



Stanford PACS

Center on Philanthropy
and Civil Society

—
Digital Civil Society Lab



**RECLAIMING DIGITAL
INFRASTRUCTURE
FOR THE PUBLIC INTEREST**
THREE PART WORKSHOP SERIES
October 20 • October 27 • November 10

The Digital Civil Society Lab presents

Reclaiming Digital Infrastructure for the Public Interest

November 16, 2020

Discussion Synthesis: Prepared by Lucy Bernholz

**“The power lives below what we can see.”
- Laura DeNardis**

Over the course of four weeks more than 300 people joined in to discuss the possibilities for reclaiming digital infrastructure in the public interest. The conversation moved from identifying multiple possible civic, community, and cultural logics for designing and using digital networks to considering possible new funding bodies and finally to pushing beyond the constraints of communication frameworks to recognize digital infrastructures as industrial control switches for most of modern life. Having structured three consecutive discussions, it would perhaps be prudent to circle back to the beginning and reimagine the civic and community logics in ways that directly incorporate and address/redress the control switch function. That is fodder enough for another series.

Beatrice Martini and Laura DeNardis argued that the shift in the internet from communications mechanism to control switch - or the shift to a cyber-physical world - is potentially more significant than even the transition from an industrial to an information economy. Because digital infrastructures now support everything from food systems to transportation they have become, in a way, subinfrastructural. Values such as interoperability, transparency and auditability, and openness - which were key to creating a global communications network - face challenges in this subinfrastructural role. Some of these challenges are questions of political philosophy and public policy. For example, are either openness or interoperability inarguable goods in systems supporting national security? Others, such as openness, are being challenged by the proprietary nature of the corporations building connected devices such as cars, transit networks and home appliances.

Seeing the internet's role as subinfrastructure is an opportunity to reimagine many of the “settled” questions of digital design and building, policy making, and community involvement. Seemingly simple questions, such as “who is a user?” become very difficult in the cyber-physical world. Adjacent discussions to this one, for example [The Refusal Conference](#) at UC Berkeley take on great importance in a world designed to “opt in everybody.” Recognizing the depth and breadth of this subinfrastructure presents new challenges for ideas discussed during the series. A Corporation for Public Software, for example, would need to think not only about communications software but also industrial control switch functionality, and the degree to which its “public” purpose also required consideration of tools for managing what are now public utilities (water, electricity, sewers, transit) as well as what are now communication functions served largely by market actors (messaging, email, sharing files, storage).

Two other ideas from the series - community tech stacks and the role of centering marginalized groups - take on even greater importance in the “control switch” framework. First, community tech stacks - which were discussed throughout the series - provide numerous models that attend to software, hardware, public policy, and governance. The collective of community tech stacks have experience, wisdom, and replicable approaches to public participation and leadership, models of stewardship, and building literacy, competence, and personal/community agency. They also nod toward, organically and not by some larger design, the possibilities of multiple alternatives, locally-led but globally interoperable.

The second widely-agreed upon theme from the series centers on the need to design within and from the needs of communities most often overlooked by markets and policy makers. This includes communities of people with disabilities, who have decades of experience influencing infrastructural design and policy in both physical and digital spheres, as well as communities that have been sidelined, redlined, and marginalized by geography, race, income, or perceived literacy rates. These communities - which often intersect with each other - have shown the power and potential of building their own tech stacks. They are also communities with much to gain from the transition from text to voice interfaces, an area that is simultaneously growing very quickly, at risk of being locked down by proprietary interests, and one that can lay legitimate claim to offering inclusivity at a revolutionary scale.

Discussants in session three, which included Laura DeNardis, Beatrice Martini, Lydia X. Z. Brown, Greta Byrum, Rachel Coldicutt, Jimmy Garcia-Meza, Marleen Stikker, and Sander van der Waal agreed on several key elements. First, there is a present-day “turn to infrastructure” - including the governance layers of the internet such as domain name systems, technical standards, and protocols - as world powers recognize these control points as proxies for power.

All of the layers of the internet - especially the governance layers - are mechanisms of control with embedded power. As the internet leaves our screens and becomes embedded at both immediately personal levels (in our bodies) and at the largest level of social control (transnational interactions) the mechanisms by which it will be controlled become ever more contested.

