A thousand Cassandras: Understanding the role of foresight in relation to digital power

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Abstract

This short report sets out the problem space, major actors, and potential solutions for Open Society Foundations (OSF) grantmaking to future-proof internet governance. It is a compilation of several outputs to inform a strategic project for OSF. The underlying research questions explored here were co-determined by Careful Industries and Exchange Point Institute, with input from the team at OSF.

The purpose of the project is to understand how digital rights organisations could more expediently close the efficacy gaps in national and international approaches to technology policymaking. In particular, we have been asked to test the hypothesis that more anticipatory capacity in the field of digital rights would help to close these gaps in a timely and effective manner.

Keywords

Futuring, speculative capability, foresight, digital rights, civil society

Introduction

This study adds to the body of literature which seeks to bridge the gap between the theoretical discipline of foresight methodologies and how foresight happens in practice. It aims to investigate how digital rights organisations perceive and use foresight, as well as reviewing various approaches to thinking about foresight. In this respect, the paper will be a heuristic tool to reframe peoples' practical thinking. We also intend this paper to act as a jumping off point for more practical action in facilitating better future-oriented thinking and anticipation in the field of digital rights through identifying gaps in existing capabilities.

Methodology

This paper was commissioned in order to identify potential future opportunities for foresight to be used in the field of digital rights. To achieve this, we explored how the current landscape is shaped by formal foresight methods, and we also anylsed the attitudes and opinions of leaders in the digital rights field to uncover systematic barriers to effective anticipation.

We engaged in a rapid research process through December 2021 and January 2022. The primary inputs for this research were interviews conducted with practitioners, industry experts and technologists from the digital rights space. Interviewees were from a range of disciplines with varying specialities, including from think tanks, future labs, research and training institutes, private industry, aid organisations and advocacy projects. Our complete research inputs were as follows:

- A grey literature review, including trade and expert commentary alongside traditionally published sources;
- Qualitative interviews with eleven industry experts.

1. What is Foresight?

Foresight and future studies are not a method for prediction, but a set of techniques for dealing with uncertainty, planning for the future, and building support for outlying or hard-to-understand theories and positions. Specifically, foresight creates a space of understanding and negotiation that, in turn, creates a shared understanding of what might or could happen. Its practices enable both action and imagination, which, in turn, help to bring desired outcomes to pass.

The most commonly cited goals of foresight exercises are as follows:
- to better define a problem for policymakers
- to ensure stakeholder engagement
- to facilitate policy implementation[1]
- to create shared understanding of priorities
- to develop networks to support innovation systems

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[1] Harro van Lente, "Navigating Foresight in a Sea of Expectations: Lessons from the Sociology of Expectations," Technology Analysis & Strategic Management 24, no. 8 (September 1, 2012): 769–82, https://doi.org/10.1080/09537325.2012.715478.

- to harmonise visions of the future for all stakeholders.[2]

Foresight is a process of social negotiation, often used to establish a degree of collective certainty as a basis for planning. This is distinct, for instance, from forecasting, which – as practiced by "superforecasters" such as Philip Tetlock – might seek to answer specific questions, such as, "Will Russia officially annex additional Ukranian territory in the next three months?"[3] Foresight is a more reciprocal design process – what Anne-Marie Willis calls "the double movement of ontological designing", in which "we design our world and our world designs us back".[4] This is in part because foresight creates social understanding, which, in turn, can be galvanised to shift outcomes.

There are also many ways in which foresight can embrace plurality. This is because the future is plural – not a single, achievable destination, but a complex system of inter-relation. Indeed, the Zapatista slogan, "A world where many worlds fit" speaks to a relational understanding of both the present and the future, in which different possible and probable futures are given both narrative and political prominence and possibility. This is an expansive understanding of futuring in which it is understood that there will be multiple simultaneous outcomes for different people and different communities.[5]

This is the case on a practical level. While shared global events certainly exist (with the COVID-19 pandemic being a notable example), our specific experiences and outcomes of those events are frequently not shared or not shared equitably. For example, as the population lived through the pandemic, it became clear that a range of factors affect both our individual and communal futures: some are external, sometimes ungovernable factors, such as our geographical location or the democratic integrity of our local governing party, whereas others are related to more personal protected characteristics, such as race, sex and gender, health or wealth.

Relatively small differences in our personal or community context can lead to big differences in our resilience against social or economic changes: for example, a proposed taxation or healthcare policy will have different implications for Jeff Bezos than it will for a similarly aged white man who works in an Amazon warehouse, even if both men live in the same state. Meanwhile, the world view of both men will be shaped by the political, economic and social context in which they exist and the value systems that they support. The extent to which these two men have shared "futures" is debatable.

Moreover, at a bigger scale, the dominant lens through which global events are viewed tends to be located in the Global North and constrained by normative, capitalist assumptions. This can be seen particularly in scenario planning for the climate crisis, in which data and research methods from the Global North are expected to be universally applicable.

Lastly, the future can be quite literally plural because it is just not possible to predict. From its uses in military defense planning, it is clear that anticipation can be a strategically useful way of determining the future:

"A sound strategic process is not, or at least should not be, an exercise in eliminating uncertainty and making smart choices based on a clear-cut prediction… The goal in prudent defense planning is to avoid optimization for one world, to plan flexibly, adaptively and inclusively."[6]

1.1 Who gets to have foresight?

To understand contemporary perceptions and framing of foresight, eleven practitioners from Bolivia, Canada, Germany, India, Kenya, Netherlands, US and UK, representing think tanks, future labs, research and training institutes, and private industry companies, aid organisations and advocacy projects were invited to present their experiences of foresight across grassroots movements, big tech, funders, government agencies and cultural institutes.

We know two things about unexpected events: first, they always occur, and second, when they do occur, they are always unexpected. (Donald A. Norman, The Design of Future Things)[7]

Don Norman's famous assertion quoted is a piece of advice for technology designers working with automation, but it is also a useful starting point for any consideration of foresight in the context of human and digital rights because it gives rise to a number of other questions – the first of which is, unexpected events are unexpected by whom? One interviewee, a long time practitioner in civil society, said

[2] Totti Könnölä, Ville Brummer, and Ahti Salo, "Diversity in Foresight: Insights from the Fostering of Innovation Ideas," Technological Forecasting and Social Change 74 (June 1, 2007): 608–26, https://doi.org/10.1016/j.techfore.2006.11.003.

[3] Philip Tetlock and Dan Gardner, Superforecasting: The Art and Science of Prediction (London: Penguin, 2015).

[4] Quoted in Arturo Escobar, Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds (Durham and London: Duke University Press, 2018)., p. 4

[5] For more on relational foresight, see Coldicutt, Dent, and Barron, "A Constellation of Possible Futures: The Civil Society Foresight Observatory Report."

[6] F. G. Hoffman, "The Future Is Plural: Multiple Futures for Tomorrow," Joint Force Quarterly, no. 88 (Quarter 2018), https://ndupress.ndu.edu/Media/News/News-Article-View/Article/1411221/the-future-is-plural-multiple-futures-for-to morrows-joint-force/.

[7] Donald A. Norman, The Design of Future Things (New York: Basic, 2007)., p. 12

she does not do foresight because, "I immediately get to questions of like 'foresight for whom and in what context and with what perspective?'"

As with so many other aspects of technology and its development, who is given permission to express their expectations, and whose expectations are prioritised and listened to is a product of established power dynamics rather than a reflection of any natural anticipatory ability. As Scott Smith and Madeline Ashby say in How to Future, "Uncertainty requires space, time and resources to explore, understand and value in a useful way, which makes it very difficult to put a price on and budget for."[8]

Through the interview process with the eleven practitioners experiences emerged with perspectives from grassroots movements, big tech, funders, government agencies and cultural institutes to weigh in on foresight by first questioning the framing.

When interviewed, a practitioner from the Global South expanded on the notion that for some foresight is not just an exercise by explaining,

"When you're from a certain part of the world and you're entering a space like international affairs or tech governance or whatever is happening in the global realm, you're always going in with foresight as a methodology anyway because you're already living at the intersection of multiple crises."

1.2 Reframing foresight

The space, time and resources to practise formal foresight are not equally distributed between civil society, the market and the state. In the field of digital rights, civil society is at an immediate disadvantage in this kind of formal, report-based futuring because the work of navigating between the past, present and future is dynamic and ongoing, and is often unrecognised by dominant power.

In the course of this research, we were confronted with the question, "Is there sufficient foresight among the people asking for the foresight?" – and all respondents reframed the concept of foresight to centre an approach to change-making that they felt was more important.

One of our prominent respondents, Steve Song, delivered key wisdom here, "We're not just trying to predict the future, we're trying to predict a better future."

One practitioner highlighted the problem that if we ignore what is fundamental about digital human rights, we will be poor "seers" into the future:

"In most places and with all of these platforms, no one is questioning should these platforms be there or not or

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[8] Scott Smith and Madeline Ashby, How to Future: Leading and Sense-Making in an Age of Hyperchange (Kogan Page Inspire, 2020)., p. 20

should there be proper rules or regulations or not. But everyone is talking beyond that."

