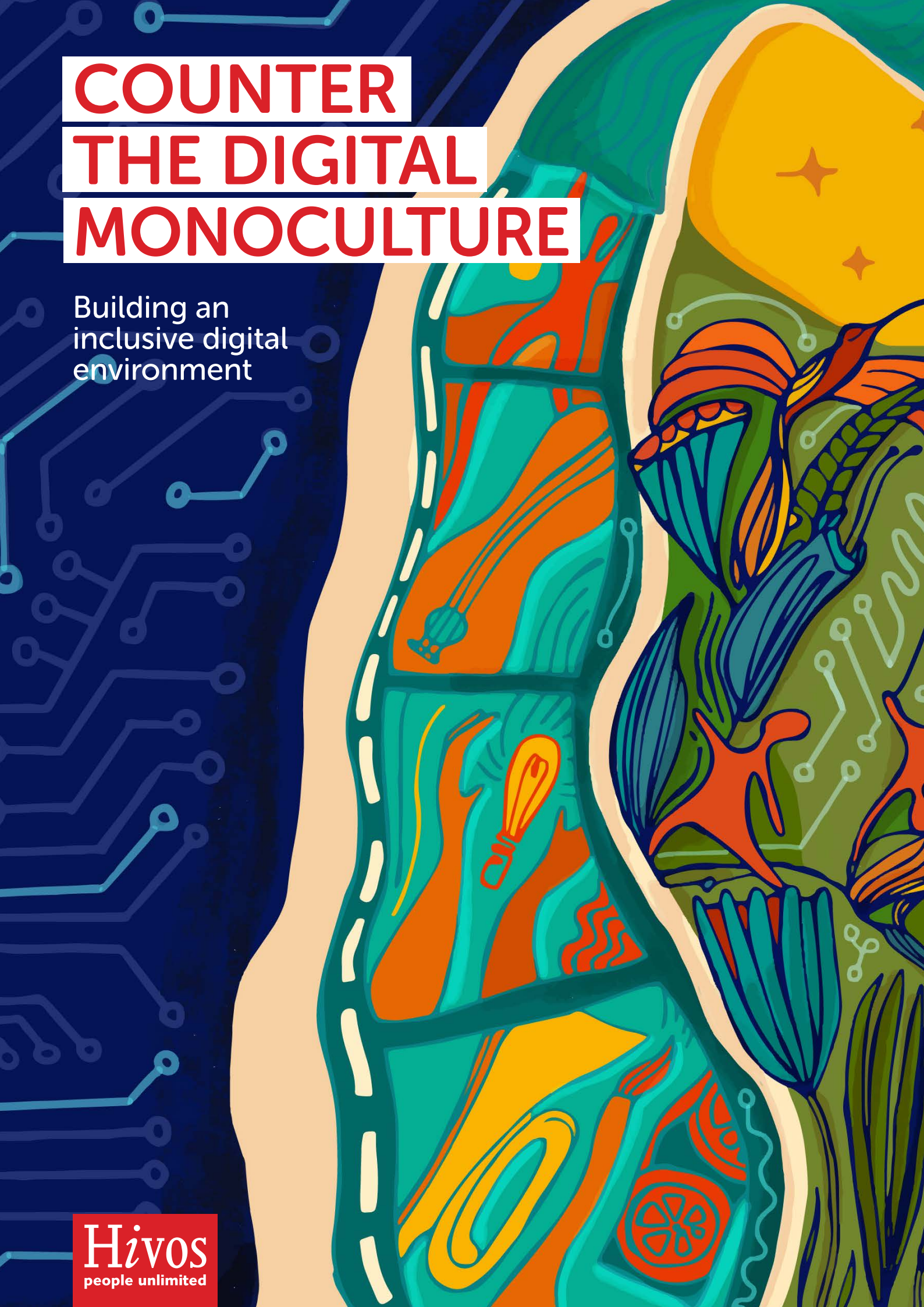
COUNTER THE DIGITAL MONOCULTURE

Building an inclusive digital environment



Hivos
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BUILDING AN INCLUSIVE DIGITAL ENVIRONMENT

March 2022

Introduction

The early days of the internet were characterized by idealistic ambitions: it would be a space of extraordinary freedom beyond the constraints of money or politics. But 25 years later, the situation is very different. Social media platforms such as YouTube, Instagram, Twitter, and Facebook exercise more control over the way we access information and share knowledge than any single country. They regulate and police the speech of millions of people and allow unprecedented levels of disinformation, hate speech and violence to proliferate. In the regions where Hivos works, for example, these platforms are enabling ever more polarization and online sexual abuse, and deftly facilitate disinformation campaigns that target LGBTQI+ communities and those who defend their rights.

Greed and captivation

One of the root causes behind this is the ad-driven business models of these tech companies. Their platforms are designed to gamify our behavior, encourage consumption, and ensure that we stay engaged as long as possible. By prioritizing user attention and growth, they have cultivated a uniform digital space dominated by clickbait, branded content, and influencer behavior. Algorithms manage the public debate and often amplify racism, sexism, ableism and homophobia, creating an attention economy that works against marginalized communities. Big Tech is transforming the digital public sphere into a digital monoculture, and we need to fight back against this homogenization and commodification of the digital public sphere.

An alternative digital sphere

Hivos works towards a vibrant and diverse digital public sphere where people can come together to freely discuss and identify societal problems and influence political action. We support people who imagine and push for just and inclusive alternatives to the status quo. They work across civil society, academia, in the media and the arts. An example of our work is the Digital Defenders Partnership, which promotes an open internet, free from threats to expression, association, assembly, privacy, and other fundamental rights. Another example is the Resource of

Open Minds and its Digital Earth fellowship which supports sci-fi writers, filmmakers, artists and futurists who imagine more humane digital futures in their documentaries, artwork and research projects.

Countering the digital monoculture

As part of Digital Earth, we interviewed seven future-oriented activists, artists and academics. We asked them, "How can we counter the digital monoculture?" The interviews cover a wide range of topics, from indigenous futurism to afro-feminism, speculative storytelling, and the need for a fossil-free internet. A recurring theme is the importance of amplifying the work of activists, artists, and filmmakers to reach wide audiences with narratives that focus on humane digital futures. Storytelling through film, art and music can involve us all and shake us free from the paralyzing grip of dystopian futures presented as inevitable. Storytelling that interweaves a plurality of voices and knowledge can present a formidable challenge to simplistic narratives that focus on the privileged few.

Hivos sees vital opportunities to support creatives and build alternative digital spaces and activist communities that will stand up to the digital monoculture. They are essential if we want to imagine and work towards a more humane and sustainable digital future.

The interviews have been conducted by Arthur Steiner, Digital Specialist at Hivos and Anna Sejbaek Torp-Pedersen, Editor at Digital Earth in 2021.

If you want to find out more please contact asteiner@hivos.org.

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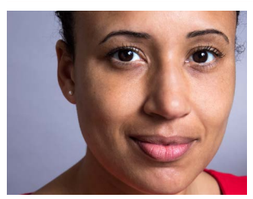

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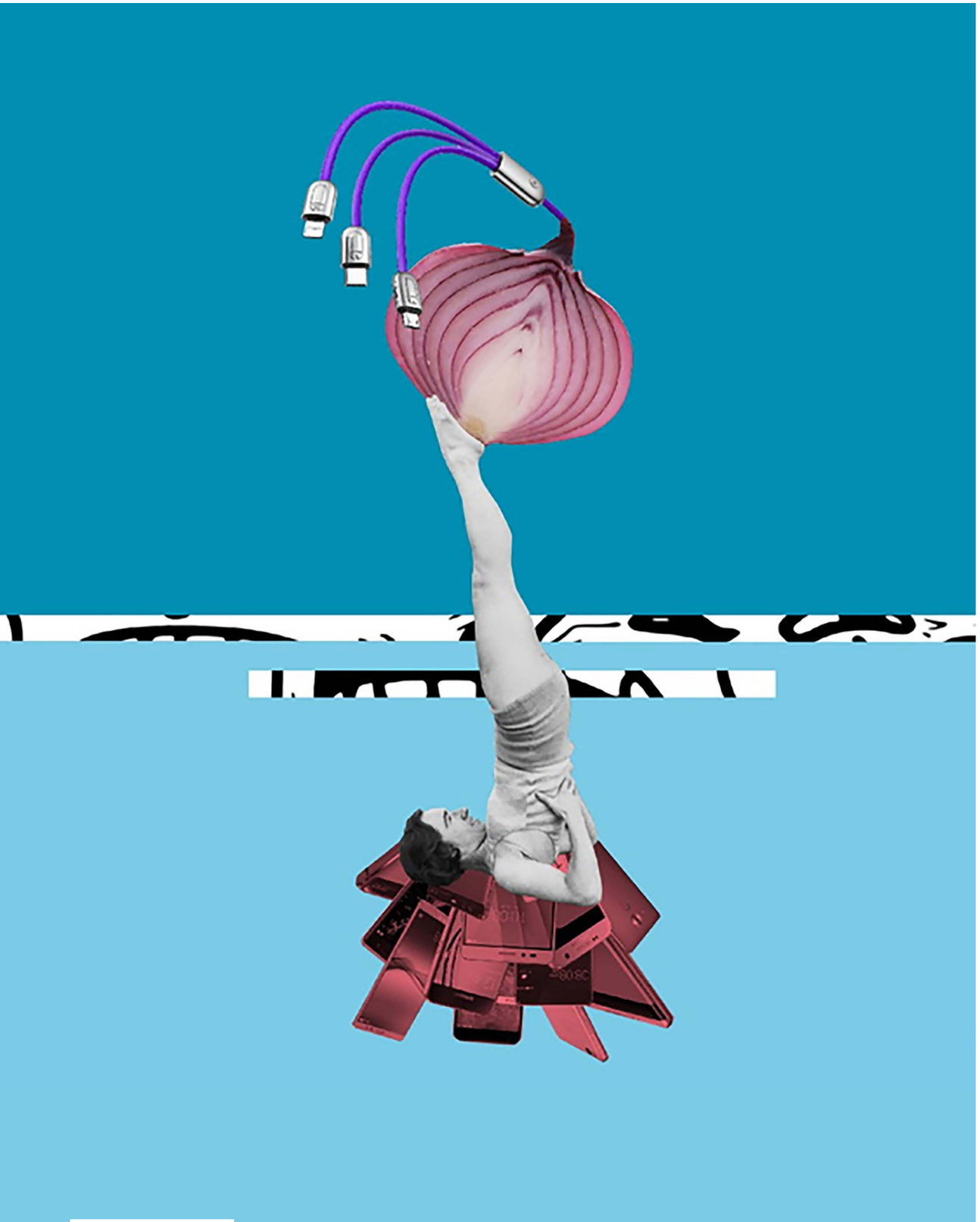


↑ Courtesy Sra Milton

Spideralex

Breaking the Cycle of Hopelessness

Spideralex holds a master degree in sociology and a PhD in economics. She has founded the collective Donestech that explores the relation between gender and technologies developing activist research, documentaries and training. She is also the editor of two volumes about the panorama of technological sovereignty initiatives. She enjoys doing holistic security and speculative fiction workshops. She is part of AnarchaServer, a feminist server.

How did you come to work combining academia and activism that's focused on feminism and technology for social and political transformation?
My academic training is in sociology, social economy, and urban sociology. I have been studying how urban social movements struggle against gentrification, particularly in Barcelona. Barcelona has been a laboratory for gentrification in Europe since the 90s and attracted people that were passionate about urban sociology. This was in the early 2000, when the internet also came around, and I changed from sociology and urbanism to do my PhD on how social movements use and build information and communication technologies (ICT) to fight and organise resistance. I was lucky to be in Barcelona which, at the time, had many hacklabs in squatted social centres where people could come and learn about free technologies and free software.