Second, in addition to complicating questions such as “who is a user,” this transition also challenges our ideas of what is a tech company, who should be regulating them, and how. The role of standards bodies, which make “policy by other means” becomes more important. As Laura DeNardis noted, this is both consequential and controversial. The controversial elements of this can be noted by recognizing that decisions by standards bodies about interoperability, for example, which might determine whether any aspects of people’s lives can be kept private in the future, are the locus of human rights decisions on a previously unimaginable scale. Given the multi-faceted technological (thermodynamics, material sciences, chemical engineering and computer science) nature of these decisions and their human rights implications, setting these standards requires a different set of actors than have been involved in the past. It also requires rethinking who are policy makers and regulators, how and where are they influenced by external forces, and what are the necessary protections to ensure a focus on public interests.

In brief, the internet in everything expands a form social control - omnipresent data collection- that is already known to be discriminatory and extractive. How then, as the practice seeps into every part of daily life, can members of the public “see” these activities (designed to be invisible), make decisions about the subinfrastructures (deliberately buried) and maintain personal and collective agency. Practices such as differential privacy provide some clues, but the need for much more inclusive co-creation of these practices, as well as systems of redress when violations occur, is a collective action problem that opens the door to needing new forms of cyber-physical governance.

Finally, the third session and the series as a whole, leads to an identified set of needs, if not answers to how to meet them:

- We need new centers of power, rooted in oft-marginalized communities, to develop governance models that will serve everyone
- Civil society, community groups, and common good minded policymakers need to include technical standard setting bodies as a place of political and economic power
- Our collective object of inquiry has to move beyond the content layer of the communications internet to the deeper infrastructure of digital societal control
- This requires a conceptual shift for policy makers, scholars, civil society and private sector from communications system to control system
- There is a multistakeholder and multi-level ecosystem of solutions
 - Corporate governance is critical. For example, meeting security standards for liability reasons is a way in which insurance might become a key lever of change
 - There is potentially a large role for external inducements, such as the buying power of organized collective or the standards setting by government purchasers
 - Liability is going to become increasingly important as a vector of design

Critical Questions Raised in Breakout Groups

- Government may not be native to this space, and may be more prone to surveillance tactics. What should their role be?
- What are the underpinning ideas around ownership and control with IP, patents, etc?
- What can we learn about the asymmetrical responses with those with less power? Such as gamers who have created guilds, etc.
- How can we move from ownership to stewardship?
- How to expand community networks to fully function as alternatives to commercial networks?
- In Kenya more literature/cases are needed to guide court decisions
- How do we communicate the mutual benefit of transparency between governments and companies on one side and organizations/citizens on the other?
- Power dynamics must be attended to directly when you are seeking a diversity of expertise (especially with funders)
- Build in pathways to collect information and priorities from disabled people (especially multiply marginalized disabled people) in an iterative process when in R&D or in policy development implementation
- The model of [NGI Zero](#), which supports early-stage research and has a string of successes, is promising.
- Considering the first point on the principles for “public software” (from Corp for Public Software proposal) is that it be government funded, what kind of political will is required to get this off the ground? Are policy makers paying attention to this or are still in the planning/academic stages?
- How does this framework (CPS) take care of the concerns raised by the control regime?
- How can we encourage individuals to participate in the establishing process of public digital infrastructure?
- What is the role of money as it flows through the system, and how can it empower public technology to be of the same quality as commercial?
- Are we talking about “public” as in government-provided structure or cooperative structure?
- How do we find resources to develop alternative tech that’s robust enough to compete? We face constraints in funding, developer skills, larger global power structures, etc.
- How do we create meaningful community engagement? How do we create a social and cultural shift?
- How can communities connect at an international level to do standards setting etc?
- Software engineering skills are a premium in the market. How do you create/retain talent to do things that are not capitalist in a capitalist world?
- There are many in this community who are working on related projects. How do we best avoid working in silos and reinventing the wheel?
- How to deal with market mechanisms? Does “open” culture distort the market?
- What are the best practices to handle governance of big data?
- What is the relationship to “the commons” and scale? -- Commons are much easier to govern at smaller scale
- Challenge: Regulatory frameworks are built around individual autonomy/choice, whereas the problems we are facing need collective action
- Will certain demographics become sort of “prey” for data collectors?