Another interviewee felt the "digital" futures frame was most limiting:

"We think of technology as a mirror of society so you have to understand what's happening politically and socially and culturally."

Future versus present

As highlighted by the practitioners we spoke with in this work, the first potential way of reframing foresight involves considering the utility of knowing the present, rather than looking to the future, with one commenting,

"We don't point to something in the future and work towards it. We really work from the present and move towards the future."

This may have specific dimensions in the digital technology sector where future-hype is ubiquitous.

At the same time, it is important to question what use there is in unpacking undesirable futures if we do so from what one interviewee described as the "undesirable present". A practitioner-scholar studying disinformation in Black communities in the United States said the following:

"Some of the things we tend to do as a movement is operate very present. It's the day to day and what's the thing happening right now and what's in front of us that we have to get through or deal with.

"I think the right's success in having their way on so many different things despite being the minority ideology in this country means we just have to shut up and align. If we take time to discuss this and live in the foresight aspects of this, they're gonna win and we're going to be talking to president Ted Cruz."

Furthermore, arguing that what is future and what is present is a function of perspective, another practitioner recalls her participation in a scenarios foresighting exercise:

"We did four basic scenarios. Everyone started talking about what are we going to do about the future? How do we prepare for it? What are the foresight mechanisms required? And I waited for a lot of the hubbub to calm and I said, 'every one of these scenarios that you see as futures are present somewhere else in the world.' I can tell you exactly where each of these scenarios are happening in different movements and communities of mine."

Practitioners echoed one another on this point, and a director of an organisation in India that provides internet access and direct services to the poor took the thought further by actually bringing the urgencies of the future-present and the present together, "everything is

connected; therefore it doesn't matter whether only Myanmar is suffering, I think if Myanmar is suffering, that means it is a sign that everybody else is also suffering."

Furthermore, the inter-relationship of the present and future was a constant theme. A future labs practitioner noted the importance of, "working from the current status quo and finding what is better and what we want to see grow," saying that " futuring [should be perceived as is] a verb rather than as a noun." Another respondent framed the space between now and next in similar terms, saying, "It's good to think about the future but I think it''s good to think about the future in terms of resilience and the present in terms of being adaptive and creating systems that can cope with being surprised."

Overall, reframing the focus of foresight to further consider contemporary issues and experiences may enhance our ability to conceptualise and work towards a better future.

Future versus past

Aside from the links between the present and future, one respondent affirmed Zapatista's wisdom regarding future pluralities by pointing out that the past has utility for the future, but also the present: "It's that moving back and understanding that historical context and then it's like, what does that tell us not just about the present but about the future." Observing that the relationship between the future and the past is more dynamic than is often admitted, another practitioner said:

"The concept of knowledge justice, which we define as the ways in which those who are marginalised by historical structures of power and privilege or ongoing structures of power and privilege, can be centred in both their leadership, their design and their knowledges to reimagine and redesign our presents and our futures."

Moreover, unequal distribution of power and status means that not everyone's experience is truly counted as happening in the present. The dangers of considering the lives and experiences of marginalised people as somehow happening in the future rather than as indicators of present and urgent concerns were highlighted again and again in our research:

"when you look back over the course of history or anything about something that's happened to people at scale, there's always a story about how it happened to a minority group first that was ignored."

"If you were asking Black women ten years ago, or asking trans folks ten years ago their experience of the internet, they would be telling you what everyone is experiencing right now … as much as the future is unwritten, history tends to move in patterns."

This imbalance is critical, and it displaces lessons that could, and should, have been learnt from the past into being unknowable problems of the future. The weaving of

foresight with history was a recurring theme in this research, with different respondents building consensus through their aligned comments as follows:

"We can't get to whose futures without understanding the past."

"When is foresight not foresight but a much more nuanced, thoughtful, humble understanding of history?"

"Long-term experience is often reflecting on and thinking about the future in reflection with collecting the knowledge about the past"

"Being able to go into archives of historical Black or local papers can also help you understand how people were responding in that time in ways that may be cut out of history books and then that can help me understand a little more what responses happen."

Therefore, as well as considering the present state in foresight, it is also key to incorporate fundamental knowledge of past issues and experiences across groups and sectors in order to inform future design.

Beyond technocratic ways of seeing

The possible arrogance of looking to the future and embracing a technical, rather than political or social, framing comes with a complex set of risks. Among high-status technologists, there can be a tendency to rationalise, but several respondents commented that removing complexity does not sufficiently honour the nature of the problems being confronted:

"In being the techies and the social scientists and activists and artists at the intersections of these very, very difficult and complex questions is not get drawn into the hubris of tech itself, which is to construct frames in which we are thinking of futures with what can border on arrogance when we're not looking at the past and the present."

"If we let ourselves marinate in the discomfort of everything will be unstructured maybe then you have that flexibility that is afforded to people to do what seems unconventional but has accommodated things that maybe they can't put to methodological rigour at this point but maybe as a retrospective activity then lessons learned kind of thing to help inform that methodology after the fact."

Resisting the inevitability of technology is an essential part of this:

"Are we reacting to what is an inexorable force of technological change, or are we instrumenting changes to reshape the flow of technology? It's this kind of McLuhan-esqe 'tools shaping our tools.'[9] I think to some

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[9] Culkin, J.M. (1967, March 18). A schoolman's guide to Marshall McLuhan. Saturday Review, pp. 51-53, 71-72

degree we give up too much to technology. We allow this sense that technology is an inexorable force."

2. Challenges in futuring

Foresight can be framed effectively to include considerations of the present and past. However, there are inherent challenges in futuring, especially in the digital sector, that need to be understood in order to be addressed effectively. For example, one respondent posed an obvious paradox in futuring for the internet:

"Leaving those without access further and further behind because the tools are available for those who are connected and unavailable to those without. That's a more obscure problem. When I mean obscure I mean dark, I mean it's not visible because those without access are invisible by definition."

All things being equal in terms of reconciling perspectives, there exist practical challenges to civil society attempting to engage in futuring: time, money, and tools. There are counter forces which are essentially sectoral inequalities in the form of power, influence and data.

2.1 Capacity and Resources

Everyone interviewed as part of the study spoke to issues regarding practical challenges in futuring the internet – specifically the difficulties of running an organisation in the present while considering the future, and potentially working with funders more focused on the past:

"We need money to bring in and also keep the big brains in our sector, like the really credible voices"

"We cannot decouple the role of civil society and anticipating or being a participant in foresight when their own foresight is about whether they will have the money to run the programme next month."

"Unfortunately how resources for advocacy are structured creates this dynamic [where] there's a matter of challenging the way we can invest differently"

"So I have never had a single international advocacy organisation ask me, 'What problem we are facing in the digital rights area and can you give me for example in which we can provide you the funding?' No."

"We need to as a funding organisation or as a funded organisation move away from programme and project based funding, to concept based, philosophy based and open support system."

"Because as an NGO that doesn't get paid to write stuff, you know that's not part of our grants, we find it hard to share our insights with people and maybe we'd like to do more of that and we don't have any formal programme for learning and reflection because of funding."

"It's not just that funders don't really know and they're a bit slow, it's that you might be causing trouble in a way that they don't want you to. That's a real problem for funding. There may be a natural disconnect between real foresight and the funding environment."

"The push towards actually monetising what it is that you're trying to build becomes extreme and then the pressure from your backers may overwhelm the organisation to do something."

Moreover, in a dynamic and frequently changing market such as digital technology, new rights abuses and social harms arise with alarming regularity, sometimes across a broad range of related topics, and so digital rights groups are often forced to spread themselves thinly; this is not always conducive to establishing campaigning or advocacy functions, let alone the development of well-articulated scenarios or speculative alternatives. Turning rapid response decisions into well-developed foresight scenarios or policy positions takes time, which means that existing anticipatory capacity within the sector can remain dormant and unrealised – discussed by activists on backchannels, but rarely given the support to be formally published or disseminated.

2.2 Sectoral Inequalities

Inequalities in funding, status and power mean that the most listened-to voices often represent incumbent power – both within and without the digital rights sector. The social and financial capital of corporate lobbyists means they have the money and influence required to create norms, and they over-represent a relatively minority interest. As one of the scholars and campaigners we spoke with observed:

"Who are the different countries and the leadership from those different countries and whose expertise do we even value is a question that we need to answer and think about as a movement"

This is unpacked further in the case studies given in sections 2.4 and 2.5, but it is notable that all respondents were in agreement that experience and expertise do not always turn into credibility and influence with legislators and other influential stakeholders. A practitioner sitting in both the civil society and the private sector commented:

"If you aren't running a start-up or somehow creating some new engineering innovation, we don't necessarily value people who are just reflecting on the implications of how our society is changing and whether it's for the better or how."

This idea was echoed elsewhere:

"[In the] political landscape in the Netherlands and to some extent in Europe, I find that people talking to politicians about technology are commercial companies with an

interest in furthering the interest in their commercial company, and there are fewer organisations."

"I would say that international advocacy networks and international advocacy organisations are extremely patriarchal and very white"

Trust in established forms of power can reduce the real and perceived efficacy of digital rights work in a number of ways.