Currently I do research about the contribution of women and non-binary identities to the development of technologies and hacker culture. I am also involved in setting up workshops and trainings about feminist self-defense in the digital spaces. Right now, we are working on setting up a feminist helpline to provide support to people that are facing gender based violence in digital spaces, or gender based violence is enabled or amplified by ICT. I'm also a part of a feminist server called AnarchaServer where we learn to sysadmin and set up online services for other feminist collectives. And besides that, I'm also part of a community where we have a social lodging cooperative and different projects. During the last 10 years, we have been buying an old textile factory space which we are rehabilitating on our own doing a lot of physical and material work, but at the same time organizing events that relate to free technologies, political appropriation of technologies, and political critical citizenship.

What is your main research question that motivates you in your practice?
It's difficult to summarise in one question, but I think it would be "how can we break the cycle of hopelessness?" In the beginning there was a lot of hope for the empowering potential of these technologies. In the last 15 years, the model has completely changed with the commercialization and centralization of the internet, international surveillance, and the polarization of the users. This has been a big disappointment for activists that really thought that they were now going to have a medium that would support the agenda of social movements and enable political and social transformation; an internet that is going to be changing things.

Now I centre on how to create methodologies to help people to reclaim the power of non-dystopian narratives. So, to train our brains to envision the possibility of imagining and desiring the technologies that we deserve and how to envision and reclaim better futures. The dystopian narratives really took up all the space. With the pandemic – where I have

not been able to do this work – my brain was frozen. So my question is how we can break the cycle of hopelessness?

Staying with the state of hopelessness, how would you characterize that?
This is a philosophical question. We are one of the first generations that feels that we might be the last generation walking on earth. That's something very new in the evolution of humankind. It's heavy and it's something that we don't talk much about.

"For me it is a very straightforward question; if you want to break the digital monoculture you need to break big tech."

And you'll see that big tech is amplifying that state of hopelessness and cultivating it. I'm so mad at big tech. A new disheartening, emerging narrative is that big tech is gonna save us from climate change. That is totally bullshit. It cannot work. Even if they weren't gonna scale all those big technologies, they would not be able to get the minerals they need cause we are not only facing a peak oil situation but a peak everything situation. The circular and recycling economy is broken. So it is clear this greenwashing propaganda is delaying a collective thought process on how we can transition to other types of societies. For me it is a very straightforward question; if you want to break the digital monoculture you need to break big tech. And as Cory Doctorow has explained breaking big monopolies is a slow, legal, boring process

I think that the NGO world and the social transformation of civil society should be at the forefront of reappropriating the political dimensions of technologies. They should question who those technologies are hurting and exploiting from a political and ethical perspective. And by "who" I am referring to humans but also animals and natural ecosystems. These organisations should not assert themselves as passive. We need to do two main things, break down monopolies by law and propel those spaces to have a political and creative appropriation of technologies.

Social justice organizations are struggling to get out of big tech's web. What would you tell those organisations or even people facing the issue of 'de-googling' themselves?
It's a work of patience and a labour of love. If you don't have mental space or time, you're not gonna be able to take some distance and reflect on a different approach. It is always better to have a collective approach to those questions, because it creates social cohesion.

I think that the food sovereignty movement has been really successful in their creative approach to express the need for ecological, slow, and fairly produced food. They made people focus on the positive values of food consumption and think critically around them. We really need to bring these elements to technology and start asking what kind of technologies we are consuming.

"We really need to bring these elements to technology and start asking what kind of technologies we are consuming."

This is also important when looking at how technology is produced. Who are the labourers, where are the minerals extracted? This chain of production is propelling so much violence, generally against women, kids and natural ecosystems. It is incredible how we carefully label whether or not our food is fair trade, and not apply this to the chain of technologies we are using.

I don't necessarily have a solution, I don't have a computer that is gonna last forever and that doesn't contaminate like its trade. But I want a computer that is produced in good conditions, can be repaired and recycled forever.

↑ This image depicts the women from the Harvard Observatory, under the direction of Edward Charles Pickering (1877 to 1919) who had a number of women working as skilled workers to process astronomical data. Harvard was the first such institution to hire women to do this type of work. Among these women were Williamina Fleming, Annie Jump Cannon, Henrietta Swan Leavitt, and Antonia Maury. Although these women started primarily as calculators, they often rose to contribute to the astronomical field, and even publish in their own names. This staff came to be known as the Harvard Computers or, more derisively, as "Pickering's Harem". This was an example of what has been identified as the "harem effect" in the history and sociology of science.

The problem right now is that there are less people involved and engaged with the theorisation and activism of the problems of big tech in comparison to the food sovereignty movement.

You have also been looking into online violence against women and cyberfeminism. How can we work with feminist principles to oppose big tech.

What principles are you working with and how do you implement them?
There are a lot of different kinds of feminisms. For me, feminism is everyone having the same rights and opportunities. We should never forget that women have been the most oppressed political subject throughout history. Not just here in Europe, but everywhere. Feminism should be anti-colonial and anti-capitalist and it is a struggle for all women. It also includes the right to opt for any gender identity and sexual orientation.

↑ Courtesy Cooperativa Kéfir

In relation to technology, investigating its HerStory is important. Women and non-cis people have been apart of it since its beginning, yet they have not been written into the "history" of its development. This is really important because the current narrative gives the impression that tech is a white, male, military enterprise and that women have not participated in the development of technologies. If we don't make this HerStory visible, we won't create the possibility for all people to understand that they are part of it and that this also matters to them.
Also, since 2010, there's been a rise in gender based online violence and harassment. These conditions force many women and feminists collectives to organize and to understand how these new forms of violence and harassment are silencing them and limiting their possibilities to use certain technologies as a medium for their own agenda. And most importantly, how do they push back and resist the detrimental effects of this. Now there's a feminist self-defense in digital spaces. There are lectures, training, workshops, and internet standards and protocols from a feminist perspective. The resistance has created feminist circles and feminist infrastructures.

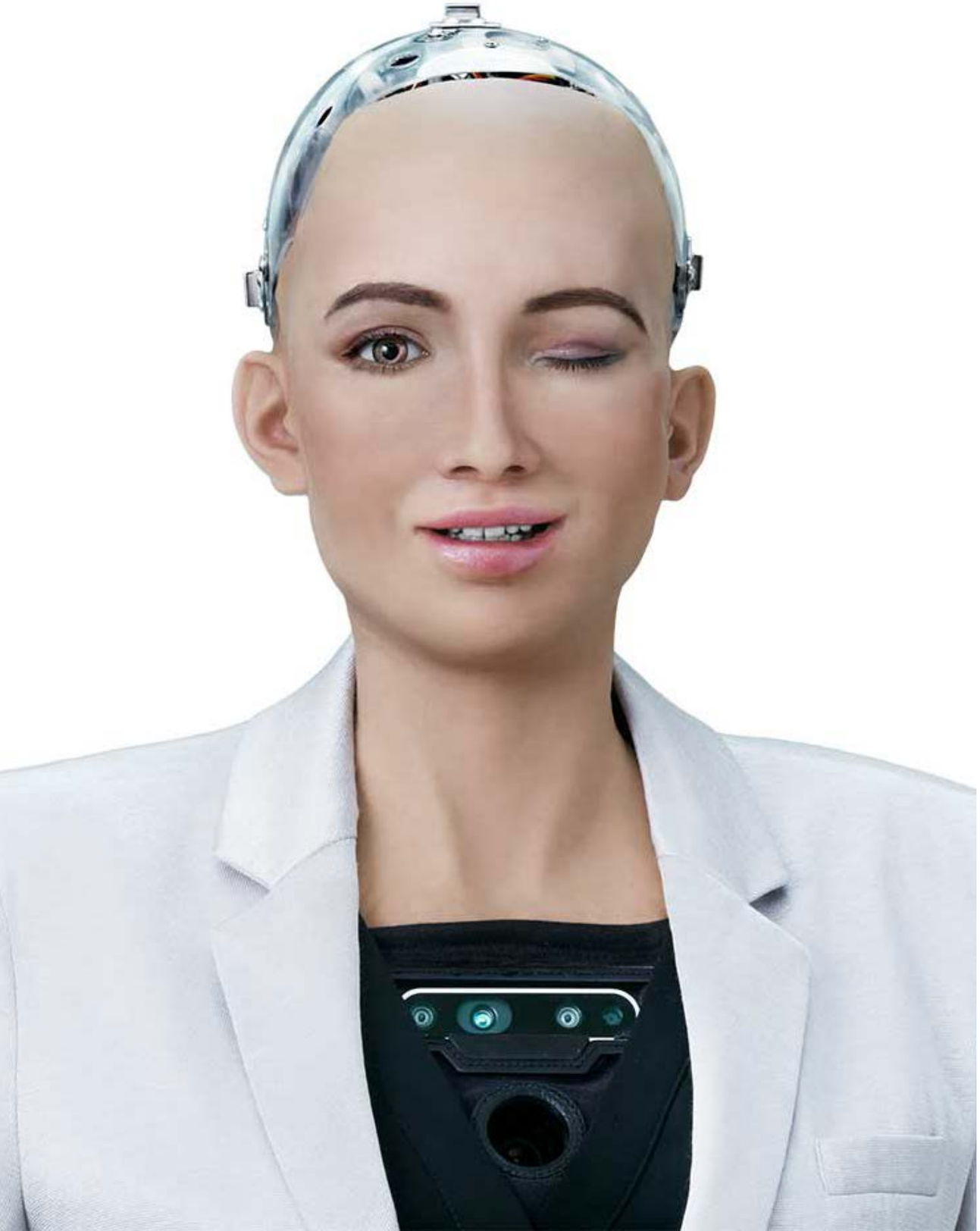
But there's still a big divide between the feminist movements in general. More feminist movements are coming on board in working with the importance to reclaim the digital space. There's a normalization of hate speech and violence on the internet. That's crazy, because this is not the case for street violence. The streets might be violent, but they should not be, and we need to reclaim the street. This is exactly the thought we need on the internet; the possibility of it being a safe space.

Technology enables feminist movements to inform, communicate, create relationships, to document and create memory. The current comercial social media platforms where this work is done are very often created or designed by misogynists. You cannot rely on these to have a human and women's rights

agenda. Many feminist collectives and movements are not seeing the possibility of building and using their own infrastructures in order to do their work in safe spaces. I mean, feminists are already working with so many important and urgent issues, so this work demands some mental space. However, building feminists digital infrastructures is far from a trivial quest, it is crucial to the work we do.

You have worked in depth with speculative fiction. Why is it so important to imagine radically different technological futures and what can we learn from speculative fiction?
Feminist techno-speculative storytelling is fiction and design gestures towards a set of geographies of the imaginary and of their materiality deeply inspired by social justice and political transformation. Walidah Imarisha illustrates this point when she suggests that "whenever we try to envision a world without war, without violence, without prisons, without capitalism, we are engaging in speculative fiction." Doing speculatively is political as it involves one of the multiple ways to re-imagine technological and infrastructural entanglements that shape our world. It also serves to expose technologies and infrastructures that have furthered (neo)colonial processes such as the stealing and erasing of indigenous scientific knowledge and techniques, and the shattering of liberation struggles. By shedding light on these contradictions, doing speculatively also attempts to de-privilege and de-glorify science and technology. De-privileging the assemblage of humans and technology (non-human) echoes the act of making visible and valuing other types of assemblage with the non-human,such as with land, animals and plants. Doing speculatively is infrastructural as it allows for the circulation of ideas, fabulations and dreams among others. It is also about healing and affect. It requires people to care enough about feminist technologies to dream about them in order to better build them. For stories to act as potential agents for transformation, they need caring, appropriate and affective infrastructures to shelter them.

