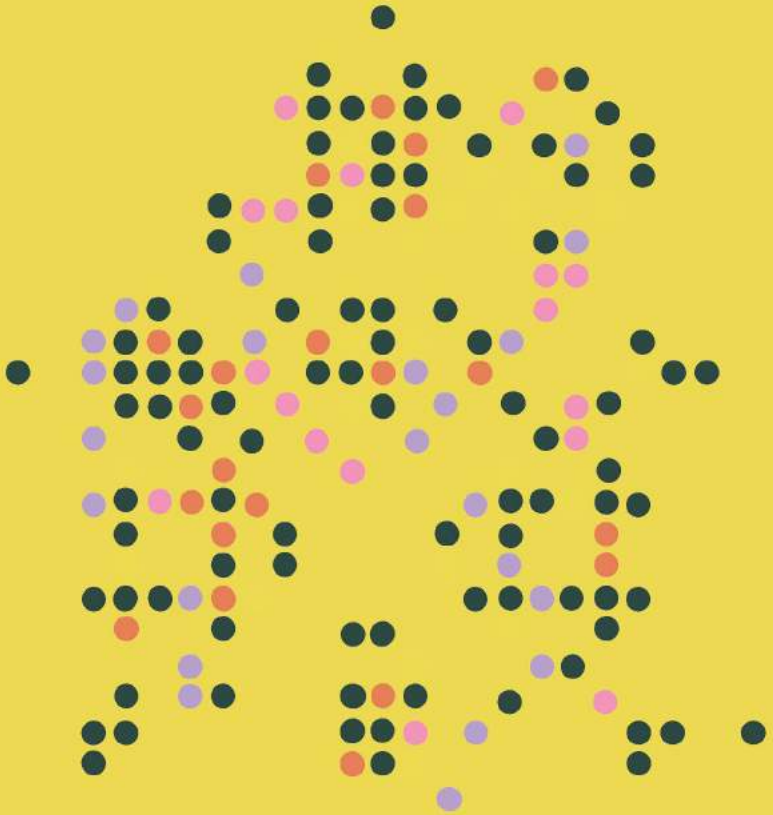

Future of Human Ecologies

Exploring the future of human ecologies.

18 Nov 2017 • Bangalore

Contents

The world of the future seems to be a smart, fast, connected digital world and it is easy to get seduced by the potential it promises. There is a lot of hype around data-driven futures that will make everything, including our relationships with each other and the places that we live in, smarter and more efficient. However it is also important to focus on our shared humanity and the diversity of our complex lived experiences in our conversations about the future.

How can we find expression and meaning in a world shaped by technology, data and algorithms? How can we think of technology that can manifest our shared culture and values that are also unique to place and context? How can we be educated participants in our own future? This edition of UnBox sought to start conversations about the role of technology in our society, and about how we want to navigate being human in a digital world.

Workshops

There were five workshops for participants to choose from:

Body as Sensor - Attendees addressed questions around our senses and the design of emergent technologies as they worked towards their own designs that would reflect ethical, contextually-situated designs that used our bodies as sensors.

Facilitators: Shannon Dosemagen & Jon Rogers

Designing for Consequences - Participants explored how design researchers can be of help in dealing with complex, multi-stakeholder innovations.

Facilitators: Danielle Arets & Archana Prasad

Provocative Prototyping - In this practical workshop hosted by Mozilla's Open IoT Studio, participants discussed, sketched and prototyped alternative possibilities for the future of voice and the Internet.

Facilitators: Martin Skelly & Pete Thomas

Visual Design Research - This workshop showed how film can become a language for collaboration with participants in multidisciplinary teams that aimed to strengthen their design and innovation efforts through design research.

Facilitators: Isabelle Makay & Dr. Bas Raijmakers

Design for Social Impact - Examples from Quicksand's decade-long practice in this domain were used to understand the nuances of design for social impact and how the latest in technology, UX, and design can be used for the betterment of society.

Facilitators: Kevin Shane & Rishabh Sachdeva

Panel Discussions

Two panel discussions sought to build provocations around a more imaginative future for technology in our lives. How can newer technologies learn from traditional communities and indigenous practices to offer a more authentic experience? Will it lead to alienation or can it be a way to understand each other and build empathy?

Citizen Engagement with the City and Its Spaces - A group of experts led a conversation around experiments that demonstrate different models across geographies for participatory city-building.

Panelists: Danielle Arets, Archana Prasad, S Vishwanath, Dr. Bas Raijmakers

Community-led Technology Models - Experts presented provocations and ideas around how decentralised models of technology development can become more robust and relevant to communities.

Panelists: Shannon Dosemagen, Mike Thompson, Jon Rogers, Romit Raj

The day concluded with time dedicated to networking and socialising, allowing participants time to interact with the panelists, workshop facilitators, visiting students, and each other.

Partners

Mozilla's Open IoT Studio is a global network of professionals committed to open Internet of Things, working alongside Mozilla to make IoT more open, accessible, and empowering.

Design Academy Eindhoven (The Netherlands) is known for its conceptual, authentic, creative, passionate and curious approach to design, moving beyond design disciplines and pushing the boundaries in research and education.

Lowe's Innovation Labs is the disruptive technology hub for Lowe's Companies, Inc., the U.S.-based FORTUNE 50 home improvement company. It seeks to connect with India's tech leaders and innovators to collaborate and develop new capabilities and proofs of concept. The vision is to discover new frontiers and seed new platforms, while fostering an environment of innovation to help people love where they live.

Citizen Engagement with the City

Panelists
Archana Prasad, Danielle Arets, Bas Raijmakers, and Vishwanath S.

How do citizens engage with a city and how can they be empowered to actually create this space and shape the environment around them? How can they use it to find their voices, lost skills, and even livelihoods? How, in turn, can the city engage its citizens to pay attention to critical issues and depleting resources? What role does design play and what are the challenges it faces in its quest to empower citizens or organisations?

Four designers, artists, and activists - Archana Prasad, Danielle Arets, Bas Raijmakers, and Vishwanath S. (a.k.a, "Zen Rainman") - came together to discuss this city-citizen relationship and what the future path may hold.

A bridge in the city of Utrecht is being built thanks to the citizens who, after failed attempts

at crowdfunding, decided to raise awareness simply by setting a project to send basic analog letters to people living across the proposed bridge. The success of the project actually prompted the policymakers to change the law, making it possible for citizens to participate in building the city. It is a great example of how design can work where formal systems may fail and how the government can actually benefit from these interventions. It is also an example of the power of connecting people and how that influences how we think about the city.

Archana's Jaaga organisation in Bangalore has also attempted to connect people across generations using the old neighbourhood of Malleshwaram as a focus. With rapid and almost uncontrolled growth, Bangalore has lost its small city character and has transitioned almost recklessly into a giant megalopolis while infrastructure is haphazardly trying to catch up. This old neighbourhood has seen buildings, trees, and even entire lakes disappear, and with the people who grew up there now in their eighties, a lot of area's stories are threatened to die with them. Jaaga recorded interviews with 25 of these octogenarians and, using cloud technology and interactive voice response (IVR), made it possible for anyone to just dial a number and listen in. They heard about their lives in this neighbourhood and why that place was so special to the city, bringing together a generation that had grown up there to another that was trying to find a sense of belonging in the city. These stories are also important to create an emotional connection so that people learn to care about the city.

