“Everything in the forest is the forest”: A Decade of the Sustainability in (Inter)Action forum

Roy Bendor, Lisa Nathan, Matthew Louis Mauriello, and Oliver Bates

The Sustainability in (Inter)Action forum first appeared in *Interactions* magazine in 2011 (Vol. 18.3). It sought to create a space for highlighting innovative thought, design and research in the area of interaction design and sustainability, welcoming a diversity of approaches to the topic across Human-Computer Interaction (HCI) communities. Whether aimed at small fixes or grand solutions, based in academia or industry, taking place in neighborhoods or studios, the work featured in the forum aimed to inform, inspire and provide us with hope that more sustainable ways of designing and being in the world are not only possible, but are already emerging around us.

Over the past decade, the forum showcased 25 efforts to bring sustainability into interaction design – not as an afterthought but as a core requirement – positioning sustainability as the *sine qua non* of design in Anthropocenic times. Throughout this period forum articles embodied the Sustainability Human-Computer Interaction (SHCI) community’s desire to reach out beyond itself to new members and communities; to explore novel ideas, practices and toolkits; and to demonstrate ways that the designerly imagination can cultivate, enact and embolden transformative change. Forum articles challenged the rhetoric of “green-washing” and the logic of extractivist practices, and debated methods to reduce consumptive lifestyles and make industrial practices more effective. Articles also showcased solutions aimed at individual choices and more collective paths for change, highlighted material fixes and creative practices, and provided insightful ways to foster community engagement and build bridges to other communities of research and practice. Taken together, forum articles exhibit the wealth of sustainable approaches already available to designers, but also the community’s willingness to critically reflect on its own roles and responsibilities as catalysts of more sustainable futures. Our hope that such futures are within reach rests on several promising directions for design:

From control of nature to designing with, for and from nature

Insofar as contemporary design co-emerged with the industrial order, design has been implicated in various ontological distinctions, dominant among them is the belief that humans stand over-against nature. But where designers used to understand their work as part of a need to protect humans from the raging forces of nature, many now see design as a means for working with, for and from nature. Designers, in other words, are rediscovering, or rather unforgetting [1], that humanity is a part of nature, thus drawing on design not only to prevent environmental degradation but to regenerate eco-social entities.

We can sense this shift with the introduction of design strategies such as biomimicry, and with the increasing use of organic**,** renewable materials such as bamboo and mycelium in the construction of new artefacts and built environments. But no less important is the inclusion of nonhumans as active participants in design processes. This change of attitude – from seeing the relations between humans and nature as adversarial to synergistic – provides an antidote

for both human-centrism and ecomodernist approaches that seek to decouple humans from nature. But it also means that sometimes designers will choose to stand back and observe, respect and learn from knowledge systems that recognize humanity as always-already part of nature. If we understand design as intentional action towards a specific outcome, the decision *not to design* is, as paradoxically as it may sound, no less designerly.

From affirmative to transformative design

While in many instances design remains wedded to its commercial contexts, it has become increasingly clear that design's power to affect, destabilize and transform society can be redirected toward better ends than endless growth, consumption and profit. With the introduction of new intelligent, data-heavy technologies, many designers are working to better understand, make visible, and reduce the ecological footprint of technological infrastructures – a task complicated by the way computation devices and services effectively conceal their true material footprint. We can see this act of concealment clearly in the kind of metaphors we use to describe computation, whereby the ecological footprint of new technologies such as AI, Big Data and cryptocurrencies is all but cloud-like.

As was said before (in this space and in many others), for design to become truly sustainable it must recognize both the hard limits of planetary boundaries [2] and the abundance of gifts provided to us by planetary cohabitants [3]. We must resist the drive to innovate at all cost in both academic and corporate settings – or at least rethink what is meant by innovation and pursue it responsibly. Every new object, computational model, or software system is the result of numerous iterations that necessitate large amounts of matter, energy and labour. These often leave behind physical waste and social costs that may be hard to quantify but should nonetheless be considered. On the same token, just as 'letting be' doesn't necessarily have to be reduced to standing aside, innovation doesn't have to mean 'new stuff'. Thinking about circularity throughout the process of design, manufacture and use is no less innovative than the kind of disruption sought by Silicon Valley entrepreneurs, and initiatives such as the 'right to repair' position maintenance as equal to, if not more important than, bringing to market new shiny objects. Like the philosophy behind the Japanese practices of *kintsugi* and *wabi-sabi*, we can allow objects to age with grace, appreciate their value and meaning beyond their mere functionality. Critical considerations of product scalability and modularity, alongside efforts to fundamentally rethink our material supply chains and to educate and empower end-users to take control over their devices are already showing the way beyond 'business-as-usual'.

Environmental justice is social justice

An important condition for design to be able to promote sustainability is a shared understanding that environmental justice is social justice and vice versa. Marginalized communities are not only the first to suffer the consequences of pollution and environmental degradation but are often the ones who are already working to stop it [4]. Indigenous communities continue to face persecution for standing in the way of 'progress' – often a signifier of extractive technologies and practices such as mining, damming, laying pipelines and clearcutting forests. In this sense,

there is a striking resemblance between the environmental externalities of modern economics and the social marginalization of global neoliberal politics; neither count for much in the pursuit of material wealth for the few. Nonetheless, where there's a crisis there may be opportunity: just as the granting of legal statute to mountains and rivers reshapes the nature-culture divide into a much more complex and flexible ontology, realignments between environmental and social justice movements are creating new hybrid politics. Designers can support these efforts by materializing the tools, situations and experiences that render such alliances possible.