If you would pick one example of a work that you find of particular importance in imagining a radically different future beyond the imperative of the digital monoculture, what would it be?
I would not talk about one artist but the artistic production of cyberfeminist groups and collectives. I try to map those and include it in our repository of collective memories in AnarchaServer, you can visit for instance the cyberfeminist folder in the repository to see what kind of artistic production I am referring to. Another very important source of inspiration is feminist science fiction and afrofuturism, I would invite anybody interested in explorting other non dystopian pathways about other possible realities, technologies, futures, to start there. Enjoy the journey!



Dr Kanta Dihal

The Whiteness of AI

Dr Kanta Dihal is a Senior Research Fellow at the Leverhulme Centre for the Future of Intelligence, University of Cambridge. She leads two research projects, Global AI Narratives and Decolonizing AI, in which she explores intercultural public understanding of artificial intelligence as constructed by fictional and nonfictional narratives. Kanta's work intersects the fields of science communication, literature and science, and science fiction. She has a PhD in science communication from the University of Oxford: in her thesis, 'The Stories of Quantum Physics,' she investigated the communication of conflicting interpretations of quantum physics to adults and children. She is co-editor of the books AI Narratives: A History of Imaginative Thinking About Intelligent Machines (Oxford University Press, 2020) and Imagining AI: How the World Sees Intelligent Machines (Oxford University Press, 2022) and has co-authored a series of papers on AI narratives with Dr Stephen Cave, including 'The Whiteness of AI' (Philosophy and Technology, 2020). You can read more on Dihal's work here.

You have been working extensively over the last years on the intersection of history, popular culture, artificial intelligence, and also critical race theory. How did you arrive at this exciting interdisciplinary work field?
I started off in 2008, as a literature scholar at Leiden University, where I focused on post colonialism. I continued into a research Master's focused on the narratives of scientific topics which led to my PhD at Oxford University in science communication. I focused on the communication of quantum physics and how really difficult topics such as quantum physics are explained to people with no physics background.

Now as a senior researcher at Cambridge, I moved onto AI where I can bring everything together to ask how the stories about complex scientific topics affect different societies differentially related to their status as former colonies.

With my co-author Steven Cave I'm following up on the research that we started with our paper 'The Whiteness of AI' (2020) on the issue of representations of artificial intelligence as ethnically white, and the ideology that is expressed in representations of artificial intelligence in visions of the future, and the people they leave out. Narratives are disproportionately influential on the deployment of AI because it has such a strong narrative history that many other scientific fields do not. So this is a field where my work, having that history of working on narratives of science can make a big difference.

You have a global approach to the topic. How did that happen?
My artificial intelligence research came from initially looking at the narratives that are most prevalent in the US and the UK. So the kind of narratives that are influencing the media stories here in the UK, where

← Sophia is "Hanson Robotics' most advanced human-like robot, Sophia, personifies our dreams for the future of AI. As a unique combination of science, engineering, and artistry, Sophia is simultaneously a human-crafted science fiction character depicting the future of AI and robotics, and a platform for advanced robotics and AI research." Source: https://www.hansonrobotics.com/sophia/

I'm based right now. We just noticed how narrow they were, how they are based on a very small set of narratives; it's always the Terminator or Asimov's laws.

We started thinking about alternatives and looking for visions that weren't just Hollywood. As we went on we decided to properly research this and look at how different parts of the world imagine life with intelligent machines. Because the Hollywood narrative is so strong and is being pushed out to parts of the world that are not the subject of these Hollywood films. So how do these Americanised perceptions clash with local perceptions? Of course, we found lots of alternative narratives that might be much more productive to use in discourse around AI around the world, and a much better alternative to the Terminator.

Could you tell us a bit more about this history of AI narratives?
The history of narratives about intelligent machines is ancient. It goes back to ancient Greece, where the oldest reference that we found was in the Iliad, where the Greek god Hephaestus created artificial women to help him out in his forge. What we've noticed is that these narratives are not only ancient, they have been prevalent and largely unchanged throughout history. Hephaestus and the female servants is a story and theme that continues to recur and still exists in various forms. You can see it now in 21st century depictions like the movie Her, or like the TV series Humans.

Another one that has been around since ancient Ancient Greece, also attributed to Hephaestus, is a creation called Talos, a bronze giant patrolling Crete, and throwing boulders at pirates. In a sense, Talos is the first killer robot and the first artificial autonomous weapon system. In its embodiment as a bronze soldier it has been recurring throughout history through to the present day. We have fictional depictions in the middle ages of bronze knights and then in the 20th and 21st century, we have the Terminator; a killer robot that looks like a human. Again, the human shaped artificial weapon is literally nearly 3000 years old.

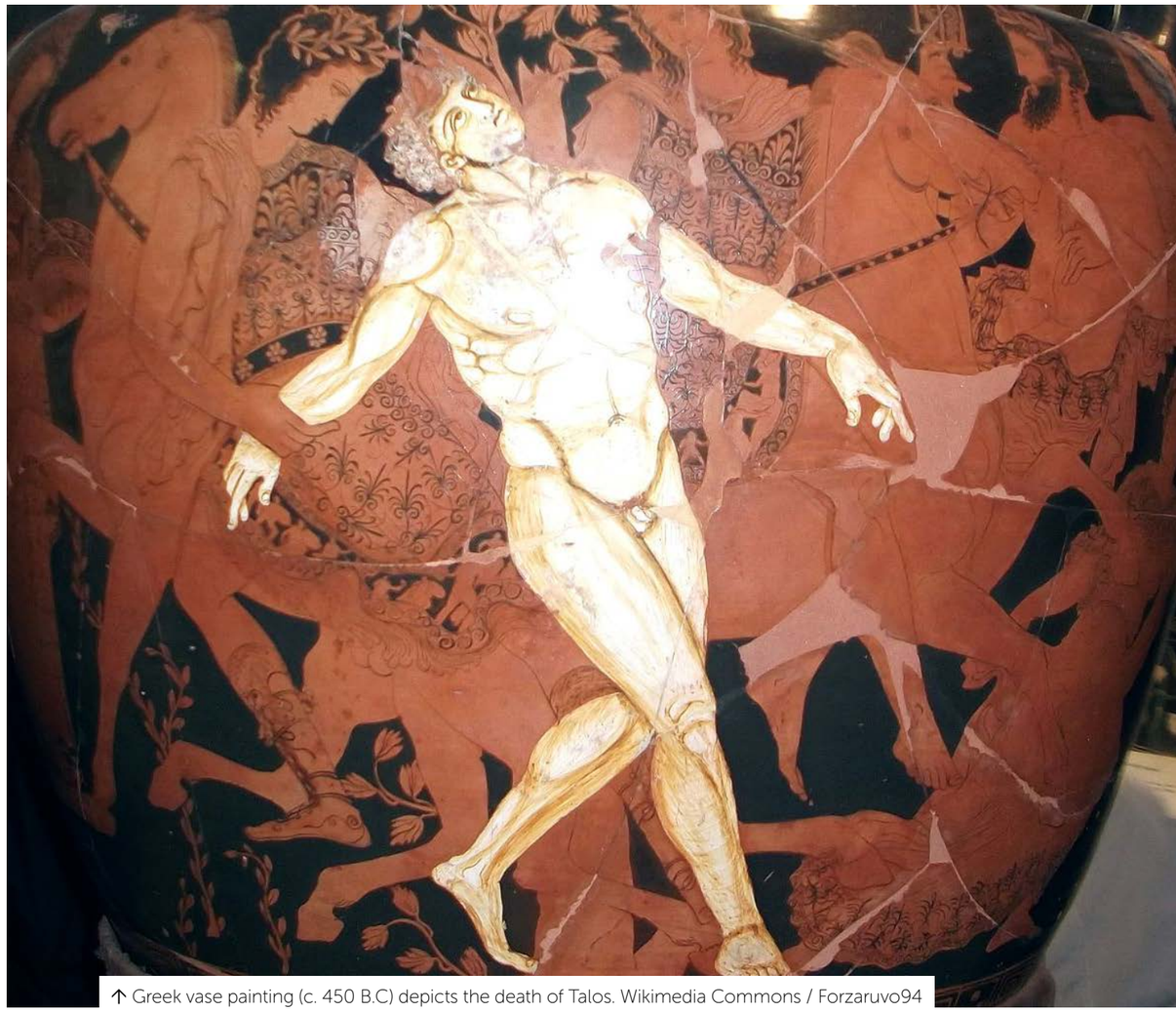
"The human shaped artificial weapon is literally nearly 3000 years old."

Steven Cave and I have identified sort of four utopian or dystopian depictions of artificial intelligence that are recurring throughout history. That history is so old and so largely unchanged, that these narratives influence how artificial intelligence is talked about today.

And what are those four depictions?
So in terms of the 'four hopes', you have hope for immortality, for health – freedom from disease –power, and eventually things like mind uploading, such as Cyborg ideation or transfer into artificial bodies.

The hope for time is one where if you have an infinitely extended life, you don't want to spend it doing all kinds of drudgery work and therefore robots will take care of all those tasks. Then there's desire gratification, the hope that social interactions too will become automated. This is things like having artificial friends, lovers, or family members. And then power, so the killer robot that defends us from evil; anything that might threaten that kind of utopia.

But those four hopes tap into fears. With the hope for immortality there's a fear of inhumanity. The idea that if we upload ourselves into the cloud, we will lose our personality and we will no longer be human. The flip side of ease is that of obsolescence that robots take over everything that we will have no work, no purpose, and that we will be infinitely bored. With gratification, there's fear of alienation. That is the fear that we will become essentially obsolete to each other. If everyone prefers to have interactions with robots, humans will no longer need each other. And that again, we lose an essential part of our humanity, the social side. And of course, the flip side of the desire for power and protection and security is being dominated by the robot.



↑ Greek vase painting (c. 450 B.C) depicts the death of Talos. Wikimedia Commons / Forzaruvo94

Could you tell us more about different ways that countries outside "The Global North" have imagined artificial intelligence?
In many parts of the world, imagining intelligent machines has been part of narratives. We have narratives about intelligent machine-like creations, for example, from ancient China, and India. In ancient China, there was a story about a robot dressed up as a woman, fooling people into thinking that it was human. In India, there was a story about the cave where the body of the Buddha lay buried, being guarded by silver robots. So while the terminology is very much taken from Europe, the idea has always been there.

And to some extent, these narratives have evolved independently. And the strongest independent evolution of these narratives is in Japan, where there is really a very different perception of what it means to live with intelligent machines. So one sort of shortcut explanation that people usually give is that it has to do with Japanese spiritualism; since everything is imbued with spirits, the border between human/machine/animal/nonliving things is much vaguer and much more blurred. Now, in reality, it is much more complex than that. But so far, what we have seen in Japan is that from the 20th century onwards, artificial intelligence has been predominantly depicted as positive and not as a threat.

↑ James Bareham/Polygon | Source images: Orion Pictures, Paramount Pictures and Lightstorm Entertainment

What are the major differences between the AI narratives that you have studied around the world?
One important finding is exactly how much the western narratives have influenced very large parts of the world. And that is partly because of older histories of cultural imperialism, meaning the attempt to root out native cultures, through re-education, or through deliberate attempts to not preserve things like writing systems which left a gap that was forcibly filled with the narratives of the colonizer.