Calls to Action:

The following known “next steps” emerged from the conference:

- A workshop proposal has been submitted to the NSF to continue investigations of how to build support for software as public infrastructure (Gastil, Davies, Gordon, Bernholz)
- A group is convening to develop policy frame on public infrastructure with Biden transition team as key audience (Schaake, Bernholz)
- Organize a research volume on public digital infrastructure (Davies)
- Organize a process for broad participation and sign-on to a report aimed at policy makers (Davies)
- Build political support (Davies)
- Introduce, pass, and sign legislation for corporation for public software (Davies)
- The role of the government must be to empower the people to build public digital infrastructure in a transparent, decentralized and participatory way. (Weimann)

- Interventions are needed at different levels. e.g. policy stack, tech stack - how to coordinate, mobilize, track?
- “Fractured by Design” → A model of distributed governance?
- Burden should not be on individuals to deal with privacy issues, needs to have a greater balance of power between individuals and companies (and the state) -- a challenge!
- Evolve/build upon commons and collective models

The Digital Civil Society Lab presents

Reclaiming Digital Infrastructure for the Public Interest: A Corporation for Public Software

October 27, 2020

Discussion Synthesis: Prepared by Lucy Bernholz

Discussants: Derrick Cogburn, Todd Davies, Melanie du Long, John Gastil, Jasmine McNealy, Catherine Sandoval

This second session, in which we dug into a proposal for a funding body for public software, built off the prior conversation ([October 20, 2020](#)) on the possibilities of public digital infrastructure and its digital, social, and physical dimensions. The proposal, prepared by Todd Davies and John Gastil, is intended as an additive strategy to efforts already underway to reshape our digital infrastructures. Those other strategies include regulatory reform, antitrust actions, community alternatives, some signs of philanthropic collaboration, the development of new institutional forms, and sector-specific codes and communities of practice.

Drawing from a similar broadcast history as did [Ethan Zuckerman](#), Gastil and Davies' [proposal](#) uses the U.S.-based Corporation for Public Broadcasting as an analogous model for funding non-commercial alternative software. The aspiration is to create a reliable funding source for public software, that which is open in nature but managed and maintained in the public interest. Toward this aspiration, the need became clear for definitions of “corporation,” “public”, and “software”. Gastil and Davies proposed definitions can be found [here](#).

The discussion then focused on a few particular challenges. First, such an idea, posited as one of many strategies for change, would need to account for the existing external environment in which it might find itself being created. Catherine Sandoval noted the regulatory elements that shaped previous eras of internet/software development, and challenged the participants to think about what the ideal regulatory environment would be to enable a flourishing set of accessible, interconnecting, alternatives. These regulations might be software-specific, but they are also likely to include areas such as telecommunications law. Jasmine McNealy took this idea further, noting the role that Public Forum Doctrine and free speech would likely play. Derrick Cogburn's work on disability rights and internet governance led the discussion to consider both the role of global standards and also community participation. Here, all of the panelists and many of the participants (via chat) engaged with Melanie Du Long's work on community networks and governance, and the principles of both design justice principles and universal design.

The nature of software development and the generative nature of it once it is widely used opened up the need to think about public governance throughout the lifecycle of the code itself, not just public governance of a funding body. The “public” in public software requires a commitment to broad participation “all the way through” the proposal. Organizational governance that should be modeled on community-owned and governed networks; software that is public in design, development, implementation, use, and iteration; and then the need to bound what public would mean in terms of software for what purposes? Just democratic and civic participation or all forms of community aspirations (cultural creation, assembly, etc). The idea of public software needs clarification from (at least) these three angles: organizational governance, software creation and use; and the scope of applications.

Drawing from both a robust set of participant inputs and the panelists' discussion, several additions or potential modifications were suggested.

- There are many existing efforts that build and maintain public software. There are roles for coordinating dispersed efforts as well as funding.
- Bridging to the first conversation, the need to support many alternatives on the way toward diversifying the ecosystem and diluting the power of centralized, commercial options makes it challenging to design a single funding source that won't also exert centralizing pressure.
- There was a robust discussion of the tensions between authenticating identity and protecting anonymity across the full range of situations in which public software might be used. The many communities working on digital identity are important constituencies in thinking through both types of software that would qualify and the governance of such a funding body, particularly in so far as it might rely on government resources.
- Government bodies aren't the only - or perhaps even the first - institutions that could play leadership roles in such a "corporation." Software built and maintained by coalitions of universities, libraries, and nonprofits (e.g. Sakai) are useful analogues. The suggestion was made that the license fees that these institutions currently pay for commercial services could be considered as potential funding sources, if redirected toward the production, maintenance and enhancement of public software.
- The "processes" of software development might also be something for public investment. For example, research into user experience design that could be applied broadly to "public software," which lags commercial alternatives in terms of ease of use, accessibility, and upgrading.
- Public digital software/infrastructure needs to incorporate proactive threat and risk analysis that draws from lessons learned about malicious manipulation of both digital systems and democracy.
- The potential role of universities, libraries, etc brought us back the institutional elements of infrastructure, a role that deserves particular attention in terms of public involvement, trust, and communities of creators and users.