Design can also help empower organisations to develop this connection and understanding over critical issues that may be facing a community that the community itself is oblivious to. In the Netherlands, the water boards have been managing water for more than 400 years. For a country that is mostly under sea level, this can be quite critical. But as a testimony to how effective the water boards are, the people take the supply of fresh water for granted and are not even aware that it may be under threat in light of climate change. Along with the water board and social housing company, Bas's group of design researchers designed a lot of playful interventions hoping to make the neighbourhood 'water aware'. This manifested as a series of events around water: collecting and labelling water collected from different houses for a water tasting evening, a soup-making event using this water, and even a rainwater collecting party. They also organised a water

Archana Prasad, based in Bangalore, heads Jaaga that brings artists, designers and technologists together to respond primarily to urban issues and is interested in knowing how culture can lead technology rather than technology leading culture.

Bas Raijmakers is the co-founder of design research company STBY and a Reader at Design Academy, Eindhoven, and likes to explore how we use design research to help design take a more strategic role in change and innovation.

Let's Talk Water Project - (from L to R) Compliment cards, design research space, water safari

safari that the water board now offers as a service that shows people what managing local water supply entails and the role they can play to support that.

Beyond just spreading awareness the project also helped the two organisations (i.e., the water board and the social housing society) to understand each other better. For example, the neighbourhood manager of the social housing company used to give to people compliment cards if they had a neat garden. He would do that for a garden which was completely paved over with potted plants in it. However, paved gardens are a big challenge for the water board as all the water from the rain runs off into the sewage system. The manager realised through working with the water board, by taking an excursion with them and seeing how water systems work, that he should really do the complete opposite. He should gift people with a green piece of wild garden compliment cards for having a garden that helped the water system rather than the 'neatness' of a paved garden.

Often design interventions may be focused on people and resources but help organisations. In this case too, Bas felt that more than water awareness, design effectively helped these organisations that had no skills or focus on how to communicate with people develop confidence to have a more public-facing role and see how their work could be built on that. It also works the other way around where the focus maybe on saving a resource like water but can unexpectedly help a community to revive itself.

Mannu Vaddars is a community of well-diggers that has specialised for 1,200 years in digging wells. They have dug wells and built the artificial lakes and tanks all over the country but started to lose their livelihoods in the 1980s when the aquifer groundwater table went below 30 - 40

feet, which was their capacity to dig wells. Instead, people started using borewells which are thin channels going up to 900 ft. and even as deep as 1,800 ft. With a drought in the years 1983 - 85, the city saw a dramatic shift from open wells to borewells and the livelihoods of these people completely disappeared. Meanwhile, Bangalore now gets its water from the river Kaveri, 100 km away and a 1,400 million cubic meters is pumped into the city. There are 400,000 borewells in Bangalore and it is heading towards a complete water crisis if measures aren't taken quickly.

One of these is rainwater harvesting: storing rainwater and recharging the aquifer to ensure its availability for future use. Vishwanath worked on the policy document that now makes it compulsory for each new building that comes up in the city to catch the rooftop rainwater, store, and recharge it; this is where the highly skilled but out of work Mannu Vaddars come in. The rainwater harvesting policy drives the construction of wells, which are no longer to get water but to take water from the rain and put it in the aquifers. This has put the well-diggers back into the picture with 125 families of the community digging wells all across the city and using their traditional knowledge married with current needs while serving the city's ecology. Zen Rainman's example showed how policy can also tie future crises to traditional skills, resulting not only in better resource management but also the revival of lost livelihoods and precious skills.

The commonality of tackling potential or even existing water crises looms large over many cities – while in some the stage is at 'awareness

Vishwanath S. aka Zen Rainman, based in Bangalore, has 30 years of experience working in water and sanitation, and is interested in the notion of development, big data, and large-scale projects and their implications on people in marginal and small communities, and informal sectors.

creation', in Bangalore it has reached a stage where policy needs to make it compulsory for new houses to actively contribute to recharging aquifers. The difference in context also becomes clear when the design of the water bill is discussed. Vishwanath bemoans the poor design of the monthly water bill which he thinks has great potential for communication. Bas reflected on how in the Netherlands, he was employed to do exactly that (i.e., redesign the water bill) but realised in their research that it is an annual communication and most people can't even remember where it is kept in their houses. However, there are also parallels: a rainwater soup finds resonance in an elaborate South Indian filter coffee recipe that uses rainwater.

It is this search for commonality that is design's playground. Archana calls it design's superpower: storytelling to engage varying audiences and bring them together onto one platform. In all the aforementioned examples, design played the role of the mediator: helping people to talk to each other, for organisations to talk to communities, and for communities to find their voice and role in a new reality (much like UnBox!). Designers need to have the skills to create this space for dialogue and common ground.

If the government seems too large and complex as an entity, we also have to remember that it is much like the city: made up of people that need to talk. And once that is done, to actually put a plan in place that is sustainable in a reality that is ever-changing. Like Danielle said, it is not about nice interventions or new tools but actually engaging in a deeper process that recognises a system that is quite complex.

Danielle Arets is an Associate Lector at the Design Academy, Eindhoven, and is interested in design as a tool for engagement and to initiate conversations.

Ethno-science Fiction, or How Visual Design Research Can Help Us Play the Future

Bas Raijmakers, Design Academy Eindhoven (NL) and STBY (NL, UK)

In speculative design, designers use imaginable futures as their material to stretch their thinking beyond the immediate. Consider robots and exoskeletons, growing new organs, and living well beyond 100 years, for instance. How could a future with these kinds of features look, feel, or be?

Our approach to speculative design at STBY and Design Academy Eindhoven in a project called *MyFutures* (a two-year collaboration with Technical University Delft, and 8 other partners in the Netherlands) states that the future is plural, and should not be predicted, but imagined in many ways to be prepared for what may come. *MyFutures* builds on ways that designers use to

think about and work with futures, and aims to eventually translate these into tools and activities that older people and their caregivers can use to design their own futures from the perspective of new possibilities, rather than shrinking options. We use science as a source for inspiration, because science has already expanded how we can live and what we can do over the past many decades. Many people, not just designers, already see science as a way to speculate about possible futures so this seemed a good place to start. During the Human Ecologies seminar in Bangalore, we further explored this approach in a workshop, building on the ideas below, using a two-minute film of an interview with a robotics scientist as our canvas to explore possible futures for Bangalore street life.