That gap has been perpetuated to the moment of decolonization, which for many parts of the world was mid to late 20th century. So we did see, for instance, how the Terminator is a pretty much universally known figure. On the one hand, there are very strong attempts to restore all the 'lost' narratives. So the kinds of narratives like the ancient Chinese and ancient Indian ones. On the other hand, there is a push to come up with new narratives that represent people's present lived experience where that lived experience has nothing to do with the life depicted in a Hollywood film. So especially in Latin America, and in Sub-Saharan Africa, there are very strong new narratives being developed with an explicitly decolonial agenda.

Do you have any examples in which innovations or technologies have been shaped by these different narratives and histories?
One major influence, especially in the West, is that robots must look like humans. That comes from that long history of them looking like humans in the narratives and to some extent being indistinguishable from humans. And that has really influenced the popular perception of robotics, even as robotics itself was developing in all kinds of directions that are nowhere near human like. Now we have robots in all major factories, and none of them look anywhere like a human.

But you get robot like Pepper, ASIMO and Sophia which are not really that useful. They are really gimmicky, they get a lot of views and a lot of likes on YouTube. There is a huge discrepancy between what people think robots are and should look like and what robots that are successful at their job look like.
As mentioned in Japan it's much more blurred because there's much less anthropomorphism.
I mean, one of the most famous depictions of an artificial intelligence in Japanese animation history is the Doraemon, which is a blue cat. When one of your most famous robots does not look like a human it shapes expectations in a very different way.

In regards to your research into AI and whiteness, could you give your interpretation of the whiteness of AI?
In the English speaking West, this history goes back to the development of the term intelligence in the late 19th century. Steven Cave has written an excellent paper on the development of the term intelligence, and how it was measured, and how that influenced what artificial intelligence became.

As people started to think about race in a scientific way – to be able to claim that the white man was peak civilized – and everyone else came below that, various strategies were invented including measuring mental ability. With the aim of proving that men were more intelligent than women, and that white people were more intelligent than people of colour, they had to jump through a bunch of artificial hoops.

Tests were created that were extremely related to people's environments and backgrounds. So people with the right kind of background were much better at answering these questions than people who did not have the educational or social backgrounds required. The LSAT, the US university admissions test, was developed in order to keep universities white. The test has now been modified, scrutinized, and criticized. But the LSAT is still part of the US college admission system.

Intelligence at that time became something measurable to create hierarchies. About 50 years after that the term artificial intelligence was invented. It came with all that baggage about what intelligence is and how you measure it. And this is why measures of AI benchmarks have always been so peculiar, and so closely related to the hobbies of wealthy men such as chess, complex board games, quizzes, and now video games. Skills considered more feminine, like social interactions or care work, were deemed completely irrelevant for what it means to be intelligent, artificial, or human.

The idea is that AI will become more intelligent than humans. In order to be able to gauge whether that's the case, you have to measure it. And so you use those measures that have historically said that white men are the cleverest. So in order to create an artificial intelligence that is cleverer than a human what is measured is whether artificial intelligence is cleverer than a white man. So the association of artificial intelligence as white is due to the idea that whiteness is the ultimate level of intelligence.

You also mention decolonisation as a crucial tool. How do you practically implement decolonization to achieve this?
When you're looking at a system of narratives, and a system of thinking, that perpetuates ideas about colonialism, or ideas that are grounded in colonialist thought, one thing that a decolonial thought can help with is dismantling those thoughts structures. By making visible where the narratives come from and what their consequences have historically been, and might become, that kind of awareness is a first step to making sure that these consequences are not perpetuated. And then we bring in alternative ways of imagining and implementing certain technologies. One hegemonic narrative is what we call techno-solutionism, the idea that problems can be solved with technology. One approach is for a rich person, country, or company to create a technology and then give it in a spirit of charity to people or countries or areas that do not have the resources to build an implement or buy it themselves. The problem with that is that this is one way to make these recipients extremely dependent on that technology, but also to create a structure of implicit or explicit debt. Now, that kind of dependency structure is one that goes back to the colonialist period. It really shows the downside of what at first sight seems to be a generous charitable project.

What is the role of artists, movie makers and the role of creatives in countering hegemonic narrative?
I mentioned there has been an extraordinary outburst of alternative new narratives that think about artificial intelligence in new ways over the past decade or so. And even the Terminator films are not what they used to be and have now given a very different view of the role of technology in the near future.

In films like Black Panther, Captain Marvel, or Black Widow, we can see alternative narratives still being very successful. And hopefully that has made people realize that shaking up these narratives does work, have an effect, and that that does create alternative visions that are consumed and listened to.

↑ Neema Iyer, Amplified Abuse, 2021. Courtesy of the artist.

Neema Iyer

Feminist Technologies for Change

Neema Iyer is an artist and a technologist. She is the founder of Pollicy, a civic technology organization based in Kampala, Uganda and is a co-host on the Terms and Conditions podcast. She currently leads the design of a number of projects focused on building data skills, on fostering conversations on data governance and digital security, and on innovating around policy. Read more here.

You are working at the intersection of digital rights, data governance, and feminism. How did you arrive here?

I've always been drawn to the arts. But when you live in Africa, artists aren't really appreciated as significant contributors to society so I decided to pursue a career in medicine, but I switched and I did public health for my Masters.

Thereafter, I got a job with a think tank where I looked at mental health and the use of technology. Afterwards I moved on to an interactive voice response company because I was starting to question the efficacy of text as a medium to communicate with people. I moved to more voice based work because there is more flexibility in terms of using local languages and you know, playing around with voice and music. And then from there, I just saw that there was this big gap in data and digital literacy more broadly.

Therefore, I started Pollicy in 2017 which focuses on digitalization with governments and with civil society. At Pollicy I found that there was a big gap in terms of how we talk about data and digital spaces. There's a lot of jargon which makes it very inaccessible for a large proportion of people.

I've always been a feminist and grew up with those ideals. The more I studied these spaces, the more I realised that there is a very significant gender digital divide. For reasons such as costs, safety, access, education, skills, and patriarchy, among others, women are not getting to use data and digital platforms in the same way. This was where we saw the need to bring in this gender element that if you just apply a one size fits all, it's not gonna work. So that's how technology and feminism came together.

What is the main question that drives you at the moment?

This sounds cliche, but I'm just always driven by this need for social justice. I do feel like, on one hand, that digital tech has the ability to transform people's lives in terms of improving their life experiences and how they interact with governments, how governments provide services, how you receive education, how you receive entertainment, and how you work. And with remote work now becoming much more than the norm, this is an opportunity where before you wouldn't get hired for a job because they wouldn't sponsor your visa to go to the US or the UK. But now you can be where you are and get a good salary.

Even if you think about feminism just a few years ago, you couldn't really talk about these issues. From when I joined Twitter about 10 years ago to now, the conversation has moved so much. No matter what people say, social media can change things with the way campaigns are run on Facebook, the way people organize movements, and it's really incredible to see what is possible. But on the other hand, you know,

we're also very aware of what the threats of big tech are and how technology can be also oppressive in nature.

We're just having a conversation about how much AI is such a buzzword, but nobody really knows what it means. But the fact is they do have real consequences on people's lives. Automated decision making is deciding on giving social services or even to grant visas. Of course, that's not as much happening in the African context.

I feel like we're at a point where we can determine what our future looks like instead of waiting for other countries to come up with harmful tech that is then imported to Africa. Maybe we can decide what we want, what kinds of technologies we actually want to know, and what kinds we don't want, and work from there.

Recently, Pollicy published a report on digital extractivism specifically focused on the African continent. What is digital extractivism and it's history on the African Continent?
We wanted to look at how colonialism is still present. Latin America, Africa, and Asia had a lot of natural resources which were extracted and taken by colonial powers. At Pollicy we wanted to ask the question, "Do technology companies work in a similar manner in today's context?" We created a list to show that some of these practices are still being used today. So for example, a lot of African countries do not have data protection laws, or if they have them, they're not really implemented in any realistic way.

"We we wanted to ask the question, 'Do technology companies work in a similar manner in today's context?'"

Therefore these states become an opportunity lot of data mining. And a lot of these companies don't pay any taxes. So one of the statistics that we had showed that the tax avoidance that happens on the African Continent is more than the amount of aid that the continent receives.

Another thing we found is that you'll often see these 'tech for good' initiatives which often launch programs first in Africa. These technologies are not tested out anywhere else. 95% of them fail, for one reason or another, and sometimes it can be quite harmful.

For example, there was biometric testing in refugees in Ethiopia and they didn't really have an option to say no. The company might say that it was consensual. Yet, if you didn't say yes, then they didn't get food. That's really concerning and you'll see it across the board. It'll be like blockchain for refugees or AI for migrants; very exploitative types of programs that they test on very vulnerable people. The companies come to Africa, they'll run a project for two years, and then we'll just never hear of them again.

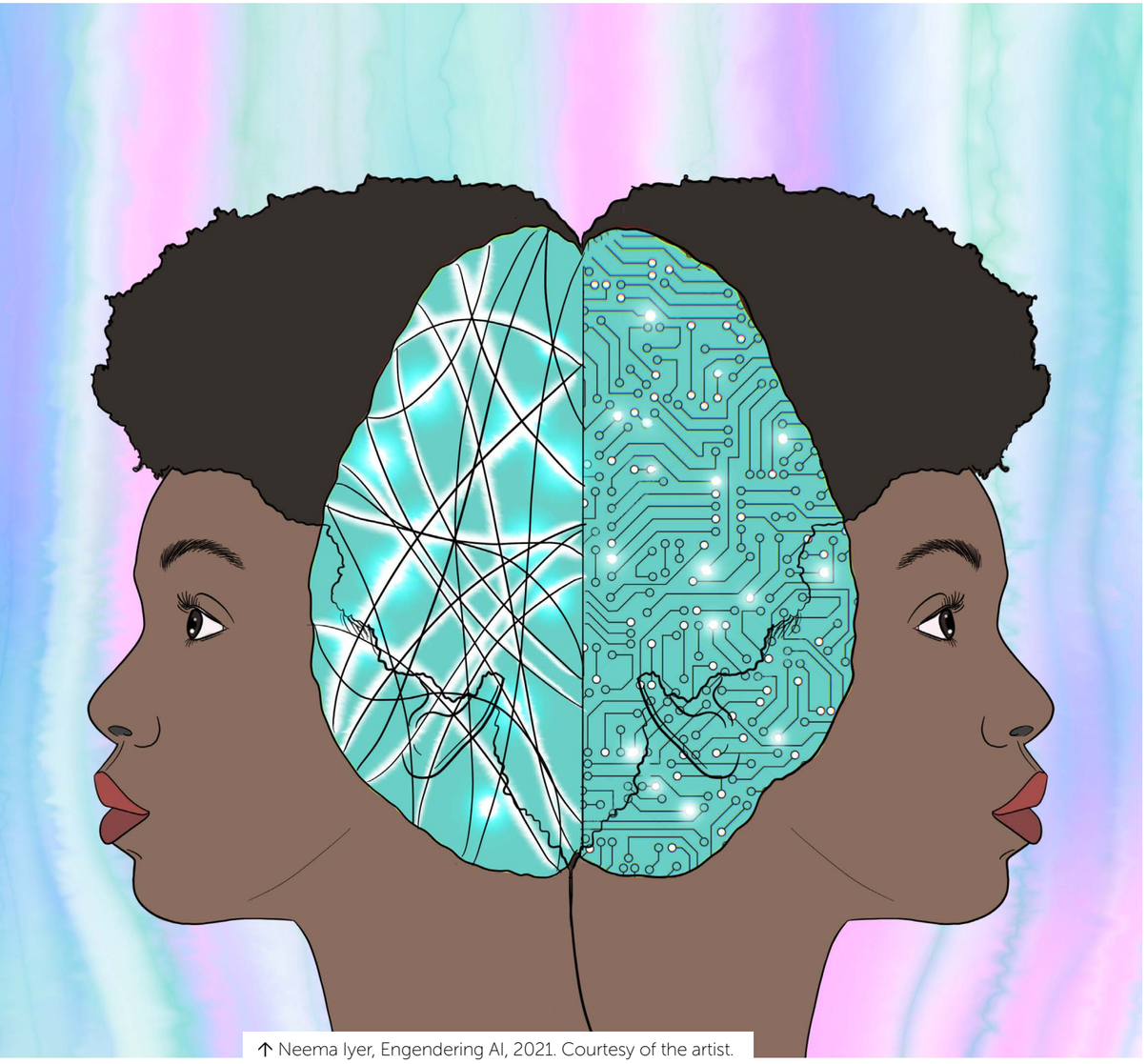
How does one counter these developments? What is the role of governments, big tech, and civil society in this regard?
One of the things we thought about is how unions can work in terms of digital platforms. For example, with remote work you can be based anywhere. But then you often hear people say, like, "Oh, well, you're in Africa, so I'm going to pay you 1/10 of what I would pay somebody in the US or Europe." I think it'd be interesting in that sense to ask what kind of agencies exist to protect them as workers?