One thing that's clear across the two conversations - defining the bounds of digital infrastructure is not easy. Understanding infrastructure in multiple dimensions (digital, physical, social) provides a framework for seeing some of the inherent intersectionality between these components, although it also doesn't make clear some elements, such as regulation or incentives. Individual projects or research (such as the CPS proposal, UMass focus on social media, and community networks) are examples of very different choices from within the Venn Diagram of digital, physical and social. The infrastructure discussions so far have also, to some degree, treated data as a byproduct of infrastructure, but that's also incomplete, as there are good arguments to be made that (at least some) data *become* infrastructural. Finally, heading in to the third session., the boundaries between digital and physical infrastructure will become even more opaque

In the third conversation of this series, we will have time for dedicated breakout conversations on topics raised so far. Drawing forward from session one and two, the topics below have emerged as possibilities. **Please feel free to suggest more - especially if you're interested in facilitating a breakout room on an additional topic - by contacting Lucy Bernholz at Bernholz@stanford.edu by November 6.**

- How might we define the regulatory environment that would allow a robust ecosystem of alternative public digital software to thrive?
- Can we separate digital from physical infrastructure anymore? What do we gain by recognizing them as inextricably linked? What do we lose?
- Universities, libraries, nonprofits, and foundations have already built massive digital resources in the form of datasets, research products, and software code. Many of these public institutions are now failing, amidst historic global economic turmoil. What can we do NOW to capture and protect the investments in, vulnerable populations' rights, and potential value in these resources from being commodified or abandoned, instead of used for the intended public purposes? How can we mobilize our current infrastructure to protect these public resources? This topic is being explored in partnership with Sean McDonald and Angie Raymond, of the Ostrom Workshop.
- Where does digital identity fit into the thinking about public digital infrastructure?

- What would global or transnational coordination of existing community alternatives look like? What might be an improvement on the current state, and what needs to be avoided?

The Digital Civil Society Lab is available to host focused discussions that emerge from this series; either in small working group formats or in larger panel/plenary formats as in session one and two. We encourage you to participate in session three in a mindset of “we need to learn from...., what’s next.... let’s do this... we also need...”

Participant Questions:

Definitions

Is there a distinction between open software and public software?

My point of reference is “open” programming languages like Python. But is Python also considered public too?

What are domains of software in the public interest - civic and political engagement, or broader?

[also Alternative System / infrastructure design] Is there a place for research software here? Strong public good alignment, possible resonance with NIH, NSF, NEH

[also Alternative System / infrastructure design] How do you think about scope / priorities / mission given the nature of software to be built in stacks. Would a CPS draw boundaries around (or emphasize) more infrastructural software (with many inbound dependencies) as compared with more user-facing software?

Advocacy / Community Building / Organizing Around DPI

What is the role of user communities around this concept of public software? How do you see them forming? How do they sustain themselves?

Governance / Ownership

[also Funding / Markets] Curious about safeguards — esp when talking about federal funding and recent cases such as the Open Technology Fund. What does decision making look like - or should look like when blending public and federal rules, oversight, and funding? (It’s something we’re grappling with at Invest in Open!)

That's precisely one of the things that needs to be talked through. What safeguards are needed? What internal governance would work best? Etc. Even NIH and NSF have these problems, but it's interesting that the RAND Corporation (Congressionally funded) doesn't have this problem as often.

[also Funding / Markets] Will you speak to Open Collective as a means for transparent funding and decision-making to maintain technology for community benefit? <https://opencollective.com/>

Alternative System / Infrastructure Design

What public software did manage to survive, and why are they an exception to the rule? What can we learn from those?