Science Fiction

How do we bring the science of today, that is the basis for what we can do in our futures, to people now? Science fiction film has since its start (arguably with the film 'A Trip to the Moon' *[Le voyage dans la lune]* by Georges Méliès, 1902) done exactly that, by fuelling the imagination of large audiences. The genre is a great example of how a society as a whole, and many people in it, can dream about possible futures, both good and bad, utopian and dystopian. It is important here that two seeming opposites (science and fiction) are connected into a coherent story that is perhaps not likely but can be seen as plausible, at least for the duration of the film. Much of science fiction works on the principle of 'suspension of disbelief,' a call upon its audiences that is also used by designers to imagine futures or alternatives to the current situation. A relevant example in this context is the film 'Uninvited Guests' by design research studio Superflux (2015) where

Scene from *'A Trip to the Moon' [Le voyage dans la lune]* by Georges Méliès, 1902

the science of the Quantified Self and Internet of Things, already introduced in society today, is imagined to progress towards monitoring systems that keep an eye on the health of older people, indicating the most healthy lifestyles to them personally. In the film, an older man living by himself is using several monitoring systems like a fork that measures the healthiness of the food he eats, a cane that checks how much he walks and a bed that monitors when he goes to sleep and wakes up. He is not interested in the numbers these provide, but some of his family and caregivers are, and they keep sending him messages that tell him what to do more, or less, of and when to go to bed. He is clearly not interested and seems to rather be left alone. Soon enough he starts to find ways to be left alone by fooling the sensors. He asks the lad from next door to take the walking stick with him for a while, bed when his supposed bedtime arrives. He ignores the compliments the system and his family and caregivers send in return. They are less frequent and less irritating than the previous reminders to do more and better. The film helps us to understand what monitoring and mentoring services may be possible soon, and encourages debate around what is desirable. At the same time, the film suggests that people will use Quantified Self and Internet of Things technologies creatively in unanticipated and unintended ways. This encourages viewers to think about how they would like to use these systems to their own benefits, and avoid their negative effects.

Ethno-Fiction

Ethno-fiction is much less known than science fiction but also relevant to the work we do. Ethnography is very widely used in design research, but not in combination with fiction. In the late 1950s, ethnographer Jean Rouch developed the idea of what was later called “ethno-fiction” (Stoller, 1992, p. 143) to emphasise that in ethnography fiction is as important as facts. According to Rouch, “[T]he world in which we live is a twilight zone, an area of light and dark, truth and falsehood, reality and fiction” (Grimshaw, 2001, p. 117). Working in West-Africa with the Songhay and the Dogon (both oral cultures), but also in Paris, he focused on the mix of stories and facts in everyday life, and he learned that fiction and stories teach us things about the human condition that no rational cultural analysis based on distant observation can achieve.

To Rouch this does not mean that factual filmmaking should be left completely in favour of fiction. Rather, he argues, we should use both: fiction techniques like storytelling, improvising, performing and acting must be incorporated in the working methods of ethnographers and documentary filmmakers. He explores these ideas extensively in his own films; for instance “The Human Pyramid” *[La pyramide humaine, 1959]* in which he sets up a fictional story about relationships between black and white young people in colonial Africa, exploring teenage love, jealousy and racism at the same time. At the start of the film he gets a group of students in Ivory Coast together to make a film about how relationships between black and white young people can exist without racism. He proposes that they use ethno-fiction and invites them all to contribute to the scenario which they will write during the making of the film. The outcome is not preset. Rouch warns them that someone will have to play the racist and others victims of racism, and that they have to stick to this role, like villains in other films do. “So everything is staged?” asks one of the students. “What do you mean by staged?” Rouch replies, “I create an experience.” For Rouch, the camera does not capture reality, it creates reality – or ciné-reality as he calls it (Stoller, 1992, p. 193). He knew his protagonists would change

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— Jean Rouch

their normal behaviour in front of the camera. But that does not destroy what he wants to film. It creates what he wants to film: a dialogue between him as an observer, the protagonists and even the imagined viewer of the film because both he and his protagonists think about how the story can best be told.

Ethno-Science Fiction

Taking inspiration from both science fiction and ethno-fiction, we can create films that combine both approaches and thus might be called ethno-science fiction films. In the *MyFutures* project we combine two different sources of film material: on the one hand we use interviews with scientists about their work, exploring technologies, the human mind and body; and on the other, the social and cultural aspects of being older. These were originally recorded for the TV-series "The Mind of the Universe" by VPRO public television in the Netherlands, which made the raw footage of the entire series available as an Open Source Science TV project (VPRO, 2017), for the public to edit their own films, making use of the Creative Commons Attribution-ShareAlike 4.0 International license. Secondly, we film scenes with older people of their daily lives that somehow connect to some of the stories the scientists tell. In editing, we then combine the two to create ethno-science fiction stories that allow for multiple interpretations.

One example is called "Pascale Fung and Det", a two-minute film in which scientist Pascale Fung explains how robots will enter into our lives and that we will have to collaborate with them: it is necessary for the robots

(L) Scientist Pascale Fung, (R) Det, in the film “Pascale Fung and Det”

to interpret what we mean, and this obviously goes way beyond taking what we say literally. She also mentions exoskeletons as a particular type of robot that will help us walk. While Pascale Fung tells her story, at times we see Det, a woman in her eighties who walks outside her home in her garden with a rollator walker. She ends at a garden chair that she puts in the right position before lounging in the sun. Then we cut back to see Pascale Fung again who ends with a statement about how robots will not only enhance our physical abilities but also our mental abilities, allowing us to not only do more but also to know and understand more. These two minutes of film give rise to a wide range of options and possibilities (e.g., service robots, exoskeletons, knowing more instead of forgetting when you get older, etc.), that on the one hand sound rather futuristic (i.e., collaborate with robots instead of robots as slaves), but on the other are directly connected to what exists now in older people’s lives (i.e., equipment that helps people to walk, the internet that gives access to ever more knowledge). We designed this film with three characteristics of ethno-science fiction films in mind. Firstly, the film needs to be grounded in the reality of older people in some way, to provide anchor points for viewers to connect the film to their own lives. We see an opportunity here to collaborate with people, just like Jean Rouch does with his ethno-fiction when he creates the story with his protagonists. The older people we involve in our design research are invited to decide with us what parts of their lives can be connected to the stories of the scientists. Secondly, we use film as a language that everyone understands easily. The interview with an expert, the observation of an action, and the cutaway technique that creates a connection between the two, are all part of a film language that people understand without effort. It is a simple way to create speculative connections that are accessible to everyone. It encourages us to dream about possible futures, both good and bad, just like science fiction does. Thirdly, ethno-science fiction is aimed at creating spaces

for speculation where our thinking about the future can be stretched and conversations with people directly involved can be had. The films must provoke personal conversations about possible futures. Here, we see connections with the use of film in participatory design, and can build on these to intervene in the conversations that already take place between professionals, formal and informal caregivers, and the people needing the care.

Future Work

"As an old person you have no future," an 89-year-old participant in our initial round of interviews told us. We also were repeatedly told that, "it does not make any sense to think about the future because you don't know what will happen anyway." And: "You could fall ill anytime and then all your plans are suddenly useless." Older people seem to live a permanent lottery; they take life as it comes.