When we did this research we found it difficult to find sources. And even when we did find sources they would be from questionable companies. These institutions are way better funded than academia. So that's kind of all you have to rely on.

With governments, there's a need to create more progressive laws. So I do think a lot of countries just tend to over-regulate. And they tend to be very punitive in nature. So if you have a data protection law, and it is broken you pay a fine. But then what are you putting in place to assist companies to become compliant? As of now there's no such program in place.

Governments have to step up and really focus on what society in 10 years look like? They're regulating a society that existed five years ago. As for big tech, I think it's a matter of just continuing to do research and put pressure on them. I think it's a lot of research that needs to be done to hold these companies accountable.

↑ Neema Iyer, Automated Imperialism, Expansionist Dreams, 2021. Courtesy of the artist.



↑ Neema Iyer, Engendering AI, 2021. Courtesy of the artist.

You have previously spoken of the experiences of African women in online spaces. What is it that we can learn from African feminism and its view on technology, to build a more hopeful digital future?
I think this ties back to the previous point that we need more research, because technology is often built with detrimental biases. The only way for us to get our needs out there is to do the research and have these conversations. That guided the Afrofeminist Data Futures project which we did at Pollicy.

Oddly enough, this project was funded by Facebook, and they had a call to see how feminist movements in Africa use data. But it was such an interesting topic that I'd always wanted to work on. We got to talk to about 40 feminist movements, and really ask them about what their data and digital needs are. And basically, many feminist movements are lagging behind in terms of how they use data, how they're represented online, and how they see the future of tech.

Most importantly, there is a lot of distrust. Black and brown people are discriminated against on these

platforms. Recently on Tik Tok, if you wrote things like "black lives" or anything similar to that, you got censored. But if you did the same for "white lives," there were no issues. People basically have a distrust of big tech, because they don't respect us as people.

I think there's many different ways people can understand feminism. I think some people would say feminism is equality, right. But that doesn't really make sense because human beings are not equal at all. So I think for me, I really think of feminism as the freedom to really live your life in the way you want. To live it free from fear and to live it in a way where you can make the most of whatever opportunities are out there.

From that angle, it really makes sense working on digital needs, because digital platforms really do give you that freedom because on online spaces you can be anyone and you can do anything. But I also understand feminism as based on love, care, ethics and appreciation of things like arts and labour. So that's kind of how my feminism comes into thinking about technology, and hoping that big tech and governments can also become a part of this grander ethos.

Do you have examples of initiatives that are driving this feminist technologies for change and care?
The US has a cultural hegemony on the world, they have developed many of the platforms we use today. There's so many things in my childhood that were based on American culture that I had never experienced, but you feel like you've experienced it, because you've seen it so many times. But now with digital platforms, it's become even more severe.

I heard that children across Africa are starting to have American accents. Everyone speaks like Americans, they pick up their cultural trends, they eat what Americans eat, the restaurants change to suit whatever is in the hipster Instagram photo. Even the kind of scifi speculative fiction books are American.

And that's why when I saw artist Dilman Dila's work, it felt so refreshing, a different perspective. And those are still so so, so rare, where you can find, you know, good writing that talks about speculative fiction. We need to have different imaginations of the future or else we're just going to end up where we are right now. We're in the future that the US built. And we'll always be stuck in it unless we can think about something different.

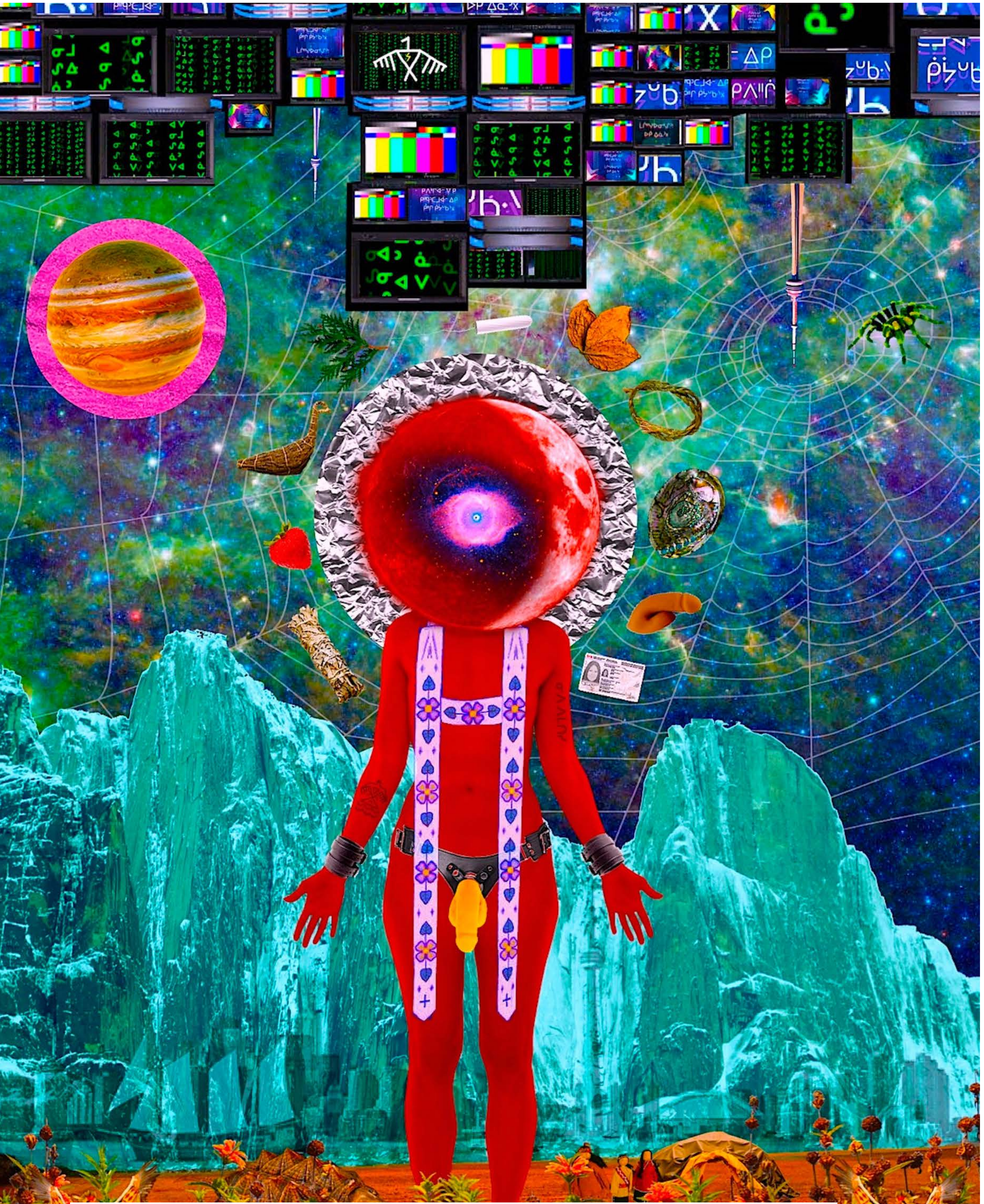
"We need to have different imaginations of the future or else we're just going to end up where we are right now. We're in the future that the US built."

I think the current ways in which we organize and use the data also leads very much to a digital monoculture. I think one of the big problems with the internet right now is that the entire internet is ad revenue based. And I think that that is the root cause of all evil.

In regard to this, I do feel like what this company COIL is trying to do is quite interesting. You just pay people and websites based on how long you're on their page. And so like, one month, maybe you have a budget of like, 10 euros, and then they just divide that 10 euros based on your browsing history for the whole month. It's very automated and you don't have to think about it. I know, in China they have this service where you can directly give content creators money. Now, on Twitter you can tip people.

That is a whole different economic model of running the internet. And it's one that I would totally be down for. I want content creators to be rewarded for the work. I don't want advertisers and all the middlemen advertisers to get money.

In this regard, on TikTok and Instagram, they have algorithms that I personally feel tend to promote white creators. It basically leads to a monoculture. So I think it'd be interesting to see if you could reward your favourite content creators in a much easier way.



↑ ᑲᓇᢃᐱᐅᐣ/connorpion/piihkonikewin mixed non-status urban cree/atimekw/métis/settler living in Tkaronto/Dish with One Spoon Treaty Territory ᐋᐣᒋᓈᑯᐐᐦᐃᑎᓯ/aandjinaagowiihidizo/s/t/h/e/y transfigure themselves Digital, 2017

Jason Edward Lewis

Main Challenges of AI

Jason Edward Lewis is a digital media theorist, poet, and software designer. He founded Obx Laboratory for Experimental Media, where he conducts research/creation projects exploring computation as a creative and cultural material. Lewis is deeply committed to developing intriguing new forms of expression by working on conceptual, critical, creative and technical levels simultaneously. He is the University Research Chair in Computational Media and the Indigenous Future Imaginary as well Professor of Computation Arts at Concordia University, Montreal. Born and raised in northern California, Lewis is Hawaiian and Samoan. Read more on his work here.

How did you come to work at the intersection of digital media, artificial intelligence, art and popular culture, future thinking, and Indigenous Studies?
I loved programming and I felt that programming was another writing practice, like poetry, which is my foundational artistic practice. When I began working in Silicon Valley we were still very excited about the emancipatory possibilities of technology, as the tech work was seasoned with a healthy dose of Northern California hippie. It was techno hippie optimism before it curdled into the Silicon Valley that we know today. But as I got older, I began recognizing the fact that I was one of the only brown bodies in most of these rooms.

I am Hawaiian and Samoan, but I was adopted when I was six months old, and raised in Northern California in a rural mountain county. So when I got to my undergrad at Stanford, it was the first time I got pulled into a community of brown and Indigenous folks, and they made a home for me. Then, much later, I met my wife, Skawennati, a Mohawk woman from Kahnawake outside of Montreal. She had been thinking about this question of what it means to be Indigenous in virtual space.

Our interests resonated with each other and we started Aboriginal Territories in Cyberspace (AbTeC) to increase the number of Indigenous Peoples working with digital tools. AbTeC does workshops on Aboriginal storytelling, Digital Media Design, video games, and animation. We support Indigenous artists through residencies so they can learn how to use digital tools and feed a discourse that recognizes the digital capabilities that we have in our communities.