One serious risk raised was the co-option of credibility by tech lobbyists, who are perceived to have created the benchmark for "actionability"; this means that digital rights activities that do gain cut through might inadvertently "seek alignment with the existing systems".

This co-option of the modes and means of credible communication can also mean that when concerns are raised, they are often ignored. For instance, a European digital rights expert observed the following:

"We kind of predicted that because it was self-regulatory framework that none of the platforms would actually do what they promised in the code, and in addition the code wasn't entirely specific, and the people who were doing the analysis weren't entirely technical and so, like, Facebook could walk into the room with a report and just bamboozle people with all of this tech speak"

While this "bamboozling" perhaps speaks to a lack of technical literacy from legislators and others, it almost certainly also speaks to what one respondent called "proximity bias" and the co-option of broader effort for the service of business rather than humanity. It is also worth noting that this bias may be heightened by the easy transition of policy staff between government and corporate roles.

This bias can lead to alienation within civil society – with one well-respected leader in the field commenting, "the lifespan of people who stay in the NGO sector is quite small".

2.3 Turning foresight into action

Limited resources do not only limit cut-through; they can also limit the potential of informal foresight activity to surface in the first place – or subsequently turn into action. One campaigner observed that the exhaustive nature of planning for grant funding left little room to manoeuvre:

"If you're giving us a £1m donation or a grant to do digital literacy that it also includes research component, advocacy, gender, everything is included from our internal planning"

Meanwhile, the founder of a successful civic tech NGO observed that their work was enabled by the freedom to have a team who were good at noticing things and communicating, not simply developing programmatic project work:

"The key thing that facilitated that ability was having a strong group of clever people around who paid attention to not just the news but to consumer behaviours and who simply kept talking and swapped knowledge."

Likewise, the importance of informal cross-sector connections was flagged:

"Some of the work we've done on data around the Glassroom has come from sitting with designers from Google and realizing that the NGO conversation is very far away from the corporate conversation"

The former Google staff member we spoke with supported the need to sit with complexity raised in Section 1, making the case against unnecessary solutionising:

"People assume slowness is bad, but it's a good thing when you're dealing with quite a controversial topic; so to the extent where it's possible to draw lines to show where things could head if they go off the rails, at least in a fully working democratic process, with time for public debate, you then could control it".

It was generally acknowledged by the interviewees that the loss of advance opportunity created by project and/or precarious funding is further compounded by the fact that raising awareness of harms is not enough. Being able to follow through and create an alternative is also vital:

"Regardless, with very few resources we were still able to do this in Kenya, Nigeria, Myanmar, South Sudan, and now everyone's all about content moderation and trying to use maching learning to figure that stuff out; but imagine if they had supported us then, and maybe because it was us, just a bunch of Nairobians trying to do this it just sounded like 'yeah, yeah, yeah you're shotting a shot too far up.' Including companies by the way, this wasn't just a funding problem from philanthropy, it was a funding problem from the companies because we had access to them but we could not get research grants; we couldn't get access to the APIs and so on. But you'd see the bigger Stanford types getting them. We were right, and look at the problem today."

One funding advisor and former charity CEO observed the following:

"It would be the wrong conclusion to produce a report that says there's not enough foresight and NGOs don't do enough foresight. Instead it would be more valid to say NGOs are constantly and endlessly spotting things that could go wrong and then they can't react because they don't have the capabilities. That's where I think the weakness is."

Furthermore, the platform engineer we spoke with commented on the penalties incurred by not being able to follow through:

"You could have done all the foresight you would have liked, but if you can't act on the metrics that you're supposed to be tracking because you no longer have

control of the infrastructure that you built, it's kind of a waste of time"

2.4 Experts by experience

In reality, many effective civil society interventions are the product of experts rapidly deploying anticipatory knowledge to mitigate human rights abuses or other worse-case scenarios, but this knowledge is frequently not written up, and it certainly does not turn into shiny reports or short videos filled with pithy soundbites. It also does not always emanate from formal digital rights groups, but often from the communities directly affected by these harms.

One well-known example of community-driven anticipatory knowledge is the "Your Slip is Showing" campaign. This campaign is now considered to be an early warning sign of ways trolling could be used to undermine democracy and grow social unrest, but it did not attract widespread attention from policymakers or platforms. As Sydette Harry pointed out at the time, "What goes unmentioned is that social capital and safety are often key to being able to go public"[10], and Harry's continued advocacy has been one of the factors that has raised awareness of the campaign among digital activists over time.

Specifically, in 2014, bloggers Shafiqah Hudson and I'Nasah Crockett started to notice alt-right trolls posing on Twitter as young Black women and voicing extreme political opinions. This was later understood to be part of a concerted effort to grow political division and part of a Russian propaganda operation.

Hudson and Crockett picked up on a range of social and linguistic clues and identified this as "sock puppeting"; together, they instigated a social campaign, #YourSlipIsShowing, to bring it to public notice. The complex nexus of harms bundled here included broad social harm to a protected class (specifically, damaging the credibility of young Black women), sowing social division, and potentially interfering in an election campaign. A profile of Hudson and Crockett in Slate magazine contains the following insight:

"At its core, after all, #YourSlipIsShowing wasn't created for traditionally white, male gatekeepers. Both Hudson and Crockett agree on what's gotten them through all of this: the network of women this hashtag has connected. 'The community of black women that I've built kind of represents the promise of the internet to me, or the promise of social media,' Crockett told me. 'We just remind each other that we're more than whatever happened to us online.'"[11]

Building a more effective pipeline from this kind of anticipatory action to policy changes is not a technosocial problem; instead, it is indicative of bigger structural biases that determine whose knowledge is considered to be credible and whose interests are considered worth protecting by "traditionally white, male gatekeepers".

The most significant structural blocker is, of course, who has the opportunity to be a gatekeeper; changing this is an important, long-term fix. However, more specifically, as concerned community members, Hudson and Crockett's work was self-supported; there was no available existing infrastructure to support their efforts. Even if their purpose had been to target "traditional gatekeepers" such as legislators, media companies or the Twitter leadership team, there was not a well-trodden path for making that happen, and little in the way of infrastructure to lift up and amplify their efforts.

Nanjira Sambuli notes that the foresight of those working with organisational support, within recognised civil society organisations, is also often overlooked:

"[civil society] organisations have long been a bellwether for the risks and harms that… digital fervour imposes. However, civil society is woefully under-resourced and even undermined in an ecosystem that prioritises digital innovation and quantifiable metrics, whether or not they are appropriate in varied contexts."

Sambuli proposes the need for more "patient capital" deployed in a more respectful manner:

"I therefore propose a more modest role for philanthropy in the digital disruptions and transitions we are navigating. One of listening — widely, carefully and humbly — to those who are living through the day to day translations of this digitalisation era. From communities dealing with the extraction effects of the minerals and materials powering our shiny gadgets, to those for whom welfare is no longer accessible because a digital system introduced for efficiency has led to their exclusion! Such constituencies deserve to not only be heard when discussing the harms they are already facing, but also — and especially — when conceptualising and designing digital interventions; much in the same way we listen to the tech architects and dreamers who are an extremely unrepresentative sample of the end-user or 'beneficiary'. We urgently need patient intellectual and moral capital to accompany the financial

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[10] Sydette Harry, "Everyone Watches, Nobody Sees: How Black Women Disrupt Surveillance Theory," Model View Culture (blog), accessed December 21, 2021, https://modelviewculture.com/pieces/everyone-watches-nobody-sees-how-black-women-disrupt-surveillance-theory.

[11] Rachelle Hampton, "The Black Feminists Who Saw the Alt-Right Threat Coming," Slate, April 23, 2019, https://slate.com/technology/2019/04/black-feminists-alt-right-twitter-gamergate.html.

investments that are and will be made to facilitate digital transitions."[12]

The authors will take editorial licence to remind readers that in the metaphor "canary in the coal mine", the canary dies. Cassandra, the priestess who tells true prophesies that are never believed, is raped and murdered in the Trojan War. We owe protection and appreciation to leaders telling us the truth about our past, present and future. One respondent reminds us that there is a power asymmetry at play: "The canary in the coal mine refers to me the ways in which the big tech, the more extreme problems about big tech, are most importantly being shown in these communities outside of Europe and the US." Great sacrifice in the past should inspire us to action for the future, as one respondent says: "For people that were doing media work, there was an ability to predict [the more extreme problems about big tech], particularly for people doing media work on behalf of marginalised communities, because we had seen this happen before. We'd seen what happens when we lose that voice and our newspapers are gone."

2.5 High status, low status

Drawing on core differences between the dominant Western tradition and the Afro-feminist perspective, Brandi Collins-Dexter identifies two types of knowing: knowledge and wisdom. Knowledge is closely tied to what Collins calls "book learning" — learning that emerges from reasoning about the world from a distance in a rational way. This form of knowledge aspires to arrive at "an objective truth" that transcends context, time, specific and particular conditions, and lived experiences. Wisdom, on the other hand, is grounded in concrete lived experience.[13]

However, a basis in lived experience does not confer the sort of strategic status that consulting firms such as McKinsey capitalise on when delivering influential programmes or advising governments and NGOs.[14] Instead, the status of being an expert by experience is more likely to be hard-won in the face of systematic barriers and oppression. This additional intensity of effort required to become this type of expert is a limiting factor in the effectiveness of more informal modes of foresight.