This insight made us reconsider the way we approach futures in our project. We have learned from people like Liz Sanders (2017) and design research studios like Summ( )n (2017) that the futures should be played rather than planned. Scenario planning may seem attractive but it defeats the purpose if you want to choose a particular scenario that you then work towards. Instead, uncertainty and coincidence should be taken much more seriously and your possible futures are about how well you are prepared to respond to these once they happen. This is equally true for individual people as it is for organisations, or entire societies. For older people, often these unplanned events are expected to be negative, when illness strikes for instance, but they can be positive too (e.g., when people near to you suddenly get more time to spend with you or when some money is inherited).

Where Liz Sanders has explored this approach to futures using physical space, objects, and interaction, we are exploring how we can play in futures using film. Liz Sanders proposes that, "in addition to planning the future, we should be playing in the future. The playing would involve enacting and pretending and using the body to explore future scenarios: not just planning. That would give a lot more ways for people to dream about the future." (Sanders, 2017. p. 32) With ethno-science fiction films we aim to contribute to this effort and take it into new areas and directions, to allow more people to play with their futures. Film is a great medium for this, because as McLuhan already pointed out it is a highly participatory media where empathic engagement has to be invested to make sense of the material (McLuhan, 1964). The participation that film as a medium makes possible is very different from engaging with written or diagrammatic representations such as scientific papers, formatted by a long and delicate process of professionalisation (Latour, 1990). Participation through filmmaking is a way of manipulating material that can handle the 'flow' of real life interactions without the detour of putting it in writing (Buur et al., 2000). Adding the fictional element makes the ethno-science fiction films speculative and playful because it explores situations that might exist. This is a basic design skill and attitude that we aim to bring to everyone at moments they need to consider their futures. The workshop at the Human Ecologies seminar was an exciting early exercise and experiment in doing so.

Acknowledgements

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Exploring Community-led Technology Models

Panelists
Jon Rogers, Romit Raj, Shannon Dosemagen, Mike Thompson

Reconsidering what the world of technology could learn from communities of practice for a more trustworthy, resilient and secure future, the panel explored questions and challenges from their practices, sharing both successes and provocations of the larger contexts within which they operate.

Mike's work begins the moment when technology and biology intersect. He spoke of smell, human-insect interaction, and the way that body odour acts as an attractant to specific species of mosquitoes, which makes one ask quite existential questions about what it is that makes a human, as well as why it is that the mosquito can smell a human from 70 meters away and actually track us down and choose to bite you

The Rhythm of Life by Thought Collider

rather than me. Mike's work is a creative exploration, with the themes he investigates often situated in the realm of 'pseudo-science'. Indeed, in the 1940s when this research was first conducted, it was dismissed as such and it is only in the last 10-15 years that scientists have developed the field of "bio-photonics", which, very simply put, is research into the fact that the human body emits light at very, very low frequencies, typically about 300 to 500 nanometers. You can potentially see this but only in its ultra weak conditions. Evolutionarily speaking, we have learned to block this out, otherwise we would see it all around us all the time. However, it is now being researched with a potential use for new diagnostic tools and healthcare, specifically because research shows that people who suffer diabetes emit higher frequency of bio-photons and also that deeply meditative spells have influenced bio-photon emissions, which are typically referred to as "rhythms of life". You can measure the emissions with a technology called a photon multiplier tube which is essentially a highly sensitive CCT camera.

Mike and his colleagues were invited to work with this technology and make sense of something that is quite ambiguous because researchers don't entirely know exactly what it means in the here-and-now. They were invited to build an intervention where they could potentially co-create what this means to a community. Off the back of this, they created what is essentially a kind of sound installation. The bio-photon emissions are collected via a black box where you simply place your hand. You don't feel anything in the process so the idea was to create something from that data that could actually be experienced. The data from the equipment was translated into a kinetic output which had some symbols that you could have played back to you. Mike and his team deliberately placed this piece of scientific equipment into an artistic context as a provocation. People were invited to come and interact with the machine and have the rhythms of their bodies played back to themselves in real time but with a caveat that this data is being donated to scientific analysis and research. They used the experiment

around the question of data ownership and privacy and the way we people deal with it in the time we are currently living in. People invited were told very specifically that participating in the installation would mean signing over your bio-photonic data hoping to discourage participation. What is particularly interesting about the bio-photonic data is, although it may not have much understanding now, in maybe five or ten years it is possible that they could be using this information to discover something wrong with your health and use it against you (e.g.,by insurance companies). But as much as the team tried to make people feel uncomfortable about participating and handing over their data, they actually had a lot of people come and willingly give them this data. It worked as a provocation, trying to explore the way that we attribute meaning and value to data.

In the last three or four years, Mike has seen the kind of emergence of the Quantified Self movement and although that has some positive benefits, it means we are sharing data left, right, and centre. We are constantly signing over this data without thinking very much about where it is going or what is it going to be used for. As Jon recounted, from horror stories of CIA controlling cars to Samsung TV and Weeping Angels, we see a really menacing side to technology. However, if technology and the data collected by it are used for the benefit of communities rather than that of a few powerful centralised agencies, it has the potential for a far more empowering vision. A household inhaler can take local data about the level of pollen in the air and advise you, a voice assistant can help you learn to sing or speak a new language; limitless possibilities open up once you consider the potential impact of democratization of data. **But how do we work towards that vision of a decentralised Internet? How do we empower people to make right decisions about what they are sharing and with whom?**

Beyond the challenges of transparency in data collection and use, there also lies the question of whose data. Whose data is being used to develop products and services and would technological behemoths consider including smaller communities that they currently ignore as markets? Jon uses this metaphor to explain: Imagine that you had to cook a meal, but only using white ingredients. Rice. Sugar. Milk. It can be very limiting, and not really healthy. Now think of coding as cooking - the data is the ingredients and the recipe is the algorithm. All coding is just that. And if you limit the data, this world becomes limited.

Today, a very few number of companies and people are controlling the ingredients (i.e., the data). For example, the voice-enabled Internet will be transformative for the world and, yet, the market is dominated by only three or four companies. More importantly, they are controlling the very data that enables the work to be done in this environment. This leads to disconnects such as Amazon Alexa data not being able to “talk” to Apple Siri data. Like petulant children, they do not play together nor do they share; their aim is to control. But how does this level of control impact the future development of such technology? Currently, Amazon’s Alexa understands English and Chinese, possibly even German and Spanish. But is it really going to learn Gujarati and work for a Gujarati farmer? Are we comfortable letting the Amazons of the world have this amount of control over our lives and to decide who has access and who does not? Mozilla Foundation and Jon want to counter just this, and make sure that everybody has a right to be able to create and consume the type of data and processes that they want.

Additionally, Michael Henrietty’s project Common Voice allows people to build their own voice database, literally just people talking in their natural environments. Over the course of one summer, he created thousands of hours of this content, providing us with much larger diversity in the kind of

data that can be used for voice responsive services. This is very much about communities taking control of the technology and being able to build with it. **But if we let the biggest shopkeeper of the world, that can actually buy the most grain and most seed, while also controlling the most powerful AI, and only answerable to one man, what can it mean? What could we do about that, to ensure that we don't have this monopoly of control at a level we have never seen in human existence?**

The need for more varied data also brings to the fore the question of the tools used to collect data and the need to democratise them. Shannon's work also looks at empowering communities and gathering data by using tools or improvising them. When the 2010 BP oil spill happened in the Gulf of Mexico, it coincided with the rise in popularity of crowdsourcing. This piqued Shannon's interest. One of those things that Shannon noticed immediately was that whilst asking people to use digital materials to report back information, they didn't have adequate ways to return that information to the people reporting it in a way that was usable to them.