When I saw AI starting to bubble up for a third time I felt much better equipped to think critically about these technologies. I and others knew that there were going to be huge problems here. The kind of the core statistical approach of machine learning meant, almost by definition, that smaller populations were going to get fucked. I started talking to some of my colleagues, who were interested in Indigenous practices, protocols, and technology. Together we wrote the essay "Making Kin with the Machines," (co-authored with Noelani Arista, Archer Pechawis, and Suzanne Kite.) It is around this time that I realised, through these conversations and previous work, that we needed to understand how these new entities might fit within an Indigenous cosmology. And that such engagement was needed now, because what's being done with the technology is just rotten to the core.

So, at this moment, June 2021, my main research question is how we go about prototyping AI, or AI-like systems, from a foundation of Indigenous epistemology. How do we capture that epistemology in partnership with communities who are interested in AI systems? And how do we formalize that, so that we can make it computable in a way that doesn't do violence to those epistemologies?

And what do you believe is the main challenge of AI?
A special issue of Journal of *Artificial General Intelligence* from 2019 featured a definition of intelligence. The following issue featured 20 responses. And it was really depressing to read because they all conceptualised intelligence in the same way. They took it as a given that intelligence means – and this is my abbreviation – rational self-serving goal seeking. It really brought home how captured we have become by a knowledge framework that is the product of the post enlightenment, utilitarian, and monotheistic way of looking at the world.

I'm a technologist, so when I watch this happen in the technological domain or dimension, I ask what we can do to counter this. This is not just coming from an Indigenous perspective, because we know that there's tons of research on multiple intelligences from within the Western tradition itself. To build technologies that reinforce just one view of intelligence is just a bad idea in general. But for small populations, like Indigenous populations are, it's potentially deadly.

One of the greatest tricks the computer science field ever pulled was using the term 'science'. They're not scientists. They're not even engineers, really, because they don't have the rigour that professional engineers have. They don't have the sense of responsibility that comes along with a standard engineering education. They're in this weird free-for-all area. It's comical, but also tragic. It's tragic, because it's having enormous real world consequences for the rest of us. And it's being built by a group of people who still to this day – no matter how many AI ethics pledges they might sign – are operating in a fundamentally unethical manner.

"One of the greatest tricks the computer science fields ever pulled is using the term 'scientists'. They're not scientists."

What is it we can learn from Indigenous knowledge systems?
So I think there's a couple things that are important. First of all is that there are other ways of engaging with the world. We've been trying to tell you this for centuries, and only now you have started to listen. You have previously actively suppressed our knowledge and punished us for expressing these thoughts; thoughts like humans being in meaningful reciprocal and respectful relationships with non-humans.

This is something that our epistemologies, cosmologies, ontologies, and language systems retain. So part of what we are doing is to say "Here are some examples of looking at our relationship to technology differently . Don't appropriate them. Don't just cherry pick and expropriate them. Rather, use them to understand that we as humans have ways of relating better to non-sentient beings. And we can do it with this technology."

Our knowledge has been treated as superstition, religion, or spirituality. But it is knowledge about this world; knowledge which has been useful in our cultures for a very long time. There's so much ignorance and incompetence around dealing with non-human creatures, because we live in a dominant culture whose main religious text basically says that man is the height and centre of creation.

And how does kinship become important here in relation to AI?
This is a challenging discussion within the Indigenous communities because people have such different kinship practices. Some are not interested in having AI as kin. Others will argue that because AI is drawn from the materials of this world, we must have a kinship relationship. Our question is then, how do we recognize and maintain that relationship? That's where protocols come in because Indigenous protocols show us the proper way of going about making and maintaining kinship.

And you know when and if AI has the 'Great Awakening,' I want it to wake up and look around and think, 'these people are pretty okay and that they have treated me well.' We really need to get out of the idea that AI is gonna wake up and hate us. One way to do this is to not treat it as a servant from the beginning.

In changing this narrative, how does aesthetics and popular culture become crucial?
I don't know how you can imagine the future without activating the people in your community or in your society that have the most active imaginations: artists. You know it's bonkers to me that you have foresight

↑ He Ao Hou, Nā Anae Mahiki Collective (2018)

and future casting consultancies which almost never include artists in their core team. They might pop an artist in every now and then to draw some pictures from the notes, but they don't treat artists as primary resources for imagining what the future might be like.

In my network many of us are artists and we believe in the power of art to open up our minds. The Initiative for Indigenous Futures is all about, how do we use art so that people in the communities we work with can imagine better futures for themselves? Plus, few of the people we normally work with are going to read an academic paper. So the standard academic ways of trying to tackle something like this are not useful tools on their own

Art is absolutely essential, I think, to mobilize people outside of academia, to think about these important concepts. And to shed assumptions as much as possible that we don't really need to care about non-humans.

Could you take one example of an artwork or a game that you find very inspiring to counter this digital monoculture?
There are so many, but one of the ones I like the most is *The Peacemaker Returns (2017)* by the artist Skawnnati. That video is about The Great Peacemaker, who lived some time in the 1100s and who brought The Great Law of Peace to what is now the Haudenosaunee Confederacy to convince the five warring nations to live together peacefully. The video recounts the events from that time period, and then reimagines it into the present day where those teachings are used to unite the different nations of Earth.

For the final third of the video, Skawennati imagines a future wherein those teachings are used to unite five intergalactic species, both human and alien. I really appreciate how the artwork considers practices developed a long time ago and applies them to the present to figure out how we can use them now-- and in the future

I think that's a really good example of how the future for the communities we work with is tied to the past. That sets the work that we do apart from standard science fiction because it's a very clear acknowledgement that we are working from foundations laid down by our ancestors. We're interested in bringing our ancestors along with us, because they still have so much to teach us.

↑ Decentralizing Digital, Children's Coding Kit. Stainless steel case containing 'Your Voice' developers board, various electronic components, and a deck of coding cards. 2025.

Michelle Thorne

Advancing a Sustainable Internet

Michelle Thorne (@thornet) is interested in climate justice and a fossil-free internet. As a Sustainable Internet Lead at the Mozilla Foundation, Michelle runs research initiatives in Mozilla's Sustainability Program. She is also a Senior Advisor to the Green Web Foundation and editor of Branch Magazine. Read more here.

First we would like to start with your background. How did you come to this work that you're doing now?

One of the main motivators for working on a fossil-free internet was spending more than a decade looking at free and open source culture and software. That's where my activist background was from. The Knowledge Commons and building alternatives to big tech was something I've been very interested in for a long time.

I worked at Creative Commons and I've worked at Mozilla for 10 years. For a long time, I've been kind of thinking and working on how we create more equitable access to the internet. How do we increase participation on the internet? How do we have people – full citizens – protected online. Around 2017-18, I realized that the planet is on fire. The internet is also creating emissions that are heating the planet. It was a moment of dissonance.

For the last few years, I've been trying to understand that dissonance and realized that there's actually a lot of people who feel that way; they are inspired by the possibility of technology to connect and empower, while also knowing that there's a dark side to it. That's been a motivator to ask what parts of the internet should be stewarded and cared for and advanced, while also ensuring that the internet is a tool to dismantle the power structures that delay climate action and reduce its own emissions.

What is the main question that drives you at the moment?

How do we achieve a fossil free internet by 2030? And how can we support technologists to bring climate justice more centrally to their work?

In light of the work you have done on digital rights and climate justice, how do you conceive of a digital monoculture?

I'm really glad that you also are thinking about this in terms of monoculture, too. I'm now working with Mozilla and with an organization called the Green Web Foundation. One of the things we discussed is the idea of moving the internet away from fossil fuels. However, if you just green the internet, you would still have this consolidated neoliberal monoculture. And so part of the transition that I see towards the Fossil Free Internet has to be one that's also supporting an open and diverse internet ecosystem.

Imagine that in 2030, a handful of companies are continuing to run the internet infrastructure. Yet, now they're also increasingly running the energy infrastructure. For me this brings up the question of how we take the discourse we've seen in the digital rights sector around breaking up big tech to build alternatives and expand that to include a discourse around climate action.

One way I've been thinking about this is divesting from big tech. There are a lot of ways we can take resources from this monoculture and put it towards alternatives towards frontline communities and other places. I draw on several metaphors from ecology for thinking about internet ecosystems that go beyond the big five.

The more that I learned about the internet's environmental impact, the more I realized how physical the internet is. We're told the story of the cloud, that ephemeral cloud, and you don't often think about the data centers and the mined material that went into the server. Understanding the physical aspects of the internet is hugely important, but not well understood, not even by technologists. It's abstracted, and technology is very good at abstracting.

You see the kind of consolidation of infrastructure that's not just internet infrastructure, but also energy infrastructure. There was a study out last year in the Financial Times, looking at who the major corporate buyers of green energy are right now. The top ones are tech companies. And so when I think about the idea of a monoculture, it's the energy infrastructure and the internet infrastructure merging together. And the same companies controlling that infrastructure also have geographic concentration. They are headquartered primarily in the US. We just know that that kind of concentration isn't healthy.

"When I think about the idea of a monoculture, it's the energy infrastructure and the internet infrastructure merging together."

And how do you wish to combine climate justice and digital rights?

There are a lot of angles. We're seeing Google being able to become more efficient because they're controlling a whole internet stack. They're actually able to decarbonize their systems faster because of how extensive their control is. Through that, they get the benefit of being perceived as a green player. That just further solidifies their position. The ability to green your tech stack should be available to everyone, whether you're a small business, educational institution, or government. We should not have to rely on Google to have a green internet.

Another issue we're seeing is the digital security issues impacted climate activists. The more people are relying on Facebook to do their organizing, the more vulnerabilities they might have. There's also a need to create alternatives that improve digital security, so that when people take political action, they're also protected; their technology helps protect them without spying on them.

Are there any initiatives that you have encountered that provide possible ways to advance a sustainable internet?

We're making a magazine, Branch Magazine, which features kindred spirits who are building those alternatives. In short, we're trying to dream with people imagining what the sustainable internet looks like.

One of my favorites is Solar Protocol by Tega Brain, Alex Nathanson, and Benedetta Piantella.hey're talking about making internet infrastructures visible. They have a whole protocol around community stewards of servers, and these servers are powered by solar energy. It's starting a conversation or a provocation on how the internet relies on our physical environment as well as stewardship.

I also really like the work of Joana Moll. She is also trying to make these infrastructures visible. In The Hidden Life of an Amazon User (2019) she went to buy Jeff Bezos' autobiography on Amazon. As she went through the purchasing process, she displayed all the code that was being put on her machine; all of the interfaces, all the tracking, etc. If you combined all of that code, it would make up something like 24 volumes of books. Moll illustrates that computation is basically outsourced to individuals, but it's invisible to us and often not what we want.

There's also a lot of technologists doing good work on greening websites, especially with open projects like WordPress. These projects are a good entry point for technologists to then start thinking about bigger systemic issues. On Branch, we have tried to follow

↑ Decentralizing Digital, Mesh Hotspot & Instructions. Make Your Own Hotspot instructions by the Meshmaker organisation. 2025. Mesh Hotspot from Gulbarga Colony, Bangalore. Plastic Bottle, wound wire aerial, solar panel, various electronic components. 2038.

↑ Decentralizing Digital, Mesh Bowl and Data Tokens. Mesh Bowl. Turned, oiled wood, various electronic components. 2045. Five Data Tokens. Turned, lacquered wood, various electronic components. 2045. Mesh Mat. Khadi Cotton with hand embroidered detail.

the Sustainable Web Design manifesto. One of the ideas that was really powerful is that you have two camps: people that don't want any data or only the bare minimum, and people that want more data and AI systems that will optimize the data. I think that there's some sort of third way—what if we build things that are more variable and that change depending on what the current ecological conditions are?

We tried to build this into Branch. Using an open source plugin, which you can add to any Wordpress site, determines what version of the website you see depending on the grid intensity of your current connection. For example, if I'm running on a lot of fossil fuels right now, then maybe it'll show less data, but if it's running on renewables, maybe you can get like the full video. It's a design for carbon awareness.