[Also Definitions] Is there a place for research software here? Strong public good alignment, possible resonance with NIH, NSF, NEH

[Also Definitions] How do you think about scope / priorities / mission given the nature of software to be built in stacks. Would a CPS draw boundaries around (or emphasize) more infrastructural software (with many inbound dependencies) as compared with more user-facing software?

If you are going to do democracy online and have citizen input - you are going to have to deal with digital identity and the representation of the self in this realm in a way that is in alignment with the public vision of this (like can you really ask people to login with google or facebook). So are you looking at open standards like those being developed by the community around Decentralized Identity/Self-sovereign identity like the Verifiable Credential Standard at the W3C?

Given adoption divides, how might a model like this cope with separate/equal interface design needs (considering device, connectivity, + institutional access gaps) in picking projects and focusing on scale?

Self-sovereign identity - which is the online equivalent to taking out your wallet, showing the appropriate ID card and signing your name - is arguably the base layer of much of the services being discussed here. What American organizations are leading in this space, and are there live examples people can use (I only know Canadian examples)?

[also Funding / Markets] Today there are some things available on the Internet that seem to serve imperfectly in some of the public roles you have identified: disroot, riseup, sdf.org/super-dimension fortress, for a few random examples. Should the model be finding and investing in existing approaches like these, or having the government build and maintain their own? How does what you've said relate to the Open Technology Fund?

If this is for civic engagement to drive better outcomes for people interacting with government, what about also enabling more meaningful social engagement to drive better outcomes for people interacting with social enterprises (non-profit and for-profit) for social good and social impact? There's tremendous fragmentation and silos in the social enterprise world.

Funding / Markets / Funding Models

Where do you see private companies that “exit to community” fitting in this ecosystem?
(<https://www.colorado.edu/lab/medlab/exit-to-community>)

The goal is to allow startups to access more typical funding paths with the end goal of maturing and turning ownership over to a community of stakeholders (instead of only shareholders). Do you think this can be a reasonable business model for public infrastructure as well, provided stakeholders are part of the governance and design throughout the life of the company, even though financial funding may be initially coming from private sources?

Sales drives adoption of software within government. Some people claim organizations like Oracle are sales organizations first, software organizations second. Would such an organization engage in sales/marketing?

Might the land grant university system be a model?

The Digital Civil Society Lab presents

Reclaiming Digital Infrastructure for the Public Interest: Possibilities

October 20, 2020

Discussion Synthesis: Prepared by Lucy Bernholz

Discussants: Janice Gates, Katy Knight, Sabelo Mhlambi, Marietje Schaake, Ethan Zuckerman

The logics that inform our approach to infrastructure matter. Current social media infrastructure is built on the logic of surveillant capitalism. This first conversation in the series focused on alternative logics and where they might lead us.

Social media informed by civic logic as posited by Ethan Zuckerman and built on by panelists could include:

- Infrastructure includes physical, digital, and social components ([reference](#))
- Many platforms with 20-20,000 users.
- Different affordances for different users (w/r/t geography, community need, etc)
- Communities set the rules; self-governed networks
- Interoperable with existing networks
- Many revenue models – subscription, subsidy, 1% tax on surveillance advertising
- Owned by communities, cooperatives, existing civic entities

The discussion further noted that:

- The current digital infrastructure was not built for much of the world to thrive. It is a colonizing force, so this work is not about reclaiming but about “claiming it” in the first place. This is the work of decolonizing infrastructure and starting anew.
- Human dignity, racial justice, and healthy societies are both starting places and end goals. These logics go beyond governance: they put communities in charge of purpose, design, implementation, use, maintenance, and governance.
- There are many examples of community-generated and led platforms, [see the resource list](#), which was pulled from the chat log of the conversation.
- Governments and regulators can (and should) make space for multiple approaches; doing so proactively protects values of pluralism, agency, control, and privacy.
- Infrastructures built in these logics are alternatives - they are *additional* strategies to breaking up the control and power of centralized corporations, should be considered in the context of other strategies such as different regulation, litigation, and market-based efforts.
 - There are many perspectives and questions about how these alternatives can or should or must influence the dominant models. See [the resource list](#) for suggestions from participants.
- Scale takes on different meanings in the context of alternative logics - what matters is the scale of trust and community. Figuring out how to address the countervailing power of the large companies is a big question - but scaling individual community efforts isn't the answer. Need to connect them, scaffold them, create coalitions that offer alternatives to the dominant market shapers.

