem collapse. Intrenched inequities and discrimination, a shrugging acceptance of business-as-usual, marches us along. In an effort to disrupt this march, we, the authors, organised a sustainable HCI (SHCI) Special Interest Group (SIG) at CHI2018, aiming to bring together people who share an interest in these complex and interconnected issues [4]. To provide a more comprehensive framing for the sustainable HCI community we proposed championing environmental and social justice together. It is our shared opinion that the intertwined set of issues relating to society (e.g. inequality, justice, diversity, privilege) and the environment are often seen as separate issues in HCI. Through this SIG we began to take stock of the multitude of intertwined issues, broadening our worldview and taking more responsibility as technologists whose work impacts society and the environment.

The SIG attracted just over 40 engaged researchers and practitioners—as well as one telepresence robot—with diverse areas of expertise. Many of the attendees were relatively new to the work produced by SHCI and social justice-focused HCI researchers. What attracted attendees to the SIG was a shared eagerness to discuss how to pursue, promote, and continue strengthening research related to interaction design and issues of environmental and social justice. In this article we provide an overview of our discussions and where we see room for continued dialogue.

Deeply Embedding Responsibility in HCI

Many attendees expressed an interest in seeing concerns about social and environmental justice becoming more deeply embedded in HCI research, practice, and community events (e.g. conferences and workshops) to demonstrate that HCI is taking these issues seriously. This led to several discussions about the shared vision or values among what we might see as "the community". Who are the members of this community? Must they interact in ways beyond purely conducting research, writing it up, and providing constructive peer review to one another? Should the community attempt to incorporate its interests into postgraduate and undergraduate teaching? How might we encourage researchers from other domains within HCI and beyond to become involved with social and environmental issues?

We acknowledged the difficulty of answering these questions definitively, particularly due to the diverse nature of global and local issues related to environmental and social justice. As several attendees pointed out, researchers new to these issues in HCI can struggle to get an overview of what has been done before and where they might best use their skills and knowledge. With the wide-ranging body of relevant research growing every year, even survey papers might be an insufficient source of information for newcomers. An open

challenge is how to appropriately bring new HCI researchers into this domain and make them part of the ongoing discussion.

An alternative way to incorporate newcomers might be through making environmental sustainability and social justice more core issues at the CHI conference itself. Building on a recent proposal by the ACM's *"Future of Computing Academy"*, which suggested that researchers could consider broader project impacts [5], we wondered: should every CHI paper contain a paragraph commenting on how the outcomes of the research might affect environmental and social justice? If so, how can we engage with the difficult challenge of evaluating these impacts? Additionally, we wondered if a frank but constructive criticism of companies producing digital devices and online services might be built into the student design competition in some way. And where are sustainability and social justice at the plenary/keynote level? It is hard to imagine more pressing issues confronting the HCI community!

Walking the Walk

Several participants expressed a concern that, if a community of environmental and social justice-oriented HCI researchers and practitioners were to become formalised, it should do more to expand its diversity and inclusion efforts. This raised many important questions about how to more deeply integrate justice into the roots of our community. For example, how can we make research and policy development related to environmental and social justice more visible across HCI? Do we require more top-down approaches advocating sustainability as "responsible innovation" and "social responsibility" within SIGCHI and ACM? Attendees proposed and discussed the potential for a group of environmental or social justice "ambassadors" to help address these systemic issues.

Environmental or social ambassadors might be able to support knowledge sharing and agenda setting within SIGCHI and the ACM, thereby promoting sustainability and supporting the growth of a diverse community. Some responsibilities for the ambassadors might include broadening the range of inclusive social events during conferences, highlighting the unsustainability of food waste at conferences, building stronger bonds with like-minded communities (e.g. HCI4D, feminist HCI, civic design, third sector HCI), and speaking directly to future conference organisers about centering environmental and social justice issues during keynotes to set a meaningful precedent. These ambassadors may also help the community-at-large advocate for installing a sustainability adjunct chair on various conference steering committees.

The Privilege to Pursue Activist Research

Numerous SIG attendees expressed a concern about the real and perceived risks of pursuing the kind of long-term research projects needed to address environmental and social justice issues. Not all researchers are currently privileged enough to pursue this sort of research, either due to their career stage or precarious work arrangement (e.g. short term contracts, restrictive funding structures, potential visa issues). On the other hand, short-term projects also carry risks, particularly when relationships and trust are critical for success. Many attendees agreed that a supportive research community with engaged senior academics and the aforementioned community ambassadors—especially if those ambassadors were to be involved with the ACM—might help address these issues.