Based on this observation, Shannon took a very different direction in her work and started PublicLAB. The first project that they worked on was launching massive red balloons and kites about 3,000 feet in the air with really simple point-and-shoot cameras connected to them – community satellites, if you will - to capture what was happening during the BP oil spill from a very different perspective than from the corporation, contractors, government, and even media sources. It led to 200,000 images being captured by 300+ engaged people whilst mapping 100 miles of coastline. And a very different, community-driven narrative appeared. How does one empower a community if the means to collect data that is not accessible? Typical environmental monitoring equipment, specifically for research institutions can cost thousands of dollars. Shannon's work really questions

Balloon Mapping by PublicLAB
Image Courtesy: Nate Dappen/CROWD & CLOUD, crowdandcloud.org

the idea of who owns information and who owns the means to be involved in doing scientific studies. PublicLAB was created as a space where it wasn't just the PhDs who could walk in and be the experts but was also the people who understood the ecosystem of the places that we were asking questions about.

How we can create collisions that will lead to new approaches to the environmental and scientific questions that we have? And how do we make room for other people? For a truly community engaged project, we can't come in as the experts with all the answers. What they can you do to create room for others as you become expert in your own field?

Shannon spoke about the need to be work across a spectrum of means, from using simple analog technology, to conduct community engagements, to educate community members, to potentially indicate, say, some environmental issue that needs a further study to doing environmental management, all the way to potentially changing regulations and enforcing them.

Although we talk about technology, sometimes the intervention required is much simpler. Shannon shared her experience working with a community in California fighting against a landfill expansion. There was a lot of data already available, but the chief problem the community was facing was language: half the community were primarily English-speaking whites and the other half primarily were Spanish-speaking migrant workers. It took a workshop where they flew balloons together for them to unite them on this subject. It was a means to start doing better community engagement.

On the very far end of this spectrum, going back to Louisiana, there was a group of people in a community next to a coal facility attempting to find

a place to capture images of coal being dumped from a conveyor belt into the Mississippi river. They used Shannon's kite approach to capture the necessary images, which led to an environmental law clinic getting involved and eventually regulatory and enforcement change. This spectrum shows how we can think about the process of what constitutes appropriate technology and data for all of these varied situations. **What about small or local data? Do we really need elaborate technology with law enforcement being the endgame? What constitutes appropriate action and who decides that? Is technology the answer?**

Beyond these are the questions of who takes responsibility. Between users, businesses, and governments, who ensures protection? And how can we nurture a culture of responsibility and self-monitoring, changing the prevalent philosophy of fail and fail fast as a way to learn that leaves a lot of room for irresponsible and risky behaviour?

Most of the time if the solutions are centred on the community rather than technology, they lead us to a more sustainable future. But some of these answers lie beyond market-centred, profit-driven systems that we live in and take for granted. Over the last two decades, some of the panellists' work in the space of digital technology started off with an optimistic, technology-can-solve-the-world enthusiasm. But with time, the realisation emerged that the opportunities come with a lot of responsibility and being reckless can lead to failures – or worse, create larger problems.

A lot of Romit's work has seen the shift from approaching problems with technology as the answer, to evaluating what technology can do and then buffering it accordingly so that it can actually be used by the people it is intended for. Romit's shifting view from the seductive power of technology to understanding how it can impact matters like empowerment

Khadi Weaving in Melkote, Karnataka

and sustainability has led to a transition in how he perceives the value of technology, particularly when one keeps communities, and their collective needs and interests, at the centre of things. As a part of a Mozilla Foundation commissioned study on decentralisation, Romit visited Melkote, a rural town in South India to understand what he could learn about decentralised system of production. What he actually ended up learning about was how you can create a truly empowered community, not by focusing on profit but rather on what is of value to a community and letting that lead the way.

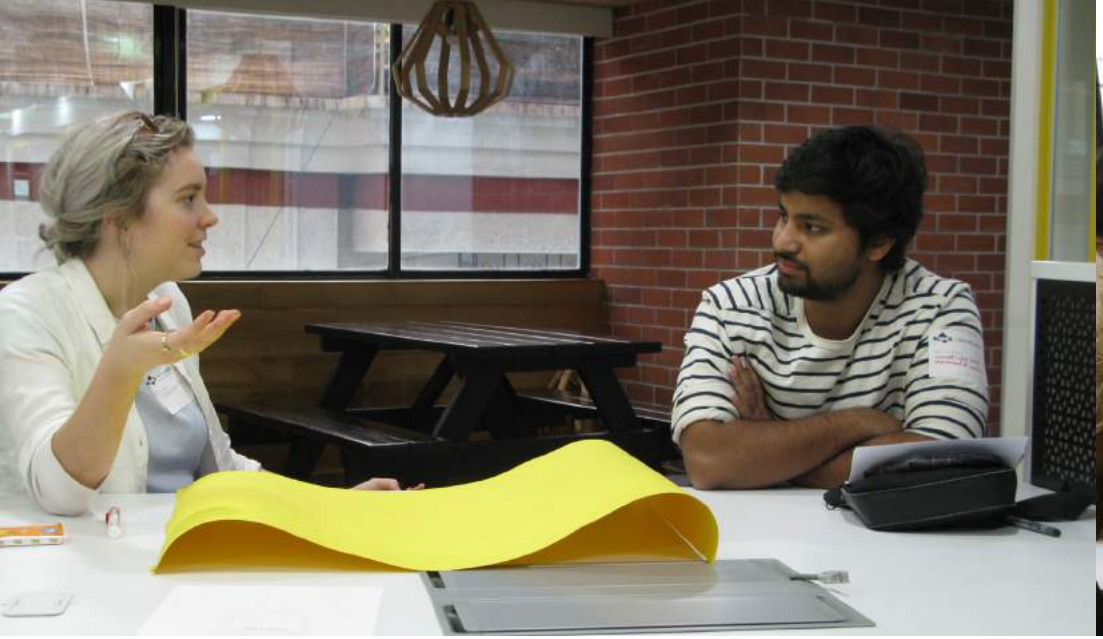
Melkote used to be well known for handloom *khadi* weaving, and at the time of Romit's visit a Gandhian family was trying to revive it. What they did was to gather all the young people in the village and checked what it would take to keep them in the village. They identified what this population needed in terms of income and then used this figure to extrapolate how much money the unit needed to generate, which in turn allowed them to calculate how much khadi cloth would need to be woven. Interestingly, once it was operational, the youth working for it came back wanting to work double shifts to produce more khadi in order to increase profits. And they were reminded of the conversation that they had had before about the amount that they themselves had suggested. You can make more money but what are you going to do with it if you have to work two shifts? That was an eye-opener: the idea that an organisation could go against the motive of profit. In fact it went against everything that we assume – that one should want and chase more, even if it means moving to a city and living in terrible conditions. It takes courage to turn this around and run something to keep people in villages and still not be motivated by profit. It takes courage to swim against the tide.