Moderator Reflections:

This first session focused on the internet and social media/search as “infrastructure,” with some discussion of SMS. There are many other elements of digital infrastructure (e.g. hardware, data centers, telecommunications physical materials and law) that intersect with issues of human dignity, environmental justice, public safety, and participation. How do we prevent a focus on software as digital infrastructure (an area within the realm that civil society/philanthropy can influence) from distracting from key physical elements of digital access?

The logics discussed as alternatives to centralized, corporatized, extractive logics are evocative of the most just, democratic logic of civil society - pluralistic, community-controlled, self-governed, independent and interconnected subsets of society. The values are in sync. This should lead us to see great opportunities for digital infrastructure created within, for, and by civil society. However, the logic alignment should also make us alert to the ways in which our “just and democratic” aspirations for civil society fail and ask how might those failures be replicated in digital infrastructures built on the same logic. For example, civil society is home to extremist ideological communities; it can be readily captured by external funding sources; it has often been and continues to be a means of state capture, both transnationally and within countries; and it is itself, in many constructions, a colonizing force.

Participant Questions:

Advocacy/Awareness Raising/Organizing for change

What could we do to turn power players in the current system into allies for positive change?

What narratives do the panelists find effective, in bridging the explanatory gap between technical capability of digital tools, and the actual influence they have on people’s real life?

I’m interested in the failure of imagination and the role of imagination in the public sphere. The other question is not how to pay for this but how to cultivate imagination--how to enhance collaboration between humanities and computer sciences?

Perhaps on some level for youth and teens, comics have a role to help bridge the gap for digital literacy. We’re working on this for students and teachers now at weirdenough.com, but would love to hear feedback in this realm of community tech.

Governance/Ownership

My question is how are data cooperatives or data stewardship ensure that individual data generators trust them as intermediaries, which is currently lacking in large platforms?

What do you mean by individual space of choice on their own data? Would this include having individuals claiming moral rights and authorship rights over their data?

What would it take to harness spectrum auction royalties for digital infrastructure?

I’m working to build community-led broadband/Digital Stewardship projects in collaboration with several US communities. We often see the incumbent telecoms swiftly shut down start-up efforts operating on logics of smaller scale and community values. New market entrants must interoperate with existing infrastructure (it’s impossible to avoid given scale/interconnection demands) – we literally have to purchase upstream bandwidth from big Tier 1 internet companies. How can we push back with our values-driven efforts AND cooperate as needed with existing players when it runs against the interest (and outsized power) of the big companies?

As you think about infrastructure, how do you think about data as Internet infrastructure? And how do you put data into the hands of folks so they can build and allow people to shape their own systems - cutting the stranglehold of the big tech players?

Alternative System/Infrastructure Design

Might we imagine a design goal for social-digital-public infrastructure that privileges SLOWing people down as opposed to SPEEDING up and FAST processing of everything with minds under constant pressure of attention? Newsfeeds currently incentivize “fast thinking” a la Kahneman, implicitly.

Might we imagine a new construction of ****journalism**** as a public transport system for social communication that carries information, views, voices, expression, power?

For e.g. current UGC streams, I feel, are like cars polluting the public physical sphere with emissions (toxic speech); what is a “public transport” system for healthy and pro-democratic information flow? Journalism’s older gatekeeping privileges are dead, long live that. Even those are unjust. What new journalism (news values) can be co-imagined with digital public infrastructure?

What are some key strategies for the kind of successful, citizen-led co-design that you work on at EII?

In addition to decolonization, dignity and local participatory design -- are there other public or civic values we could/should counterpose to dominant logics of "scale" and "autonomy"?

Funding/Markets

I’m a technologist who has worked with many civic institutions: I’m interested in any org that isn’t institutionally based on capitalist ownership. For me this includes political parties/groups, trade unions, co-ops, resident associations, religious groups, charities, even orgs like the scouts or neighbourhood watches. My fear is that **none** of these are going to survive the digital revolution without radical transformation, which so far I haven’t seen to relieve these fears. What do we do with these existing organisations? Replace or transform? This is also my contribution to the question of “what do we do with funding?” - assume these existing orgs won’t survive - what gaps will they leave? how do we replace that? what can we learn from their founding stories?