What would your recommendation be for individuals and civil society organizations that want to join this movement?
I mean, this is one of those not-so-satisfying answers. I do think there's a sense of commitment to transformation that you have to do, when you realize that we have big systems like the internet and planetary ecology. There are going to be a lot of things that we have to rethink and redo to be sustainable and avoid a brittle monoculture.

I think that part of this is like committing to learning. And then part of that is really learning from the environmental justice and the climate justice movement. Something I've noticed in the tech sector, there's a sense of amnesia in that we have to reinvent everything. Yet, there are existing social movements,and while they have their faults, we have to ask what we can learn from them?

There's ways we can make change in our daily practice and the organization of our sector. But also remembering that we're also citizens that have political power. Big Oil wants us to think it's all individual responsibility but actually, it's going to be collective action that's going to push back some of these really big systemic harms. So I think people realizing that there's small things they can do will help them gain confidence and awareness to then move towards collective transformative. Systemic change is where we need to be going.

What is the role of art and aesthetics in this for you?
Art really has that capacity to change the way we think, experience, and imagine. So I think that's one reason to love working with artists. Aesthetics is really important, because if we're talking about making transformative and systemic change, we're going to have to be not just saying no to something. We have to be saying yes to something else. We need help to imagine what that 'yes' is going towards. It might not be a piece of code or a text, but sometimes it's music or it'll be these other forms of understanding and experiencing.

Art helps us figure out the yes. That goes into the aesthetics of what's desirable, what's irresistible, and speaks to what we really want.

What is an example of an artwork that you find very inspiring and counters this digital monocultures?
There's an amazing set of researchers based in India that just released a project called Decentralizing Digital. They work with local farming communities and local indigenous tribes to ask what it would be like to have technology that's built with local materials, local traditions and crafts, and had things like voice assistance or personal AI's. They made all these different speculations that are much more situated in a history and a context, but also crafts possible futures. While that doesn't look directly out of fossil free internet, it looks at how we build with local resources and build for local communities, which is how we're going to combat the digital monoculture.

Note:
The drawings of artefacts that accompanied this interview are part of Decentralising Digital, an ongoing research project seeking to co-create new narratives for decentralised digital futures working with rural communities in Karnataka, India. The research is led by Quicksand, an interdisciplinary design research and innovation consultancy based in India, and in collaboration with local community partners, creatives from across the country and designers from the University of Dundee, UK. The team includes Loraine Clarke, Babitha George, Romit Raj, Jon Rogers, Neha Singh, Martin Skelly and Pete Thomas.

↑ Morehshin Allahyari, Material Speculation: ISIS – Ebu, 2015-16, 3-D printed plastic resin and electronic components. Courtesy the artist.

Morehshin Allahyari

Digital Colonialism

Morehshin Allahyari (Persian: مورهشین الله‌یاری; born 1985) is an Iranian-Kurdish media artist, activist, and writer based in Brooklyn, New York. She uses computer modeling, 3D scanning, and digital fabrication techniques to explore the intersection of art and activism. Inspired by concepts of collective archiving and cultural contradiction, Allahyari's 3D-printed sculptures and videos challenge social and gender norms. She wants her work to respond to, resist, and criticize the current political and cultural situation that is experienced on a daily basis. Her work has been part of numerous exhibitions, festivals, and workshops at venues throughout the world, including the New Museum, MoMa, Centre Pompidou, Venice Biennale di Architectura, and Museum für Angewandte Kunst among many others. She is the recipient of United States Artist Fellowship (2021), The Joan Mitchell Foundation Painters & Sculptors Grant (2019), The Sundance Institute New Frontier International Fellowship, and the leading global thinkers of 2016 award by Foreign Policy magazine. She has been awarded major commissions by The Shed, Rhizome, New Museum, Whitney Museum of American Art, Liverpool Biennale, and FACT. Read more here.

In your practice, you combine art activism, digital fabrication, digital art and memory with a specific focus on West Asia. Could you tell us more about your background and how you arrived at this exciting mixture of exciting fields?
My entrance to the art world was through creative writing. As a teenager storytelling was something that I became really interested in and the ways that I found power and in ways of expressing things, starting from personal experiences and then arriving at collective experiences.

In Iran, where I grew up until I was 23, I studied social sciences and Media Studies. You can see traces of that in my practice in that art making is not just art for art's sake, and it's not just technology for technology's sake. Rather, my work reflects how different social, political, cultural issues and topics are expressed. I then choose the relevant medium or technology to convey a message to make something that is invisible, visible. Being in school in Iran and also just like the life that I was interested in even as a young adult also had an influence on the way to look at the world through like critical eyes; not in terms of negativity, but like rather always like asking questions and never taking things for granted and never accepting ones status quo.

When I came to the US for graduate school, I studied digital media studies for my MA and new media art from my MFA. That's where I became interested in technology. We had one class, which was an elective class that was called cyber studies, and there I fell in love with these ideas of thinking about the web and internet and cyberspace critically. My thinking about social issues and political issues kind of came together in one place. And then technology became a toolset that then carried those points.

What is the main question you are fascinated by at this moment in time?
In my practice, for the last six or seven years, I have been really interested in this non-binary relationship between history and technology. I say non-binary

because I don't see them as things that are against each other necessarily. For me it's a much more complex relationship between these things.

In my work, for example through Material Speculation ISIS (2015-2016) and She Who Sees the Unknown (2016-), I've been interested in looking back into the past to bring out things, situations, or in relationships with it that hasn't been considered. I call this refiguring or re-figuration and I wanted to re-reimagine ways of thinking about now and the future with a focus on the Middle East or Islamic culture.

I have also thought a lot about archiving as an art practice; such as 3D printing, digital fabrication, being a method or a tool for archival work. Or more traditional ways of thinking about archiving documents, such as PDF files and images. I am now questioning access to archives and questioning open source.

This has a lot to do with how I want the world to be in terms of how creatives and artists practice their work. Artists that are always looked up to are people that go beyond their artwork. It is people that are generous and not interested in their practice with this idea of "Oh, I'm just going to be in my studio solo and make work." Rather making becomes about something bigger, be that community building, or giving access to their research, or even being open to sharing a process.

What are the key issues of Digital Colonialism?
Digital colonialism is a framework for critically examining the tendency for information technologies to be used or deployed in ways that reproduce colonial power relations. But my research is also connected to cultural heritage and historical heritage.

In *Material Speculation: ISIS series,* I reconstructed 12 artefacts that were destroyed by ISIS in 2015 at a Museum in Iraq. I was doing reconstruction work but the product had many layers to it. The sculptures had a memory card and flash drive embedded into them. When I did that project in 2015-2016, ISIS was at the height of their power. They had an intense presence on social media.

Simultaneously, on the technological side of things, we have this sudden rise of 3D printing. I was also living in San Francisco, where there is a really crazy presence of tech companies. Suddenly, all of them started to buy these tools, and travel to different parts of the Middle East or different countries in Africa, to scan artefacts that were at risk of being destroyed. I became curious because in a lot of time, we will have the issues of monopoly of information. The companies will have copyright ownership of these scanned artefacts to a point where even if, for example, the Lebanese government wants access to a certain object from their national collection, they might not be allowed.

This was a moment when no one was questioning what was happening to this digital data. If you go to the British Museum or MET Museum, we can see the colonial power by simply asking how certain objects even got there. But with digital digital practices, it's a much more grey or unknown area. I really wanted to talk about what digital ownership means in this way? That also played a really important role in the way I as an artist started thinking about access to or protection of knowledge and cultural heritage of your country.

You have also been looking at the relation between digital storage and archiving in relation to human memory. Could you elaborate more on this relationship?
The first time that I saw an object getting 3D printed, I was blown away by watching this process of something being transferred from the digital to the physical. Now that's normal, but back then it was so science fictional.

"The first time that I saw an object getting 3D printed, I was blown away by watching this process of something being transferred from the digital to the physical. Now that's normal, but back then it was so science fictional."

↑ Morehshin Allahyari, Dark Matter (First Series): #pig #gun, 2013, 3-D printed plastic resin. Courtesy the artist.

The first thing I thought about was what would happen if I had access to a 3D printer in Iran and printed things that are forbidden. In the series Dark Matter (2014) I extended this thought into ideas of archiving things considered 'dirty' as an archiving and documentation practice. This series was focused on reproducing objects that had been censored in Iran at this time.

In Material Speculation: ISIS series the sculptures were like time capsules because there were the elements of the memory cards and flash drives inside the body of the artefacts. Inside the flashcards and memory card there are PDF, files, images, my email correspondence with historians, scholars, the process of making the work, as well as OBJ, STL files of all the artifacts.

At that point, I wanted to keep or hold this knowledge for future civilisations. It is a poetic, political, and practical gesture. Because in the future, even if you have access to this data, there's no way to replace what was lost, although you can reprint all the artefacts. But they would serve as a point of memories, some kind of resource for knowing what was there, what was lost, and what it looked like.

In She Who Sees the Unknown, you also extensively focus on mythologies particularly the monstrous and dark goddesses. Why are you working with these kinds of figures?
In *She Who Sees the Unknown* I'm going back and looking at mythical female/queer figures, and how their stories have been forgotten and underrepresented and then building objects with them.

Growing up in Iran and reading mythical stories it was always about male figures. Naturally I began questioning where the female figures were. What are the figures that I can focus on or think about where they have this potential in them to become vessels for storytelling for refiguring and for rebuilding other worlds?

↑ Morehshin Allahyari, She Who Sees the Unknown, 2016, HD digital video. Courtesy the artist.

Jinns became specifically important because they are so present within West Asian culture, South Asian cultures, and also African Cultures. And also they're spoken of in the Quran as creatures that are hybrid, they're shapeshifters. I felt like it was a figure that was not explored, and there was so much room to think about it so I wrote new stories about all of them.

You just released the archive from She Who Sees the Unknown, could you tell us more about that decision and how it came about?
The archive is a result of four and a half years of research into She Who Sees the Unknown. The research involved going through so much archival material. But a lot of the time it was hard to get access to certain manuscripts because of the gatekeeping of the Western based institutions. They wanted me to sign contracts to download materials from my own culture. This became frustrating and annoying.

"Digital colonialism is a framework for critically examining the tendency for information technologies to be used or deployed in ways that reproduce colonial power relations."

When the project was coming to an end, I wanted to release this archive I had collected, but obviously I wanted it to be curated. In the archives there are like 40 rare manuscripts. It became important to share the material and those resources. When I was building the platform, I wanted to bring in some of those thoughts around digital colonialism to turn around those power structures.

So in thinking about open source, I had to question whether open source is inherently positive. The answer is obviously no. It's important to question where it is that you are sharing information and what platforms you are giving this information to within the imperialist, colonialist systems. In seeing how I could turn around power structures, language became key.

On the archive's website, you can have access to the first layer of the archive but to have access to the second, third, and fourth layer, you have to know either Farsi or Arabic to put in certain codes. I worked with hackers and designers to develop it and it's almost impossible to gain access via a translation app. As you go deeper into the archive, you access the more rare and harder to find material.

It's honestly been like an experiment, and I was very afraid that people would be angry. But it was really important for me to be intentional about who you give access to and why you give access to a very specific demographic and how to protect some heritage that has constantly been re-appropriated and taken over and owned.

To continue on your last line of thought with regards to this shared digital future and its collective practice, could you propose an icon or a symbol or a monument for a digital future?
That's such a good question and a very difficult one. It would probably be Huma, a jinn, who brings the fever and heat to the human body.