Indeed, the perceived disconnection between relatively low-status information from lived experience and high-status, official-seeming anticipatory knowledge means that civil society's contribution to policy debates can easily become pigeonholed as "only" relating to delivery or practical action; while this approach is often praised by funding bodies,[15] it must go hand-in-hand with long-term campaigning to support legislative change or affect corporate behaviour, and does not easily generate strategic advantage in established Western corporate or governmental settings without additional academic or similar high-status support. Paraphrasing Patricia Hill Collins, Abeba Birhane notes that "knowledge and understanding emerge from concrete lived experiences". Therefore, these assumedly "low status" forms of knowledge deserve more attention.

Meanwhile, the social imperative for rights groups to focus on urgent actions and mitigations[16] speaks to both the relative status of different forms of knowledge and to a broader disconnect between the outcomes that drive corporate investment and those that influence philanthropic funders.

Indeed, anyone who works at a not-for-profit organisation can attest to the fact that application forms for charitable funding are often project-based and seek specific delivery details and evidence of productive activity and short-term change — this downgrades the possibility for speculation or long-term strategic development, which is then easily pushed to the margins and never fully articulated. This can confine rights groups to being restricted to the Overton Window rather than being able to shift this window to a more beneficial view.

2.6 Systematic barriers

In spite of this variety, the human project of sense-making tends to default to a small number of narrative norms and ontological frameworks, thus creating systematic barriers to change. Indeed, as documented in S.1.1, social capital and status are often pre-conditions for influence, particularly for complex ideas, and the intellectual cut-through gained by entrepreneurs such as Elon Musk is an object lesson in how financial capital can generate uncritical respect.

By its nature, the diverse field of digital rights is constantly in dialogue with the dominant norms and frameworks created by the technology industry, and the close coupling of industrial and entrepreneurial investment with both

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[12] Nanjira Sambuli, "On the Patient Capital Needed from Philanthropy in Tech.," WINGS, accessed January 5, 2022, https://members.wingsweb.org/news/38241.

[13] Abeba Birhane, "Algorithmic Injustice: A Relational Ethics Approach," Patterns 2, no. 2 (February 12, 2021): 100205, https://doi.org/10.1016/j.patter.2021.100205.

[14] Examples of this are numerous, but e.g. https://www.vox.com/science-and-health/2019/12/13/21004456/bill-gates-mckinsey-global-public-health-bcg

[15] For instance: https://www.tnlcommunityfund.org.uk/news/press-releases/2021-10-18/putting-communities-first

[16] Jack Larkham, "Hysteresis in the Making: Pandemic Scars and the Charity Sector," Pro Bono Economics, November 2021, https://www.probonoeconomics.com/pandemic-scars-and-the-charity-sector.

digital civil society and academia[17] may be an intentional move to thwart the expansion and pursuit of critical and alternative thinking.

For legislators, the financial incentives offered by technological growth and unchecked market expansion during the earlier decades of the 21st Century led to the prioritisation of these market-driven narratives; this is shifting a little with the introduction of some more critical, socially-minded reforms in the US, EU and UK, but this new field of influence is still emergent at best, and the alternative narrative constructs are still in development.

The fact that new narrative constructs are still only in emergence is in part because – in the Global North at least – dominant narratives about technology have been informed for the last 75 years by a relatively small number of people (mostly white, mostly men) who have made their fortune on the West coast of the United States.

While Vint Cerf and Tim Berners-Lee were creating the Internet and the World Wide Web respectively, there were others who were forming the ideological basis that informed how these technologies grew and were used. As Fred Turner notes, "Somehow, by the 1990s, [the computational] metaphor born at the heart of the military research establishment had become an emblem of... personal integrity, individualism, and collaborative sociability".[18] Turner identifies these values as being similar to those of the Free Speech Movement, which he sums up with the phrase "enlightened self-interest."[19] These values did not emerge by accident, but were in part the product of the Whole Earth Network, a conscious (and ultimately very profitable) effort in world-making and futuring that told the stories of emerging technologies through publications including the Whole Earth Catalogue and Wired magazine.

Over the subsequent three decades, the digital technology industry has had a relatively unusual opportunity to build on this and frame its own speculative narratives. From investor decks that project hyperbolic levels of success to highly produced product launches, such as the widely copied Apple Keynote Events, these marketing and fundraising efforts are also attempts to frame a set of

possible futures and demonstrate what their achievement will look like.

However, as Timnit Gebru recently wrote in The Guardian,

"what truly stifles innovation is the current arrangement where a few people build harmful technology and others constantly work to prevent harm, unable to find the time, space or resources to implement their own vision of the future."[20]

Problematically, the field of digital rights is pitched time and again as a foil for both governments and industry, not as a place for dreaming or visioning. This effaces and normalises the values and experience[21] of those who are not a part of the powerful minority that get to tell their story and frame their future, and it assumes that only one future is possible at a time: that the version of the future told in Silicon Valley is ineluctable and can only be diverted, not replaced by or be able to coexist alongside other possible futures.

In "Algorithmic Injustice: A Relational Ethics Approach", Abeba Birhane makes the case for moving away from a dichotomous, rational approach to technology towards a relational one – one that tolerates more "messiness, ambiguity, and uncertainty". Investment in better foresight capability in digital rights organisations is not a magic bullet; instead, it should be viewed as a long-term investment in a more diverse and ethical technology ecosystem.

3. Foresight methods

3.1 Formal foresight

In this section, we review three methods of formal foresight, including scenarios, empiricism, and speculation, and discuss their applicability for digital rights.

Scenarios

One of the most commonly employed methods of foresight is scenarios. Scenarios can be used in multiple ways, but in essence, most techniques seek to build a range of futures based on a few fixed social, economic, environmental or political factors. These futures often illustrate what would happen at extremes of the spectrum. The RAND Institute

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[17] See, for instance, Lucy Suchman and Meredith Whittaker, "The Myth of Artificial Intelligence," The American Prospect, December 8, 2021, https://prospect.org/api/content/7fc7f7c2-5781-11ec-987e-12f1225286c6/ on Eric Schmidt, and the work of Jack Poulson at Tech Inquiry "Tech Inquiry / InfluenceExplorer," GitLab, accessed December 21, 2021, https://gitlab.com/tech-inquiry/InfluenceExplorer.

[18] Fred Turner, From Counterculture to Cyberculture: Stewart Brand, the Whole Earth Network, and the Rise of Digital Utopianism (Chicago, IL: University of Chicago Press, 2008), p. 16

[19] Turner, 14.

[20] Timnit Gebru, "For Truly Ethical AI, Its Research Must Be Independent from Big Tech," The Guardian, December 6, 2021, sec. Opinion, https://www.theguardian.com/commentisfree/2021/dec/06/google-silicon-valley-ai-timnit-gebru.

[21] Escobar, Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds., p. xvi

in the USA first used scenarios in the 1940s, followed by the Stanford Research Institute.[22]

The use of scenarios was developed and pioneered in the private sector. The application of scenarios in the private sector is particularly associated with Shell, who in the 1970s and 1980s used scenario planning to prepare for the impact of external events on oil prices.[23] By the early 1990's, scenarios were being used in the public sector. A famous example of the use of scenarios by governments is the Mont Fleur exercise carried out in post-apartheid South Africa. Four scenarios were developed by a diverse group of 22 prominent South Africans – politicians, activists, academics, and businessmen, from across the ideological spectrum. One scenario – named Flight of the Flamingos – illustrated how a new South Africa, with equality between races, might flourish. The scenarios were credited with playing a role in persuading the National Party to accept a negotiated settlement and convincing the ANC of the need for a credible economic policy.[24] Mont Fleur worked under very specific political conditions, and attempts to replicate it in other contexts, for example the Israeli Palestinian conflict, have not met with success.[25] Although scenarios had proven to be successful in the context of private organisations where they originated, they proved to be more difficult to apply to geopolitical and social futures in the public sector.

There are some examples of scenarios being developed for digital rights, but scenarios are more commonly used as an internal exercise to inform programmes or research, meaning they are not publicly available. In 2018, the digital freedom fund held "Future-Proofing our Digital Rights" workshops to explore the right to get information about your own data, the right to delete the digital self, and the right to participate in digital expression. They developed future scenarios based on the brainstorming of future digital rights. Their goal was to make the abstract rights more tangible through narratives, focusing on the right to access social network infrastructure and the right to

disconnect.[26]   Similarly, Ranking Digital Rights have developed six scenarios under the topic of freedom of expression and nine scenarios under the topic of Privacy using a methodology detailed on their website[27].