Body as Sensor

Workshop facilitators
Shannon Dosemagen and Jon Rogers

In June 2017, Mozilla's Open IoT (Internet of Things) Studio[1] brought together a group of people from different sectors to explore the ethical underpinnings and inner workings of voice IoT. One of the strains coming from this gathering was an ongoing conversation from a term, *body as sensor*, which Shannon used in a short introduction to her work at Public Lab on the first day. During November 2017, we had the opportunity to build out and test hypotheses around the idea of body as sensor and [voice] IoT when we conceptualized a workshop in Bangalore, India for an Unbox event.

[1] https://wiki.mozilla.org/Open_IoT



We used this workshop to test the thesis of our body being the most fundamental sensor and to explore how our bodies relate to technologies in a more human way. In framing the workshop, we wanted to understand our relationship to our bodies through shared and networked technology and to look at opportunities, while also seeking to understand the responsibilities that come with this type of connection. An additional strain we identified was looking at ways of protecting people from invasive use of intrusive technologies, ensuring people's privacy over the way machines are increasingly capable of gathering and interpreting data in ever more invisible and remote ways. Given that context is everything, we wanted to look at this from as many social and cultural perspectives as possible.

Context

Working with people who neighbor industrial facilities (oil refining in the case of Shannon's experience), tools of choice included paper and pen, photographs, and clippings from newspapers collected over years that provided narratives of ongoing, long-term scenarios of living in uneven power dynamics, which create polluted communities. Residents relied on their senses, knowing the smell of sweet almond and rotten eggs, which pointed to Volatile Organic Compounds (VOCs), benzene and hydrogen sulfide, in the air. As Nick Shapiro, a colleague and collaborator of Shannon's who has tracked FEMA trailers and indoor air quality, wrote in *Attuning to the Chemosphere* [2], many times the first sign of changes to our environments and personal health come from a "sensorial skewing" (Shapiro, 2015: 368). These early experiences with community monitoring where the body is our first form of environmental sensor and analog

[2] Shapiro, Nick. 2015. Attuning to the Chemosphere: Domestic Formaldehyde, Bodily Reasoning, and the Chemical Sublime. In Cultural Anthropology, Vol 30, Issue 3, pp. 368-393

monitoring tools prompt deeper understanding and narrative development of environment and health issues, have become embedded values in the way Shannon approaches her work.

Jon's perspective is that we need to start looking at the real stories behind the realities of a highly profit-driven corporate Internet that's manifested itself in the IoT. When you buy a fitness tracker for example, do you really think that Nike cares about your health? Or do they care about selling training shoes? Is a shoe-salesman going to be the person you want to trust your personal healthcare and well-being to? We're increasingly seeing a highly corporate take-over of incredibly powerful technologies. Amazon, Apple, and Google are buying up companies that collect or interpret data about human bodies at an astonishing rate. Face recognition systems are commonplace - which moves the threat of automated constant mass surveillance from a theoretical problem to a practical problem. Whether you are shopping[3] , boarding a plane[4] , or turning on your TV[5] , the odds are that a remote AI is identifying you and linking you to data about you.

This is a landscape that is increasingly being dominated by Data Brokers who trade your personal data to the large corporations without your knowledge. This world where 'data is the new oil' is celebrated rather than castigated needs to be challenged. The place to start to challenge this is at the source of design ideas.

[3] https://www.theguardian.com/cities/2016/mar/03/revealed`-facial-recognition-software-infiltrating-cities-saks-toronto

[4] https://www.ft.com/content/da415b5a-10b7-11e7-b030-768954394623

[5] http://www.samsung.com/au/support/skp/FAQ/801466

Goals of the Workshop

- To generate new thinking and reflections on our bodies in relationship to technology;
- To not just think about AI and big data, but to think holistically;
- To have an informed critique of future possibilities and responsibilities;
- To have some thoughts on future directions. In an increasingly digitized world, how can the concept of using our human senses integrate;
- An experience for workshop participants built on curiosity

Suggested Workshop Framework

Minutes	What we're doing	Assets we will need
0-20	**Welcome and introductions** • History of how and why we personally and collaboratively started thinking about this topic. • Showed a video about the multiple sides of voice IoT and potential ethical implications, • Prefaced the concept of "body as sensor" in the context of this workshop.	**Ice-breaker** • Draw the person next to you for 2 minutes. Switch the paper and the person who was drawn adds one detail that is personal-- physical or otherwise.
20-35	**Mindfulness exercise** • 5 min: find a space and for 5 minutes think about your body. • 5 min: For the next 5 minutes write down what you experienced-- smells, sounds, what you touched, perhaps a taste. Is there something different than what you're normally used to? A new smell? A new feeling? You can use the workshop "people paper" and do what you want with it or visually make your own notes. • 5 min: Share with a partner in the room.	• An empty space (in your mind) and a place to retreat to.

Minutes	What we're doing	Assets we will need
35-75	**The body as a sensor** • Get into groups of 4 (2 pairs put together). • Reflect on your own bodies and the current state of both consumer products and the potential of emerging technologies. • Develop ideas and narratives that draw out the notion of the body as a sensor. Talk about narratives beyond fitness and consumer activities. There are surely many more ways to harness knowledge from our bodies. • Part one (first 20 minutes): explore the body in relationship to itself and technology: • 15 minutes activity • 5 minutes group share • Part two (next 20 minutes): explore connected bodies and what this means for connected communities of bodies: • 15 minutes activity • 5 minutes group share	• Full range of printed assets (available from Mozilla for workshops): • Bodies • World map • Ideas sheets • etc
75-90	**Work by yourself to reflect on personal practice.** • Personal reflections on next steps • what would you like to take forward. What might you take into your own design practice?	• Share these as post-it notes (or paper) on a wall.
	Closing comments and reflections on the workshop • Focus on your group process and your personal process. • What senses did you bring into the process? What weren't you sensing before that did or could influence your design? • End with 2 minutes silence/mindfulness in the group setting.	

During the workshop, we included an additional portion, detailed on the next page, but received feedback that there was already a lot packed into the two hours; the thinking being that this is a portion that could be cut in the future, bringing in the context and conversation to other parts of the workshop.

Minutes	What we're doing	Assets we will need
30	**Deconstructing the 'voices' of consumer products that harness our bodies as sensors.** • Discuss where "10,000 steps" and Alexa's "What kind of music would you like to listen to?" have come from-- is it simply to tell us we've met our goals/introduce us to new music or does it get us walking so sales of training shoes rise and Spotify sales soar? Or both? • Pick one of these objects or an object of your choice and do the following: First 20 minutes: Break into pairs and deconstruct a product of your choice • What are things really saying? • Technology can amplify the social power of computing, opportunities to do good are incredible, but also are up for exploitations. Consider this in your product. What does it look like? Final 10 minutes: Share back	Ideas sheets + speech bubbles

Reflections on the Workshop

The initial exercise and introduction was developed to introduce participants to each other in a visual manner that prompted people to think about body and identity.