I extended that to the climate crisis, and also when I tell the story it is connected to how we experience a crisis. So when there is a crisis, we will all experience it equally and evenly, without the notions of class, race, or geographic location. That's the figure for me that is the representation of an ideal, utopian world. Kind of like utopia through dystopia.

↑ Intersectionality: Noa Snir for the Digital Freedom Fund

Nani Jansen Reventlow

Digital Rights and Strategic Litigation

Nani Jansen Reventlow is an award-winning human rights lawyer specialised in strategic litigation at the intersection of human rights, social justice, and technology. Trained as a litigator and with an extensive background in defending journalists and human rights activists in some of the most repressive environments in the world, Nani built on this experience when she founded the Digital Freedom Fund to advance digital rights through strategic litigation in Europe.
Throughout her career, Nani has seen first-hand how unequal power structures in society affect people's ability to exercise their rights and achieve justice when they have been harmed or wronged. By broadening access to judicial remedies and strengthening the ability of communities to leverage the power of the courts, Nani's new organisation, Systemic Justice, will help dismantle the power structures that underpin racial, social, and economic injustice and work to develop a more just society. Read more, here.

You are the founder of the Digital Freedom Fund (DFF) and you have been working at the intersection of law, human rights, and technology. What brought you into this exciting career?
I wish I could say that it was all a big master plan to end up working on digital rights and strategic litigation, but it wasn't. I became familiar with strategic litigation, when I was working at the Media Legal Defence Initiative (now Media Defence), an organization based in London, that works to defend journalists and bloggers around the world.

Two things came up in that context. One was strategic litigation as a tool for systemic change. I had the privilege to work on cases all over the world, in national jurisdictions and at international courts, that had to do with freedom of expression. Here you had the opportunity to leverage one case to bring about a bigger change in law, policy, or practice. For example, I got to litigate the first freedom of expression case at the African Court on Human and Peoples' Rights. That case didn't only make a difference for the journalist in question, but it also helped strike down a law so that other journalists couldn't be imprisoned under that legislation.

I saw the importance of the internet as a tool for information sharing and dissemination. Simultaneously, I got really fascinated with strategic litigation. After leaving Media Defence, I worked on a project at the Berkman Client Center at Harvard to really look at collaboration across different disciplines in relation to strategic litigation. How can you get lawyers, activists, technical experts, and academics to work together to keep the internet open and free? At that point in time the opportunity to set up DFF came along, where we focused on strategic litigation at a field level. So instead of being involved hands

on in cases, we focused on how we could facilitate support for those who want to bring about change and defend our human rights in a digital context.

And returning to the present, what is the main question that drives you at the moment in your work?
There are two questions that drive the work. From a mission related point, we ask how we can enable better cases to advance and protect our human rights in a digital context. We currently do that through financial support for strategic litigation projects and through skills and knowledge building.

The second question overlays that: how can we make sure that the work better represents the needs of everyone in our society? And that's where we come to the work we have initiated on decolonisation.

What is your personal drive to focus on these two questions?
I can't stand inequality. And I often struggle with this question because people always expect a beautiful origin story. It's actually nothing like that. If you were to dig deeper, growing up in The Netherlands as a girl with a mixed background, you are inherently aware that your position is different in whichever context you operate.

But I have to say my work hasn't been driven from that identity perspective as such. I always hated unfairness. Also, from a law nerd perspective it's just fascinating to use the law as a tool for good. That is a wonderful strategic puzzle: how do you make sure that litigation works in tandem with campaigning, advocacy work, policy efforts, and legislative efforts to bring about bigger change?

We want to talk more about digital rights and strategic litigation. Before we go into greater detail, could you outline what we mean when we talk about digital rights?
There's a very traditional view of digital rights as being online freedom of expression, data protection, and privacy rights, which is a very narrow view.

I think the more correct view is that it concerns all human rights as they are engaged in the digital context. So it's not just civil and political rights, but also economic, social, and cultural rights. And I think that this view is becoming more relatable.

Due to the pandemic, most of us were confronted with how much we depended on technology to fulfill basic needs. At DFF, we set up a specific COVID-19 litigation fund in the summer of 2020. One of the issues we supported was concerns around reproductive rights. During a pandemic and in lockdown, it became extra important to access information on this matter online. Because if a government decides to block websites that contain that information, people –– who cannot visit a doctor in person –– are left in the cold.

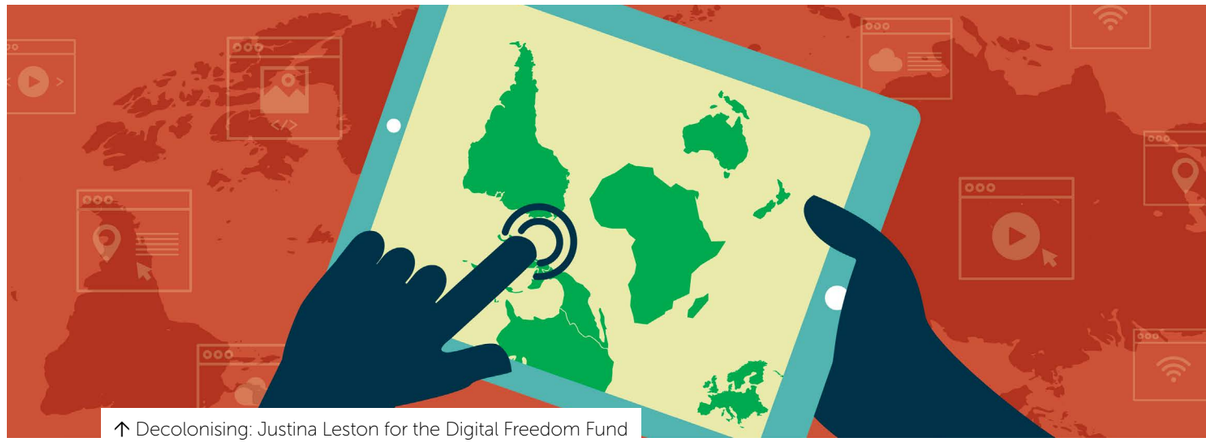
So at DFF we work with a more holistic view: "digital rights are human rights".

If we look at the current state of digital rights, what are the pressing global issues?
I always struggle a little bit with the most pressing issue because it's so difficult to compare.
In light of the pandemic, a pressing issue is the lack of consideration about what governments are rolling out – resorting to tech solutionism – measures that will be very difficult to roll back. With COVID apps there was the assumption that if you collected and shared more data, you would be better able to combat the pandemic without actual proof that this was going to be the case. There's some sort of blind faith in technology coming in to save the day without anyone providing evidence to support these beliefs.

When technologies are applied as a solution it usually comes from a privileged position. There's insufficient consideration of the negative impact that it can have on marginalized groups. To a large extent this has to do with the composition of those who are currently the "watchdog" of our society. The digital rights field is still mostly male, mostly white, mostly able bodied, cisgender, etc.

What can strategic litigation look like or how does it work? And are there any cases you worked on that you perhaps would highlight as an illustration?
So strategic litigation is litigation that is really interconnected with other strands of activities.
It interacts with campaigning, with advocacy work, with policy work, with generating public debate. It's much more than just the court case.

You're really trying to make sure that the public at large understands what the issues are and what is at stake in the case to set the stage for bigger systemic change. You can have an impact also without necessarily winning your case in court. There's often a lot of concern about what happens if you lose. Obviously, no one wants to set a bad precedent. But it can be a calculated risk that you put an issue on the map even if the courts might not go along with you.



↑ Decolonising: Justina Leston for the Digital Freedom Fund

A great example in the Netherlands is the challenge to the system risk indication system. The Dutch government decided to connect a number of public institution databases and run an algorithm over those collected data to determine who was more likely to commit fraud. Based on who the system would highlight as a possible threat, this individual would become susceptible to further investigation by various government authorities. This was entirely based on what an algorithm was determining, rather than a person actually having done something. This was rolled out in neighborhoods that had a high immigration rate and a low income rate overall. It was targeted at specific parts of the Dutch population.

In response to this, a coalition was formed together with different interest groups coming together with the Public Interest Litigation Project. Eventually, the law that was underpinning the use of this algorithm was struck down. So that is a nice example of how litigation can help challenge detrimental use of technology.

How could strategic litigation become a way to challenge the development of the digital monoculture?
It would be so easy if we could just take Facebook or Google to court for this. Yet, I think transparency is the first step. Because we need to know what we need to act against. And quite often, we have a sense but not enough specifics. But, you know until harms are really transparent and they're visible, it's going to be really difficult to effectively address them, which is one of the reasons we are so far along with this problem already.

"It would be so easy if we could just take Facebook or Google to court."

There's currently this fake transparency by giving data at an aggregate level, but it doesn't tell us very much about what happens in individual cases. It also doesn't tell us what happens automatically behind the scenes.

Together with European Digital Rights (EDRi), you proposed an initiative to decolonize the process of the digital rights field itself. Would you tell us a bit more about why you launched this initiative and what you want to achieve with it?

When I set up DFF a couple of years ago, we had a strategy meeting in February of 2018. I looked at the group photo afterwards and I realized I was the only non-white person on that photo. And of course, skin color is only one dimension, but it was just a very stark illustration of what it looks like when you walk into most rooms in Europe and digital rights are being discussed. Like I mentioned before, it's mostly white, mostly male, mostly cis-gender, and ablebodied. Naturally that affects the priorities the field sets, which currently are very much focused on issues like privacy and data protection.

↑ Digital Rights for All: Cynthia Alonso for the Digital Freedom Fund

Without applying any intersectional lens to that it doesn't represent the society we live in. It also doesn't do justice to the fact that quite often the harms of technology are mostly felt by those who are marginalized in our societies. So there's a huge disconnect there. I started thinking about how we could address this, obviously acknowledging that we're just one organization.

Nevertheless, I got really frustrated, at some point, hearing a lot of people talk about diversity, equity, and inclusion without doing anything. I just said "Okay, let's just start," even if our effort isn't going to change the world at large and even if it will take a long time.

We call it a decolonizing processes because we want to address the power structures that hold the field in place as it currently stands. So we started last year with a listening and learning phase where we talked to organizations and individuals that we're currently not seeing as part of the digital rights conversation. Organizations that work on racial justice, social justice, economic justice, or climate justice. We asked them how and if they engage with digital issues, what they would address in this regard, why or why not they were engaging with this, and what it would look like if the digital rights field was decolonised.

We started our design phase this year where we are collaboratively designing an initial multi-year program to set in motion a decolonizing process for the field. The participants have a background in digital rights, racial justice, social justice, economic justice, some in community organizing or academia, and we also have funders participating.

In relation to this, there's also a need to communicate digital rights to wider groups in society. How can digital rights be made more accessible and concrete?

I think we have to look at ourselves in the mirror as digital rights activists and think about how we're communicating with a broader audience. I've had so much difficulty over the years explaining to my mother what I do. And that actually shouldn't be the case, right?

I think part of the problem is that we're very focused on communicating about these issues in a very limited way, if I can put it that way. We rarely give people really concrete guidance on what they can actually do. Additionally, we need to rethink what is going to resonate with people. Perhaps it is not the doomsday scenario. It is interesting to look at hope based communication and at framing the positive alternatives. That feels counterintuitive to a lot of us working on human rights and on digital rights, but research shows that it actually works much more effectively.

And what do you think about the role of corporate culture and film? Are there any examples you would highlight as important to this discussion?
I do not think I have an answer to this. But I can tell you about something else I am really excited about. Besides our decolonizing work, we also have our Digital Rights For All program. We are working with organizations that work on racial,social and economic justice, to see how they can expand their work into the digital context and develop policy, advocacy, and litigation strategies around those issues. For this

project, we're working with an artist who is going to be developing an interactive video game. I never would have thought of that and I'm just really curious what that's going to look like.

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