Scenarios have not been successfully applied in all cases, because as with most foresight techniques, they are reductive and are unable to fairly account for the complexity of the real world. It is clear that we have to accept that such techniques are unlikely to account for this complexity, but currently these techniques tend to lack reflexivity and openness about their shortcomings. Instead, the language of foresight is carefully crafted to allude to creating more certainty or opportunities; for example, in " Managing the Future: Foresight in the Knowledge Economy", Chia presented the following aims and definition of foresight: "refine sensitivity for detecting and disclosing invisible, inarticulate or unconscious societal motives, aspirations, and preferences and of articulating them in such a way as to create novel opportunities hitherto unthought and hence unavailable to a society or organization".[28]

Another issue with scenario-based foresight was highlighted in an interview in this work, where one practitioner said, "We did a 2x2 matrix and you can imagine, optimism vs pessimism, x-y axes. So we have four basic scenarios. Everyone started talking about what are we going to do about the future? How do we prepare for it? What are the foresight mechanisms required? And I waited for a lot of the hubbub to calm and I said, 'every one of these scenarios that you see as futures are present somewhere else in the world.' I can tell you exactly where each of these scenarios are happening in different movements and communities of mine." This indicates that scenario planning introduces a paradox because foresighting "for whom" and "from which perspective" cannot easily be resolved for a global digital rights movement.

Empiricism

Aside from scenario-based foresight, many foresight publications show a reliance on developing an "empirical method" to gauge the potential of technology. For example, a 2013 foresight paper developed a novel method to estimate the probability of computerisation of 702 occupations by using a Gaussian process classifier and

[22] Rhydderch, 'Scenario Planning' (Foresight Horizon Scanning Centre, Government Office for Science, 2009), https://webarchive.nationalarchives.gov.uk/ukgwa/2014010 8141323/http://www.bis.gov.uk/assets/foresight/docs/horiz on-scanning-centre/foresight_scenario_planning.pdf.

[23] Shell, 'Earlier Scenarios', 2018, https://www.shell.com/energy-and-innovation/the-energy-f uture/scenarios/new-lenses-on-the-future/earlier-scenarios. html.

[24] Ian Taylor, Stuck in Middle GEAR: South Africa's Post-Apartheid Foreign Relations (Greenwood Publishing Group, 2001).

[25] G. Sussman, 'Searching for Flamingos in Israel: The Pitfalls of Mixing Scenarios and Negotiations', 2004, https://doi.org/10.1057/PALGRAVE.DEVELOPMENT.110 0083.

[26] https://digitalfreedomfund.org/future-scenarios-visions-abo ut-digital-rights-beyond-the-here-and-now

[27] https://rankingdigitalrights.org/project-documents/risk-scen arios/

[28] R Chia, '"Re-Educating Attention: What Is Foresight and How Is It Cultivated?"', p 22 in Managing the Future: Foresight in the Knowledge Economy, ed. H. Tsoukas and J Shepard (MA: Blackwell, 2004).

found that about 47% of the total US population had jobs that were "at risk" of computerisation[29]. This paper employed mathematical and statistical techniques to predict the effects of machine learning and mobile robotics on employment, thus applying a distinctly empirical method to assess the future.

This type of foresight produces perceived certainty about the unknowns to quell demand for "qualified information about the future"[30]. In this context, it is clear that technological forecasting is required to act as a strategic tool driven by economic demands. "In uncertain environments characterized by strong competition between companies and countries…technological forecasting provides 'difficult-to-acquire strategic information for decision making and it functions as a socioeconomic mobilization tool'"[31]. In this sense, traditional empirical approaches build perceived certainty in order to facilitate the role of technology in economic growth.

However, authors in the social sciences have asserted that it is ontologically impossible to apply empirical methods to phenomena yet to happen. For example, Tuomi argues that we live in a time when failures in prediction indicate the need to collect more data to develop better models, yet he argues that this assumption cannot be applied to events that have not yet happened because the future is an ontological expansion[32]. Tuomi further states that we create fictional certainty by weaving past constructed narrative through the present and into the future[33]. Moreover, Regner argues that the future emerges in a place where there are no facts, and thus standard methods of measurement cannot be applied[34].

Indeed, the empirical approach is problematic because empiricism is truth or fact finding, suggesting there is a correct and singular vision for the future. However, competing visions about the future are sometimes produced by such empirical modelling. This is particularly the case for science and technology, with some asserting that technology will eventually emancipate humans from work[35] and others predicting that it will exacerbate existing inequality in the future[36].

The fundamental limitation in this context is that traditional foresight methods are probabilistic and designed to create certainty through their own discourse, which is distinctly rooted in the present. Although this supports investment and allows for the planning of regulations and frameworks, the certainty is purely constructed through this discourse, and this happens in two key ways. First, Berkhout explains how multiple expectations about the future exist as "bids"; they are not always collectively[37] accepted, but the bids that allow for many flexible interpretations will gain the most support. This demonstrates that there is variety in perception of the future. Secondly, Harro van Lente[38] points out that the perception of uncertainty is relational; those close to the innovation experience a higher perception of uncertainty compared to consumers, for example. Overall, since there is variety in perceptions of the future and uncertainty itself is contextual and not universal, then certainty cannot be universal either. Therefore, the influence of traditional techniques which claim to bring certainty to the future through an empirical method must be critically questioned as the use of these techniques may lead to entrenching of present bias and inequalities in the future.

Speculation

Speculation could provide the conceptual, methodological, or practical tools to overcome the problem of relying on futures that are a mere extension of the present. Indeed, we require strategies to understand the future for social and technological development, yet Valery has described our attitude to the future as inadequate, saying "we enter the future backwards"[39] meaning that it is very hard to conceptualise alternative futures outside of our current

[29] C Benedikt Frey and M Osborne, 'The Future of Employment: How Susceptible Are Jobs to Computerisation? | Publications', Oxford Martin School, September 2013, http://www.oxfordmartin.ox.ac.uk/publications/view/1314.

[30] López Peláez, 'From the Digital Divide to the Robotics Divide? Reflections on Technology, Power, and Social Change', p13 in The Robotics Divide, ed. Antonio López Peláez (London: Springer London, 2014), 5–24, http://link.springer.com/10.1007/978-1-4471-5358-0_2.

[31] ibid

[32] Ilkka Tuomi, 'Foresight in an Unpredictable World', Technology Analysis & Strategic Management 24, no. 8 (September 2012): 735–51, https://doi.org/10.1080/09537325.2012.715476.

[34] Patrick Regnér, 'Strategy Creation in the Periphery: Inductive Versus Deductive Strategy Making*', Journal of Management Studies 40, no. 1 (1 January 2003): 57–82, https://doi.org/10.1111/1467-6486.t01-1-00004.

[35] Heilbroner and Jeremy Rifkin, The End of Work: The Decline of the Global Labor Force and the Dawn of the Post-Market Era, New edition edition (New York: Jeremy P Tarcher/Putnam, 1997).

[36] Lopez, Daneau, and Rosoff, 'The Individual Video Experience (IVE): The IPod as an Educational Tool in the Museum'.

[37] Frans Berkhout, 'Normative Expectations in Systems Innovation', Technology Analysis & Strategic Management 18, no. 3–4 (1 July 2006): 299–311, https://doi.org/10.1080/09537320600777010.

[38] Harro van Lente, 'Navigating Foresight in a Sea of Expectations: Lessons from the Sociology of Expectations', (p775) Technology Analysis & Strategic Management 24, no. 8 (September 2012): 769–82, https://doi.org/10.1080/09537325.2012.715478.

[39] Paul Valery, 'Regards Sur Le Monde Actuel et Autres Essais - Folio Essais - Folio - GALLIMARD - Site Gallimard', 1988, http://www.gallimard.fr/Catalogue/GALLIMARD/Folio/Folio-essais/Regards-sur-le-monde-actuel-et-autres-essais.

context. There are many ways to understand speculation as an alternative way of thinking, yet the common thread is creating and supporting a certain sensibility about the future. This sensibility is concerned with the contingent, unexpected and inherently unpredictable nature of the future. It allows new ways of thinking about temporality that detach from liner notions.

The work of Isabelle Stengers is widely cited in the field of speculation[40]. Stengers attempts to dispel post-enlightenment claims of science being supreme and universal. Building on the work of philosophers such as Deleuze, Stengers puts forward a "tool for thinking" which she called "The Ecology of Practices"[41]. Specifically, she presents a philosophical analysis and tools for thinking and reflecting on the way in which certain "practices" exist and produce "co-becoming" in mutual symbiosis. Co-becoming explains the relation of entities, such as practices, and assumes that no entity has meaning external to its relation to others. Two entities come together and are changed through interactions, but they do not have to have a "common definition of understanding". Deleuze and Guattari describe this with the example of the wasp and the orchid; the wasp seeks the orchid for nectar, the orchid seeks the insect for pollination, and they remain differently "reasoning" co-evolving species[42]. Stengers argues some key points regarding the structure of the ecology of practices; she asserts that for an ecology of practices to exist, we must move away from assuming the "thinkers task as one of enlightenment", one that is truth finding in order to "subvert the hegemonic languages and social structures"[43]. She advocates moving away from this thinking in order to denounce the notion that "only the truth will set you free"[44]. Instead, the "ecology of practice" for foresight would ask what demands or requirements are made by the practice and what particular obligations the practice imposes upon the practitioner.