Engagement Beyond the CHI Conference

SIGs offer an opportunity to meet like-minded researchers and discuss future collaborations. Many of our SIG's attendees shared a general feeling that they were amidst a passionate

group, and that they were perhaps missing out on opportunities to support one another due to rather loose affiliation and organisation, both within the context of CHI and beyond. We wondered about a number of possible improvements: at a very basic level, some community resources or some sort of digital space in which to spark discussions about potential collaborative projects and grant applications, identify our gaps, share our research, and establish our identities—beyond the existing mailing lists and static resources—could help. This could broker access to established experts that one might consult (e.g. related to eco-feedback, transport, food, charities, life cycle assessment), a list of alternative venues for publication (e.g. ACM Computing within Limits (LIMITS), ICT for Sustainability (ICT4S) and ACM Computing and Sustainable Societies (CompaSS), which are wonderful events for meeting new people and trying out new ideas).

Reflecting on Next Steps

There are so many exciting opportunities to pursue and next steps that we could take if we want to more directly orient HCI towards environmental and social justice. If our SIG demonstrated anything, it was that a broad group of HCI researchers have the energy for and an interest in tackling the interwoven issues of social and environmental justice. To support this energy and promote broader notions of sustainability we call on the SHCI community to support a more holistic approach where a set of shared values and ethics are recognized as central to SHCI's vision. We believe that forging the community in such a way is essential for more directly orienting HCI towards environmental and social justice.

We were thrilled to hear our SIG attendees calling for more visibility of existing environmental and social justice research and projects; SIGCHI to improve its representation of these issues; and increased action and activism that can support the energy and enthusiasm of attendees. We agreed with and intend to support action towards achieving these calls. What we also heard from attendees was that there is a significant number of HCI researchers interested in social and environmental justice. In the coming years, we intend to encourage, establish, and support a number of champions within HCI and SIGCHI who can push for environmental and social justice at different levels in our organisations and communities, from different directions and at different paces.

Whilst there is value in transforming SIGCHI and the ACM at the top to help establish the institutional legitimacy of our concerns and influence the direction of interaction design, we believe the SHCI community could focus its efforts on numerous other avenues. We could expand the reach and power of our community if we actively talk about environmental and social justice in our research, twitter feeds, and conversations—with policymakers, our peers, and members of the public.

In order to help HCI evolve in the future in order engage in challenges, and transform sustainability issues relating to climate change, environment and resource consumption we must more deeply consider issues where the digital technology, energy and the environment are implicated in issues of injustice, inequity and discrimination.

How can we be more active in this space? We can choose to include a few paragraphs in our CHI papers commenting on how our research might affect environmental and social issues, and we can bring these issues up when presenting our work in public. We can have a conversation with our students and advisees, or bring up these issues during project meetings and workshops. The opportunities to more directly orient HCI towards environmental and social justice are varied, and we believe they shouldn't be restricted to SIGCHI or any single ACM-sponsored conference. Environmental and social justice can and should be ingrained in every interaction design project. There is no single "right" way to

make progress on the diverse issues related to environmental and social justice. All of our *interactions* matter.

PUT INTO MAGIC HANGING BOX:

There is a sizeable community of interaction designers working on and interested in environmental and social justice. We are emboldened by our latest SHCI SIG and we now hope to energise a wider community interested in championing environmental and social justice. We invite readers to join our longstanding SHCI mailing list (<https://groups.google.com/forum/#!forum/sustainable-chi>) and catalyse or get involved with conversations and activities. We also want readers to know that, since the SIG, we've started a Twitter account (url: http://twitter.com/sustainable_hci hashtag: #SHCI) and created a Slack channel so people can meet and share information about social and environmental justice (<http://hci-sustainability.slack.com> - email Oliver Bates (see contact below) for an invite). We have also been in direct contact with CHI 2019 conference chairs to discuss embedding environmental and social justice in the core of next year's conference. Lastly, we've started developing a case with help from programme committee members to put in a proposal which demands for an adjunct chair of environmental and social justice (or similar guise) for CHI 2020.

References

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