During the section of the workshop we would potentially cut in future iterations, participants conceptualized several objects people wanted to redesign across very different topics: online payment systems in India, a different way to develop disability certificates in India, comparing liquids ingested into the body with the liquids released in order to use the body as an internal scanner, and 3D printing of both food and organs.

During the time when participants were asked to focus on personal mindfulness, workshop participants reflected on the sounds (many noting the constant horns and street sounds as engulfing their full sensory experience), coldness and the change of temperature from outside to inside. Coming back together, small groups created rapid designs that integrated shared and personal sensory experiences into voice IoT products.

Conclusion

The workshop was a first attempt to explore the practicalities of designing for the body as a sensor. It raised a number of directions and considerations for future work, that perhaps we should not just be looking at the body as a sensor, but also as scanner and as a shield. It's way beyond our knowledge to know the scientific possibilities of some of these things - for example turning the body into a scanner by measuring the change in things as they pass through our bodies. In itself this is not anything particularly new, as we've had body scanners as medical equipment for a long time; more than that, what we're talking about is the domestication of medical equipment (e.g., taking the highly medicalised technology equipment we currently have

into the home appliance and wearable space.) It could radically transform our relationship to personal health and our bodies, whilst also raising so many questions about trust and security in relationship to data; issues that we know we have to face, and not just here, but for the industry as a whole. It could be that through starting to look directly at the highly personal relationship we have to our bodies, that data and technology can provide the desperately need correction in the current status quo. The big question remains that, if we are to place our bodies first, how do we do this in a way that also places ourselves first? Our bodies are not biological vessels for electronic data, they are the people that we are.

Prototyping Voice Interactions

Workshop facilitators
Martin Skelly & Pete Thomas

A network of Internet-connected microphones is growing. The market calls them "intelligent home assistants" but they are fundamentally microphones that connect to the Internet. The ethics of these discrete 'home assistants' is complex: it's lead by corporations and markets of scale; driven by the needs and wants of Silicon Valley but exported globally. Current voice Internet interactions aren't healthy, customisable, local, or diverse and we are moving towards a siloed ecosystem at pace.

We ran an open workshop session that brought together fifteen participants exploring the voice-enabled Internet in Bangalore as part of the Unbox event. The scope was to explore local voices and interactions in the city, and we worked through a four-stage provocative prototyping design process. During the workshop

Provocative Prototyping Workshop

we came up with some principles of provocative prototypes: they should be thought-provoking, question assumptions, ambiguous, nearly real but not too practical, and polarise points of view, and should not be predicted, but imagined in many ways to be prepared for what may come.

The first step was to develop scenarios and personas for local voices in Bangalore. Participants working in four small groups came up with character personas, design scenarios, and concept ideas. Each group then developed a short storyboard narrative of their idea based on a specific local user and design scenario. The ideas were diverse. For example, a concept for a street assistant that encouraged people to take more exercise, a concept that encouraged lonely citizens to take some exercise, and a mirror that could detect truth, lies, and humbleness.

Three themes emerged while prototyping the voice-enabled Internet in this local context:

01 **Local voices**

Lots of discussion focused on users who spoke languages and dialects that aren't currently catered to in voice, illiterate users, and technology skeptics. We also discussed at length bespoke use cases and individual requirements, and how this can work alongside the mass market one-size-fits-all design approach.

02 **Empathy in voice**

We discussed voice in public spaces and the relevance of voice-enabled Internet for streets, parks, and markets. This lead to concerns about current voice systems understanding context and appropriateness of the time and place of the interaction.

03 **Customisation**

Looking at voice-enabled Internet and human ecologies lead to a discussion about closed systems and how these currently "invisible" technologies could be adopted, modified, hacked, and recycled into developing interfaces and services for a fast changing marketplace.

To enable new ideas for voice interactions with the Internet we have to root ourselves in new contexts, design from new perspectives, and look at problems from beyond our own cultural outlook.

Design Learnings from Decentralized Approaches

Pete Thomas

I recently spent a week in India, delivering a workshop as part of an Unbox event in Bangalore before travelling to the BR Hills region in Karnataka to spend time with the Soliga tribal community.

As a first-time visitor from the UK to India, I was surprised by the familiarity of Bangalore. Beyond the obvious cultural and aesthetic differences, Bangalore is a recognisable global mega city, albeit one where the urban ecology is fragile. The infrastructure and services struggle to cope with the city's rapid growth and effect on the natural environment for which the city was famed have been devastating [1].

[1] https://scroll.in/article/847397/how-bangalore-went-from-being-indias-most-liveable-city-to-a-dystopia-in-the-making


(L) BR Hills, (R) A foaming toxic lake in Bangalore

According to a recent UN report [2] approximately 7% of the global population (12% of the urban population) or roughly 500 million people, are spread across 31 such mega cities: cities with a population of over 10 million people. The UN predicts that by 2030 41 mega cities will be home to 730 million people or 8.7% of the world's population. The majority of the existing mega cities and all of the anticipated mega cities are situated in the Global South, with the ten new mega cities all located in developing countries.

The contrast between this mega city and the BR Hills region couldn't have been stronger, and this was the point of the visit: to consider, in the context of future human ecologies, what could be learned from decentralised communities, whether parallels can be drawn between them and a decentralised Internet, and the role of this in contributing to a Healthy Internet.

Although this community represents an alternative model to the megacity, a model more in-tune with the natural ecology of the BR hills, it is a model at risk from the growth of Bangalore and other nearby cities, and it is hard not to wonder about the future of these people and their way of life. The anthropocentric urban ecology of the city is attractive to people in rural areas of developing countries as it offers the potential for access to a range of services, facilities, and opportunities that offer the potential for a demonstrably better way of life.

However as Alejandro Aravena [3], the 2016 winner of the Pritzker Architecture

[2] http://wcr.unhabitat.org/

[3] https://www.theguardian.com/cities/2016/oct/19/two-billion-more-people-live-cities-alejandro-aravena-habitat-3

Prize points out, to support the predicted population growth in cities humanely, “we would need to build a city of one million people every week, spending no more than $10,000 per family. If we don’t solve this equation, it’s not that people will stop coming to cities; they will still come, but they will live in awful conditions.”

The future of both ecologies, Bangalore’s and the BR Hills’, whilst radically different are inexorably intertwined. In the context of this visit I wanted to consider what the role of the designer is, or can be, in relation to a discussion on future human ecologies.

Our understanding of design is growing increasingly broad and inclusive, whilst simultaneously demanding greater granularity and specificity. When we talk about design we don’t mean just one thing; we mean many, and these disparate branches of design each have their own distinct nuance, behaviours, and language.

The rise in popularity of design, specifically in design thinking as a methodology or process abstracted from a process of making, and the subsequent commercialisation of this approach, sees design increasingly perceived as a strategic tool that can be applied across disciplines. Indeed, the language that we use to talk about design is increasingly the language that we use to talk about design thinking rather than the language we use to talk about other branches of the discipline such as engineering or typography.