The ecology of practices is, therefore, an alternative way of thinking about how we think. It is a concept that might allow a move away from linearity in the way we think and away from the idea of constant progress. "It is clearly hard to think without reference to a kind of progress that would justify its past as a path leading to our present and future. The ecology of practice has this ambition [to move away from the idea of causal linearity]"[45]. A key influence of speculative practice on foresight is its avocation of moving from a highly constrained way of relating, to one in which many discourses (or ways of understanding) exist, creating less certainty with regard to the future. Furthremore, foresight within institutions such as think-tanks generally remains in the realm of the probable, configured by way of formalised techniques and methods. Speculation could provide a route to open up these processes to the possibilistic.

Much speculative literature represents methods for thinking with respect to speculation; however, some authors actively argue that speculation itself is not a method[46]. A key reason for establishing the boundaries of speculation is to allow the judgment of examples of speculation and, thus, establish if they are worthwhile or not. For Whitehead, "propositions" are important[47]. Propositions elicit feelings, thus allowing imagination to unfold. Subsequently, once we have imagination, Whitehead differentiates imagination and speculation: imagination becomes speculation when "the applicability of its results [are] beyond the restricted locus from which it originated"[48]. A speculation, therefore, has to be applicable outside its own domain to be considered speculation and not mere imagination. Stengers argues a very similar point, suggesting that speculation is not a free for all and can only occur when the thinker leaves the ground of agreed human conventions[49]. This is a similar notion to the one expressed by Whitehead, that this openness involves moving away from the certainties of the immediate situation and "jumping" away from your ground. We do not transcend our problems, which provide us with the ground to jump; rather. the ground allows us to speculate at the moment of the jump[50]. The key point for Stengers and Whitehead is the risk and faith in taking the jump.
A possible challenge with the paradigm to define and reclaim speculation is that speculation is not an impartial

[40] Mike Michael et al., 'Manifesto on Art, Design and Social Science - Method as Speculative Event', Leonardo, 15 September 2014, https://doi.org/10.1162/LEON_a_00928; Alex Wilkie, 'Prototyping as Event: Designing the Future of Obesity', Journal of Cultural Economy 7, no. 4 (2 October 2014): 476–92, https://doi.org/10.1080/17530350.2013.859631; A. Wilkie and M. Michael, 'Expectation and Mobilisation: Enacting Future Users', Science, Technology & Human Values 34, no. 4 (1 July 2009): 502–22, https://doi.org/10.1177/0162243908329188.
[41] Isabelle Stengers, 'Introductory Notes on an Ecology of Practices', Cultural Studies Review 11, no. 1 (12 August 2013): 183, https://doi.org/10.5130/csr.v11i1.3459.
[42] Gilles Deleuze and Felix Guattari, A Thousand Plateaus: Capitalism and Schizophrenia, trans. Brian Massumi, 1 edition (Minneapolis: University of Minnesota Press, 1987).
[43] Stengers, 'Introductory Notes on an Ecology of Practices'.
[44] ibid 187

[45] ibid 183
[46] M. Halewood, 'Situated Speculation as a Constraint on Thought', 2017, 52–64, http://repository.essex.ac.uk/20163/; Savransky, Wilkie, and Rosengarten, 'The Lure of Possible Futures'.
[47] Alfred North Whitehead, David Ray Griffin, and Donald W Sherburne, Process and Reality: An Essay in Cosmology (New York: Free Press, 1978).
[48] Whitehead, Griffin, and Sherburne.
[49] Isabelle Stengers, Cosmopolitics I, trans. Robert Bononno (Minneapolis: University of Minnesota Press, 2010).
[50] Stengers.

tool for thought. It is also not a tool that allows us to practically improve upon the building of futures in practice, but instead highlights what is wrong in practice now and shows the limitations of knowledge production with respect to the future. It sheds light on the normative practices of neoliberal economies, and the restrictions this places on the construction of what is yet to come. It appears that reclaiming speculation can be used to drive "other" world agendas which might lie outside of the neoliberal domain.

The clear division between those who see speculation as a prop for a thought piece and those that see speculation as a practice tool could be seen as problematic. Scholars that talk about speculation in more abstract terms strongly argue that reducing speculation to a method devalues it. This also relates back to speculation being seen as a way to understand and influence attitudes towards the future, rather than focusing on strategies.

However, in contrast to speculation being viewed as a constraint on thought, others have attempted to conceptualise speculation in more practical terms. Mike Michael has attempted to develop a heuristic approach for the practice of speculative events. He draws on the work of Whitehead and Deleuze while highlighting some significant problems with the implementation of speculative approaches.

Specifically, Michael et al. attempt to provide "a set of heuristic principles for speculative methods"[51]. Michael adopts the term "method" in his paper, taking his definition from Stengers in the "Ecology of Practices" and "Cosmopolitics".

Michael describes a speculative methodology can be achieved through the "enactment of uncertainty"[52]. A "product of research", such as a painting, a graph, or an article, is not something that proclaims "this is how it is" but is something that is "inviting others to consider what it is (or they) could become. A speculative approach must allow for engagement with the "virtualities"[53] of the issue at stake. Experimental speculative methods usually engage through speculative design or other artistic methods. The method has to be oblique and underdetermined in order to allow people to engage with the issue in unexpected

ways[54]. An example is Bill Gaver's speculative design, which develops artefacts that are ambiguous and can act as speculative devices/ An example is "the Local Barometer" prototype, which displays text and images related to the locality of its position, chosen from the Internet, using the barometer's wind speed and direction. Analysis showed that this piece was less about mapping of the socioeconomic character of neighbourhoods but more about asking questions regarding the very meaning of neighbourhood as a "technonatural" entity[55]. Therefore, speculative design should allow for "problem making" about the possibilities created by research events[56].

Therefore as we have explored, speculation is a tool for thinking. Those that advocate for speculation argue that the social dimension to big thinking has been replaced to some degree by science, technology and logic. Fundamentally, they question whether organisations that think about the future are, through that very activity, closing down options for the future: "The question is whether most think tanks may actually be preventing people thinking of new visions of how society could be organised and made fairer and freer. That in reality they have become the armoured shell that surrounds all politics…"[57].

An example of a speculative intervention that was developed to counter this lack of big thinking was The United Micro-Kingdoms: A Thought Experiment. At their design studio, Dunne and Rabey developed an experiment to take the literary imagination behind the Sternberg Solution series, or The World, Who Wants It, and combine it with more concrete design speculations. After finding The Beginner's Guide to Nation-Building published by the

[51] Michael et al., 'Manifesto on Art, Design and Social Science - Method as Speculative Event'.
[52] Michael et al., 'Manifesto on Art, Design and Social Science - Method as Speculative Event'.
[53] ibid

[54] Mike Michael and William Gaver, 'Home Beyond Home Dwelling With Threshold Devices', Space and Culture 12, no. 3 (8 January 2009): 359–70, https://doi.org/10.1177/1206331209337076; Michael Guggenheim, Bernd Kraeftner, and Judith Kroell, '"I Don't Know Whether I Need a Further Level of Disaster"': Shifting Media of Sociology in the Sandbox', Distinktion: Scandinavian Journal of Social Theory 14, no. 3 (December 2013): 284–304, https://doi.org/10.1080/1600910X.2013.838977; Alex Wilkie, Mike Michael, and Matthew Plummer-Fernandez, 'Speculative Method and Twitter: Bots, Energy and Three Conceptual Characters', The Sociological Review 63, no. 1 (February 2015): 79–101, https://doi.org/10.1111/1467-954X.12168.
[55] Michael and Gaver, 2009, 'Home Beyond Home Dwelling With Threshold Devices'.
[56] Michael et al., 2014 'Manifesto on Art, Design and Social Science - Method as Speculative Event'.
[57] Curtis, Adam, 2001. https://www.bbc.co.uk/blogs/adamcurtis/entries/fdb484c8-99a1-32a3-83be-20108374b985

RAND Corporation in 2007[58], they began to explore how nations were built and if states could be designed. Architects have long developed master plans for cities and regions, so they asked architects whether they could talk about big ideas through small things, and the Design Museum in London invited them to test their ideas.

It is common in the design of technology products and services to start with personas and then develop scenarios, all within existing reality. However, in this project, Dunne and Rabey wanted to zoom out and start with new realities (ways of organizing everyday life through alternative beliefs, values, priorities, and ideologies) and then develop scenarios and possible personas to bring it to life and to "tell worlds rather than stories,"[59]. By presenting the viewer with design proposals for objects, it was explored whether they could they imagine the world the designs belong to and move from the specific to the general. This is very different from other world-making activities, such as cinema and game design, in which the world and potential architecture is shown, which usually presents an overview from which the viewer has to imagine the specific.

The project narrative is as follows: "In an effort to reinvent itself for the twenty-first century, England devolved into four supershires inhabited by digitarians, bioliberals, anarcho-evolutionists, and communo-nuclearists. Each county became an experimental zone free to develop its own form of governance, economy, and lifestyle. England became a deregulated laboratory for competing social, ideological, and economic models. Its aim was to discover through experimentation the best social, political, and economic structure to ensure its existence in the new postcrash world order—a sort of pre-apocalyptic experiment designed to avoid the thing itself, which increasingly, seemed inevitable."[60]

Dunne & Raby, Train, from United Micro Kingdoms, 2013

Such speculative design interventions are an opportunity to change our systems of thought. "As we rapidly move toward a monoculture that makes imagining genuine alternatives almost impossible, we need to experiment with ways of developing new and distinctive worldviews that include different beliefs, values, ideals, hopes, and fears from today's. If our belief systems and ideas do not change, then reality won't change either. It is our hope that speculating through design will allow us to develop alternative social imaginaries that open new perspectives on the challenges facing us."