This is already evident when designers support solidarity across sectors in and through their design processes, when they facilitate processes of participatory or co-design, promote platform cooperativism and commoning, or help build community solidarity and resilience. What Arturo Escobar helped popularize as autonomous design [5] is gaining traction, opening up design to myriad perspectives. When such perspectives also include more-than-humans, design can be seen as an agent of ontological malleability. And the more our understanding of the world in which we act becomes more complex and more nuanced, the less plausible is the belief that acts of design can be isolated or insulated from global politics. Designed objects, services, environments and experiences are nodes in complex networks of practice – networks which design helps to weave. If there's hope that design will help us out of our current trajectory it lies precisely here, in design's capacity to recreate new entanglements, realignments, and the conditions for a broad alliance for equitable change to emerge.

What is to be done?

These and other promising directions for sustainability in design can only flourish in an environment that nourishes the designer's capacity to envision and pursue alternative futures or, in Tony Fry's words, to counteract society's tendency for "defuturing" [6]. If we are unable to think beyond current social, political, cultural and economic conditions we are guaranteed to merely (re)produce more of the same, despite the fact that the planet and all those who share it are desperate for deep change. If sustainability is anything it is about our ability to envision and pursue better futures. We cannot be satisfied by tinkering around the edges of our ecological crises, nor should we despair because of the scale and depth of the action needed. Designers can and should help create new narratives that foreground resilience, equity, inclusiveness, humility and responsibility.

Over the past decade the SHCI community has moved in this direction by pushing for important measures to reduce the material footprint of the HCI community and by integrating sustainability into new and existing initiatives. This is clearly not enough, but we take hope from knowing that we are not alone. We would like to thank the magazine for providing the community a space to come together, and all the authors and editors for helping to keep the forum relevant and inspiring. Although the forum is ending, the struggle for sustainability – indeed, for a better future for all – is far from over. We call upon the design community to do more to increase our chances of surviving and even thriving in the Anthropocene. There are plenty of opportunities to get involved (see sidebar) and join others who are trying to make a difference by their commitment to working towards a future in which respecting the magnificence of our planet is

the first law of design, where design does not settle for doing little or no harm but is committed to regenerative practices, and where human societies support diversity instead of domination. We are all in this together.

“There are no individuals. There aren’t even separate species. Everything in the forest is the Forest” (Richard Rogers, *The Overstory*)

References

[1] Shotwell, A. (2016). *Against purity: Living ethically in compromised times*. Minneapolis, MN: University of Minnesota Press.
[2] Rockström, J., Steffen, W., Noone, K., Persson, Å., Chapin III, F. S., Lambin, E. F., . . . Foley, J. A. (2009). A safe operating space for humanity. *Nature* (461), 472-475.
[3] Kimmerer, R.W. (2015). *Braiding sweetgrass: Indigenous wisdom, scientific knowledge and the teachings of plants*. Minneapolis, MN: Milkweed Editions.
[4] Costanza-Chock, S. (2020). *Design justice: Community-led practices to build the worlds we need*. Cambridge, MA: MIT Press.
[5] Escobar, A. (2018). *Designs for the pluriverse: Radical interdependence, autonomy, and the making of worlds*. Durham, NC & London: Duke University Press.
[6] Fry, T. (2009). *Design futuring: Sustainability, ethics, and new practice*. Oxford and New York: Berg.

******

Sidebar

Whether they are already involved with sustainability or not, readers may find the following non-exhaustive list of resources and initiatives useful for pursuing sustainability in and through design.

- **Sustainability and Climate Chairs** are often nominated at ACM conferences such as CHI, MobileHCI, CSCW, and UIST, and CHI has recently introduced a subcommittee dedicated to critical and sustainable computing. The ACM SIGPLAN Climate Committee has created a set of useful resources for those considering to get involved in an existing activity or wishing to initiate a new event: https://www.sigplan.org/Resources/Climate.
- **ICT for Sustainability** (ICT4S) is an annual gathering of technologists and sustainability practitioners dedicated to promoting sustainability in their work (http://www.ict4s.org).
- The annual **LIMITS workshop** is often coupled to ICT4S and provides participants with a lively space for discussing design, technology and sustainability (http://computingwithinlimits.org).
- The **Design Research Society** (DRS) supports a Sustainability special interest group (https://www.designresearchsociety.org/cpages/sustainability-sig) and one dedicated to pluriversal design (https://www.designresearchsociety.org/cpages/sig-pluriversal-design).

- The ACM has introduced (as of 2019) a **Carbon Offset Program** (https://www.acm.org/special-interest-groups/volunteer-resources/conference-planning/conference-registration#h-carbon-offset-program) and a **CO2 Footprint Calculator for Conferences** (https://co2calculator.acm.org/login.html). Examples of initiatives already implemented at CHI 2019 can be found here (https://chi2019.acm.org/2019/02/22/talking-about-chi-and-sustainability/).
- To participate in active conversations about fighting climate change across the ACM join the **ACM climate** Google group (https://groups.google.com/g/acm-climate/), and for more conversations about HCI and sustainability join the **Sustainable CHI** Google group (https://groups.google.com/g/sustainable-chi).

******