What underpins design thinking, and indeed all design practice, is a skill for anticipating future needs and responding to them, and perhaps more importantly than that, a skill of wanting to make things better, of incrementally improving upon on these responses.

Illustration by
Anisha Thampy

In this context, one of the earliest pieces of evidence we have of design is the stone chopping tool found in the Olduvai Gorge in Tanzania [4]. At between 1.8 and 2 million years old, it is, according to Neil McGregor, then Director of the British Museum, "one of the earliest things that humans ever consciously made". McGregor goes on to say that it represents, "the moment at which we became distinctly smarter, with an impulse not just to make things but to imagine how we could make things 'better'... it is making things that makes us human".

I would argue that it's not making things that makes us human, but designing them. Design occupies much the same role now as it did in Tanzania over a million years ago. Alice Rawsthorn describes design's role as that of, "an agent of change, which can help us to make sense of what is happening around us, and to turn it to our advantage".

If we accept that design is a fundamental part of what makes us human, a capability that we are born with rather than acquire, then where does that leave designers (i.e., those who have trained and honed their latent design capacity into a particular set of design skills)?

It creates a responsibility for designers to recognise that we are not alone in the skills we possess, merely more aware of them, more capable of identifying when we use them, and perhaps more practiced in applying them.

As designers, we also need to be able to reconcile a desire for excellence and expertise within our diverse disciplines whilst recognising that only by

[4] https://www.bbc.co.uk/programmes/b00pwn7m

working as a part of communities and alongside other practitioners can we really engage with, and begin to understand, the tacit knowledge often required to meaningfully anticipate and respond to our future needs.

In thinking about this, I was reminded of the work of Antionette Carroll and the Creative Reaction Lab [5] whose work, "starts from the premise that design's greatest value is in exposing the invisible mechanisms of inequality, many of which were by design themselves". The lab espouses a straightforward approach of "creative problem solving" removing some of the barriers to an equitable approach that we can create through the use of specialised language.

The lab's approach to Equity-Centered Community Design is a response to some of the failings they have identified with the practice of design thinking: "We have noticed some people that use design thinking are often separate from the communities they are trying to understand: they go into the community to observe and then leave to create a solution. On the other hand, Equity-Centered Community Design focuses on dismantling systemic oppression and creating solutions to achieve equity for all."

There are many reasons why equity matters and the Creative Reaction Lab explores this in some depth, but moving beyond the very clear morality and ethics of justness, equity also matters, particularly in the context of human ecology, because diversity matters. As our cities grow ever bigger and more and more people live in urban environments, it matters that we preserve, respect, celebrate, and protect different ways of life, different ways of being, different viewpoints, different ecologies. It matters that we enable a diverse

[5] https://www.fastcodesign.com/3068235/want-to-fight-inequality-forget-design-thinking

The team at BR Hills

range of people to play a part in anticipating and imagining how we could make things "better".

As humans, our urge is to imagine new solutions and scenarios. As designers, we are trained to fulfil this role and to celebrate our abilities to do so, but we rarely understand the full implications of these actions.

This viewpoint underpins much of Victor Papanek's "The Green Imperative" in which he states, "A world view based on recognising how little we know might not only protect us from devastating mistakes in the future, but might also require letting go of the arrogance that seems such a strong element in the personality of designers and architects". The idea of letting go of ego, of demonstrating empathy and embracing the knowledge of others, was a key thread connecting the diverse range of speakers and participants at the Unbox Future of Human Ecologies event.

Another thread, echoing the work of the Creative Reaction Lab was the idea of the designer as responsible citizen and specifically design as a tool to facilitate agency, for example in enabling communities to monitor the pollution in their environment or in creating the capacity for dialogue between generations to contextualise the fast pace of urban change.

What seemed particularly evident in all of the work, but perhaps most tangibly in that of Vishwanath Srikantaiah and Bas Raijmakers, was the role that design can play in helping to enable community action to translate into political intervention. In many cases this was simply a process of making visible what had previously been invisible, or hard to see, or hard to understand: providing a context to encourage and enable political dialogue.

All of the projects discussed at the event were local in scale, designed around and in partnership with local communities. They were, in a sense, decentralised and, according to Papanek, this approach has great value in mitigating against the unintended implications of our design actions, particularly when responding to global issues:
"The problems may be world-wide, yet they will yield only to decentralized, human-scale and local intervention. This is partly due to the fact that we are still unable to assess the impact of what we do as designers and as consumers – only if our intrusions are modest in scale are the chances of major miscalculations reassuringly remote."

The future of the fragile human ecologies of the BR Hills and Bangalore are impossible to predict, but they can be anticipated and imagined. In this context the role of the designer is clear: to facilitate design as an activity for all people to engage with in order to deliver equitable solutions at local scale that deliver meaningful and positive change.

The Banyan Tree

Sarah Allen

I first met the Quicksand team at MozFest 2015 where they created a spatial installation called the Banyan Tree. They aspired to, "collectively explore participants' wishes for the future of a connected village [by creating] a space that symbolizes a village tree that becomes an open space to share thoughts, exchange wishes, and collaborate with someone on making an idea."

The team arrived at the venue with beautifully hand-dyed material that looped over and draped to create a sheltered area where people could host talks, drink tea, and share stories. I loved this idea of creating a new, unexpected space that acknowledged tradition while mixing it with the new to ensure there was room for shared ideas and creativity.

Image Courtesy: Paul Clarke

MozFest understands the power of connecting people. It is these connections and relationships that keep the Internet healthy, a task that has never been more vital. The festival is co-designed by a network of technologists, educators, artists, and activists who curate a narrative through sessions submitted from around the world. These sessions are a glimpse into local issues, experiences, and solutions. They are a way for people of all ages and expertise to ask for help and problem solve, while making lasting connections.

After MozFest 2015 came to a close, what struck me was how the Banyan Tree symbolised the environment we seek to create with the festival itself: a safe meeting place where participants can anchor themselves, their conversations, and their work.

The Banyan Tree started a great collaboration between Quicksand and MozFest, showing us our shared experiences, hopes, and desires for our own communities. We both seek to create banyan trees for others, so that they can sit, listen, and share visions for their own healthy Internet, as well as to think about and work with futures, with the aim to eventually translate these into tools and activities.

The MozFest team



Firangi
Chilli





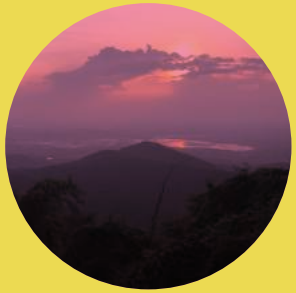
LOWE'S









UnBox is a multi-disciplinary, collaborative platform for experiential learning that explores new and emerging cultural contexts, while being rooted in people-centric approaches. Founded as a festival in India in 2011, Unbox has prompted new thought, work and partnerships at the intersection of design, art, culture, social change and enterprise.

Over the past seven years, the festival has grown into a widely recognized platform for inspiration, dialogue and hands-on action. UnBox is anchored by Quicksand, a design research & innovation consultancy and has an active network of advisors and friends from India and abroad.

www.unboxfestival.com
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