The technology industry does have its own tradition of conceptual design in the form of Vision of the Future video scenarios setting out future directions or promoting new corporate values, but they are often very limited in their scope and vision. They usually feature perfect worlds for perfect people interacting perfectly with perfect technologies. Whirlpool, and especially Philips Design, are two companies that have consistently gone beyond this and successfully used conceptual projects to explore alternative visions for everyday life, which with Philips's design probes pushed the medium itself forward. Their Microbial Home (2011) is a proposal for integrating domestic activities such as cooking, energy usage, human waste management, food preparation, and storage, as well as lighting into one sustainable ecosystem in which each function's output is another's input. At the heart of the project is a view of the home as a biological machine.

[58] James Dobbins et al., The Beginner's Guide to Nation-Building (Santa Monica: RAND Corporation, 2007). Available at http://www.rand.org/pubs/ monographs/Mg557.html. Accessed December 24, 2012.
[59] Torie Bosch, "Sci-Fi Writer Bruce Sterling Explains the Intriguing New Concept of Design Fiction," Slate blog, March 2, 2012. Available at http:// www.slate.com/blogs/future_tense/2012/03/02/bruce_sterling_on_design_ fictions_.html. Accessed December 24, 2012.
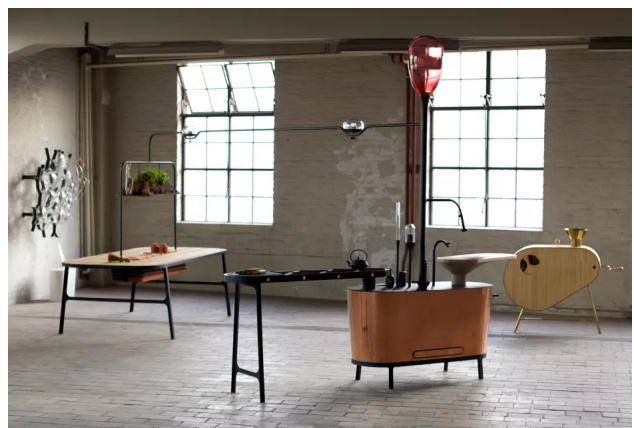[60] Dunne & Raby, 2013. Speculative Everything: Design fiction and social dreaming. https://readings.design/PDF/speculative-everything.pdf

Philips Design Probes, Microbial Home, 2011

3.2 Real World Planning Advantages and Constraints

Planning is something civil society organisations must do already. In this work, practitioners shared some of their methods for thinking about the future, including those that are part of project development, monitoring and evaluation or represent modified versions of foresight exercises, like scenario mapping. Andrew Eland, who works in the private sector and at one time was a Google engineer said, "The whole concept of planning space [that] exists in many developed countries is all about forcing you to think through concepts of foresight and getting public opinion about them." Furthermore he elaborated on methods of design planning in software engineering, which are required, he said, because, "If you're building something, some software that has the potential to affect a large number of people, and it will outlast your involvement with the project, so you're creating something that is potentially dangerous and you need safeguards around that."

One respondent working to make ubiquitous local, community networks, which is an underfunded space that involves costly infrastructure development and maintenance, said that at worst, "The most important thing about a business plan is evidence that planning is taking place." Additionally, at its best, he noted that "The planning process is more helpful than the ongoing evaluative process that is time consuming." In other words, while planning can be helpful to achieve outcomes, the more future focussed an activity, the more is required to monitor and evaluate progress, which is often deprioritised for organisations who have reached or exceeded their capacity. However, one respondent who is an advocate of traditional planning activities noted that "things like evaluation and feedback mechanisms can yield some interesting results."

Effective civil society organisations have learned to leverage a streamlined planning process to make their activities more efficient. An organisation founder and director explained, "if you're giving us a $1 million donation or a grant to do digital literacy, that also includes a research component, advocacy, gender, everything is included from our internal planning." Although that funding can, at times, be scarce, it allows for a special kind of foresight. He continues, "Our organisation doesn't have foresight planning, but [our organisation] has a very strong conceptual ecosystem to be in a position of always working in a most sustainable manner and not in a dependency manner."

In effective planning, good advocacy is key. Indeed, one recurring theme from effective practitioners is that careful consideration of people's needs from the beginning at the visioning stage for an organisation enhancessuccess in predicting outcomes.

"When you work for civil society, what is the work you are working for? Are you working for civility of the society or sanity of the civility of the society? As long as that is challenged, your work is never finished, and that will always be challenged."

The key when planning a new project is not foresight, he says, but "connecting [the mission] to funder's areas of focus and merging all of them together without really diverting it or making it look like they don't belong with each other."

Analogously, for digital rights analysis, Nanjira Sambuli uses the phrase "narrative ventriloquism." She says, "You have to do the acrobatics to suddenly make the same points… all my advocacy over the years has been about that, and you sort of weave in why that matters to the trend but not following the trend."

Specifically on the topic of digital rights and the importance of maintaining a steady frame when viewing an issue, Sander van der Waal from Futures Lab WAAG says, "I wouldn't frame it as have we been right or not right about something, but we do see now that we often refer back to the early days of the internet to some of the things that were designed quite adequately from the beginning and are now being reinvented." Osama Manzar reflects similarly on how digital rights work has only deepened, not changed, "Before this it was a tool of privilege, a tool of complement, a tool of efficiency, a tool of choice, a tool of inclusion, but not exclusion per se. Now it's a tool of exclusion if you don't have it. And this foresight is very much there."

3.3 Informal foresight methods

Civil society organisations are doing foresighting, but it is often informal. Even one respondent from a futures lab reported, "We never use that term foresight, and I don't think that we have a very structural way of approaching it," reinforcing that "unconventional" is a term that better defines what they do. However, a seasoned practitioner who used foresighting in government settings said, "My default assumption is that actually the best NGOs are good at looking at the future, they just don't necessarily use the frameworks you get off the shelf or from looking at Wikipedia or whatever."

Those informal methods can be hard to quantify. A practitioner of 20 years said of foresight that there is a, "large element of sensing, and that sensing comes partly from following intuition and partly from experience as well." This capacity is often amplified through networking; this practitioner reported that, at her organisation, they do "a lot of listening to our partners and to people we work with and talk to and come across in our investigations, or research or trainings." Jon Lloyd at Mozilla Foundation, who put on the annual MozFest conference, said he is inspired by "informal conversations either within the organisation because we have a fellows programme, and we have a lot of fellows we can chat to."

Some of civil society's informal foresighting methodologies are simply derivatives of more formal methods. For example, these can include outcome mapping to workshop exercises that have participants produce a newspaper front page from the future. These exercises can help advocates describe the successful impact of their initiative. Indeed, as one practitioner reminded us, "You can't change the future if you can't imagine it." Future visioning is when advocates are asked to think "if we are successful what does the world look like?" Reflecting on such activities, Steve Song says, "That works well collectively, but it's a harder thing to do individually." It's important for any foresight methods and tools to imagine how they might work as asynchronous processes.

Cynicism also serves a purpose for civil society organisations in that their advocacy targets tend to be predictable and as one practitioner pointedly put it, "There's a lot of being right about shit that was doomed anyway." However, that informal foresighting can make you unpopular. For some of our interviewees who tend to go against the grain, it may seem out of place to try to institutionalise mechanisms of thinking when often we need to rely on and uplift individuals within institutions who just refuse to settle for popular thinking and then turn out to be right. They agree this sows unpopularity for those practising foresight. One respondent said, "It's interesting to ask the question regardless of funding, 'How is it celebrated in the sector?'"

There are some informal methodologies that are suited to replicating and peer learning. The first question most of our practitioners ask is, "what do people say"? A UK-based practitioner said, "Low and middle income countries are super interesting to talk to just because the way they use the internet is so different." A scholar and author who has a book coming out on disinformation in the Black community in the US talked about her methods to understand disinformation: "The first thing we're often tracking is what is coming into those various networks and how people are discussing that."

It also matters a lot to practitioners who is saying what. Claudia Pozo from Whose Knowledge? said, "When we talk about decolonisation and knowledge justice, we talk about imagination as resistance." As already mentioned, Zapatistas and other indigenous communities offer insight and actual direction for how advocates in the public interest might engage in futuring.

The private sector also offers inspiration and potentially material support through data simulations. One of our practitioners with experience in big tech said, "For particular pieces of software at the design stage, it's common to write up [a] design document that doesn't really detail exactly what it is that you're going to build and how, but more like these are the challenges that we're trying to solve, these are the alternatives that we considered when we set out to build this, and this is the approach we took and why." Mentioned previously as a challenge to foresight, data-driven consumer and market research can aid civil society organisations, such as with the partnership

between Tactical Tech Collective and Mozilla to produce the Glass Room exhibit[61]. The *New York Times* said, "The exhibit lured people in with the visual language of high-tech consumption… to be reminded of the many ways we unwittingly submit ourselves and one another to unnecessary surveillance, with devastating consequences."[62]

Overall, despite the difficulty in quantifying informal foresight methods, our practitioners suggested they are commonly used across organisation types and can provide specific benefits when perceived and understood effectively. These methods include derivatives of formal methodologies, paying attention to cynicism, advocacy within communities, and partnering between market research and civil society organisations.

3.4 Resisting foresight

Not all the respondents in this study were positive about foresight, and there exists some resistance against the practice. For example, one respondent familiar with foresighting exercises questioned whether the status quo approach to future studies has even been effective despite all the methodological rigour. Another respondent who has engaged in futuring said, "at the same time it's hugely time consuming and expensive. It's expensive not just from a process perspective but in the amount of time and the people who have to engage in it."

As to the legitimacy of the approach to sense-making in order to be resilient, one practitioner expressed concern around foresight because to him it felt like saying, "there's an iceberg there, we'll just steer around it." This may just lead everyone into another iceberg. Another practitioner was more cynical, asking whether foresighting done by those empowered by the status quo is just to help extract information about where damage is happening to help prepare for that, prevent that and uphold the status quo.

There are some who say digital rights advocates are far too ready to point out future harms. A practitioner at the intersection of funding and internet governance said, "I just don't believe the argument that says the downsides have not been noticed, especially if we're in the last five years and, more relatively, into the next five years, because now everyone in the technology industry is absolutely hair triggered about all forms of social harm all the time, and they're almost is no technology news story now that doesn't begin with 'Someone has invented X and people are worried.' That's like the normal news story for any technology now. Even vaccines, which are not digital tech, 'Someone has invented a miraculous vaccine that's going to save your life and oh my god what happens if X.'"

[61] https://tacticaltech.org/projects/the-glass-room/
[62]

https://www.nytimes.com/2016/12/27/magazine/finding-inspiration-for-art-in-the-betrayal-of-privacy.html

4. Discussion and ways forward

The theoretical and practical accounts from practitioners that have been discussed in this work demonstrate that the concept of the future and the practice of foresight have been studied from a variety of perspectives. With each perspective comes a different framing and agenda about the functioning of sociotechnical systems. However, this broad and rich array of influence does not yet translate into a clear understanding of the social and technical mechanisms that shape future visions, neither does it provide an unproblematic practical method for thinking about the future collectively because there is no agreement regarding whether a "method" or heuristic of foresight is a good or correct thing.

The domains of practical foresight, forecasting, and prediction largely lay outside the remit of the social sciences. In turn, as the social sciences begin to investigate the concept of the future, they must ensure that their investigations provide practical as well as theoretical insight. Speculation does provide a framing of the future that has potential for foresight. It facilitates new ways of thinking and ultimately sketches the outlines of how to move from what is a probabilistic paradigm to a more open and possibilistic way of thinking about the future. Indeed, one respondent in the US said it's important to use foresight to focus on, "What is the actual policy we should be pushing for instead of the one that feels like the most effective because it's the most immediate course correction."

There is a need for further work to understand the role of foresight in civil society to better map the existing ecosystem. One respondent said of her organisation, "We always drop projects in order to be able to figure out new issues otherwise we'd be spread too thin, so it's a kind of natural ongoing process for us… There's an intentional attrition rate because we don't expect to follow everything and we want to keep exploring." A futures lab director similarly said, "We experiment with new solutions but often don't take things further than the prototype stage."

Another practitioner from the global south who lamented not receiving funds for her work in foresighting the perils of content moderation over a decade ago says, "We are the ones to frame that all this is interconnected and this is how we sort of divide the labour. So how do we use tools or strategies like foresight to activate abundance and to activate complementarity so we're not all just doubling down on digital rights amorphously because there's only funding on digital rights." This indicates a need to strategically expand or overlap the current funding space beyond digital rights.

Civil society organisations need education and training. A practitioner working as a fellow for a private sector company said, "Foresight method and tools that civil society is mostly unexposed to so I think that would be interesting, especially leveraging asynchronous processes." Conversely the public sector, governments, must do foresighting and civil society's understanding of methodologies can pressure governments to be responsible, as one respondent said: "There is no such thing as a disaster that is not the government's fault. For governments, futures was good because it forced that diversity."

Cross-sector and cross-disciplinary synergies present crucial opportunities for equalising civil society within the landscape. A Europe-based respondent said, "We don't necessarily talk to people outside the space very much. Also the conversations are quite circular in response to proposed legislation."

Most practitioners admitted to diligently following the conversation in the digital rights community, but many discussed strategies for intentionally placing themselves outside of those conversations or strategically creating niche, small pockets within the mainstream debate.

More importantly to all respondents was the need to go beyond our echo chambers to ensure we value the foresight happening from other perspectives: "When you look back over the course of history or anything about something that's happened to people at scale there's always a story about how it happened to a minority group first that was ignored."

5. Conclusion

This study aims to bridge the gap between the theoretical discipline of foresight methodologies and how foresight happens in practice for those that work in the field of digital rights. By analysing various attitudes and opinions of leaders in the digital rights field, as well as reviewing various approaches to thinking about foresight methodologies, we have identified a number of social, political and technical barriers and opportunities for the use of foresight in the field of digital rights.

We found that the space, time and resources to practice formal foresight are not equally distributed between civil society, the market and the state. In the field of digital rights, civil society is at an immediate disadvantage in this kind of formal, report-based futuring because the work of navigating between the past, present and future is dynamic and ongoing, and is often unrecognised by dominant power. The evidence indicates that unequal distribution of power and status means that not everyone's experience is truly counted as happening in the present. This caused a danger of considering the lives and experiences of marginalised people as somehow happening in the future rather than as indicators of the present and these urgent concerns were highlighted through our interview data. This sentiment was observed to be further exacerbated by the highly technocratic way of viewing technology and its agency on society by the private sector as optimisable.

These observed imbalances also play a role in the challenges of doing foresight and thinking about the future,

particularly for civil society. The analysis highlighted that there are significant challenges with resource and capacity and sectoral inequalities when it comes to implementing foresight in the digital rights space. We observed that limited resources do not only limit cut-through; they can also limit the potential of informal foresight activity to surface in the first place – or subsequently turn into action. Similarly, it was observed that civil society does deploy research methodologies that constitute forms of foresight, however this work is often not given as much recognition as similar work in the private sector. Many effective civil society interventions are the product of experts rapidly deploying anticipatory knowledge to mitigate human rights abuses or other worse-case scenarios, but this knowledge is frequently not documented, and is often not promoted as impactful reports or videos with pithy soundbites, as seen in the private sector.

A number of systemic barriers have been highlighted in the uptake and use of foresight by digital rights organisations. The diverse field of digital rights is constantly in dialogue with the dominant norms and frameworks created by the technology industry, and the close coupling of industrial and entrepreneurial investment with both digital civil society and academia. Under this model of dominant norms, the field of digital rights is pitched time and again as a foil for both governments and industry, not as a place for dreaming or visioning. This effaces and normalises the values and experience of those who are not a part of the powerful minority that get to tell their story and frame their future, and it assumes that only one future is possible at a time; that the version of the future told in Silicon Valley is inevitable and ineluctable and can only be diverted, not replaced by or be able to coexist alongside other possible futures.

In our discussion of foresight methods we show how formal foresight methods have been designed by industry and work to uphold the dominant norms and frameworks where a powerful minority gets to tell the stories of the future. These methods, through their design, are reductive and fail to give the opportunity to explore a plurality of futures; they close down the future by honing in on a small range of ideas. We demonstrate that speculation could provide a viable alternative methodology for civil society

to enact foresight, through methods that are more pluralistic and can hold many ideas about the future at once. These more pluralistic methods may fit more easily with the informal practices we identified as already happening within civil society organisations.

In light of the findings from the interview data and our analysis of existing literature, we suggest two ways to improve the integration and practice of foresight in digital rights organisations.

There is a clear gap in our understanding of the role that foresight is and could play for civil society organisations. We therefore propose that more work is required specifically to map the existing ecosystem - to provide a clearer and more expansive view of the types of research and foresight that is happening. Further, as identified in this report, much civil society research and foresight remain under recognised and any mapping work should build towards developing a better framework to leverage the potential of under recognised civil society research and foresight. Ultimately, increasing recognition and visibility of existing work by civil society is about broadening what we might consider to be foresight, to incorporate more informal and potentially speculative thinking, and to normalise this as part of research practices beyond the private sector.

There is also a lack of cross-sector or cross-disciplinary communication, even between civil society organisations themselves. Civil society could benefit from methodologies to intentionally place themselves beyond the regular conversions and topics that they directly work within. There is value in foresight facilitating a 'commons' approach, one where multiple organisations can benefit from shared knowledge and visioning. We propose that a key step towards this would be to create a foresight commons - a collective space for digital rights and other associated civil society organisations to begin to connect and find useful resources. This would be a space for collective foresight. There are also clear benefits in a collective approach, with sharing of work and expertise, as well as reducing the potential cost or risk to any one particular oragnisation.