I’m curious about what pieces of digital infrastructure you think are appropriate for outsiders / donors to fund. I’m thinking about the U.S. government's Open Technology Fund, which focuses on funding tools to counter government surveillance and censorship. Could something similar work for bootstrapping digital infrastructure? What caveats would you have about a government playing a role in creating this infrastructure?

The Digital Civil Society Lab presents

Reclaiming Digital Infrastructure for the Public Interest

Resource Links

*** indicates resource links provided by the Digital Civil Society Lab and speakers**

Governance

*Application of PG&E for Approval of its Mobile Application and Supporting Systems: COMMENTS OF THE BROADBAND INSTITUTE OF CALIFORNIA AT SANTA CLARA UNIVERSITY SCHOOL OF LAW - Catherine Sandoval

<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M329/K216/329216088.PDF>

*Application of PG&E for Approval of its Mobile Application and Supporting Systems: REPLY COMMENTS OF THE BROADBAND INSTITUTE OF CALIFORNIA AT SANTA CLARA UNIVERSITY SCHOOL OF LAW - Catherine Sandoval

<https://docs.cpuc.ca.gov/PublishedDocs/Efile/G000/M336/K533/336533891.PDF>

*Published Book: The Turn to Infrastructure in Internet Governance - Musiani, Cogburn, DeNardis, and Levinson (2017)

<https://www.palgrave.com/gp/book/9781137533265>

Published Book: Frameworks, Futures - DeNardis, Cogburn, Levinson and Musiani (2020)

<https://mitpress.mit.edu/books/researching-internet-governance> (Open Access)

*Published Report: “From Rationality to Relationality: Ubuntu as an Ethical and Human Rights Framework for Artificial Intelligence Governance” - Sabelo Mhlambi

<https://carcenter.hks.harvard.edu/publications/rationality-relationality-ubuntu-ethical-and-human-rights-framework-artificial>

Published Book: Privacy in Context – Nissenbaum (2009). <https://www.sup.org/books/title/?id=8862>

*Published Book: Internet in Everything – DeNardis (2020). <https://www.lauradenardis.com/internet-in-everything>

*Book Chapter: Big Data Analytics and Text Mining in Internet Governance Research: Computational Analysis of Transcripts from 12 Years of the Internet Governance Forum - Derrick Cogburn

<https://doi.org/10.7551/mitpress/12400.003.0010>

*Published Paper: Beyond Being There, for “All of Us”: Exploring Webconferencing and Remote Presence Devices for Accessible Global Governance - Derrick Cogburn (2018)

https://static1.squarespace.com/static/56b51714c6fco84aa9cd4f8b/t/5a7dof88e2c4835168eb9ba8/1518145416748/Cogburn_2018_HICSS.pdf

*Published Paper: “Access Granted: Facebook’s Free Basics in Africa” - Toussaint Nothias

<https://pacscenter.stanford.edu/publication/access-granted-facebooks-free-basics-in-africa/>

Published Paper: “Against Digital Colonialism” - Renata Avila

<https://autonomy.work/wp-content/uploads/2020/09/Avila.pdf>

Published Article: Lessons for the World on How Estonia's Digital State is Coping with Coronavirus - Philip Salter

<https://www.forbes.com/sites/philipsalter/2020/05/01/lessons-for-the-world-on-how-estonias-digital-state-is-coping-with-coronavirus/#697d42da5001>

Published Article: "Socialize the Data Centres!" - Evgeny Morozov

<https://newleftreview.org/issues/II91/articles/evgeny-morozov-socialize-the-data-centres>

Website: Freifunk Memorandum of Understanding

https://github.com/freifunk/MoU/blob/master/FreifunkMemorandumofUnderstanding_en.md

Blog Post: Trust and Accountability Patterns in Digital Government: Data Usage Trackers - Richard Pope

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PURPOSE STATEMENT

Imagine living in a society in which most of the land and buildings available for meeting and working were owned by a few for-profit corporations. Churches, governments, groups of friends, schools, nonprofits, and grassroots social movements would each have to reserve space on—or have a key to—a privately-owned facility, often on a large corporate campus, in order to meet and work together. It would be a society with no domed capitol buildings, city halls, temples, open campuses, public parks, community centers, or nonprofit spaces.

Fortunately, this is not the society we live in, but it does describe the online spaces where our digital information is stored and where much of contemporary life—including civil society action—now takes place. This scenario is inherently threatening to democracies, in which free expression and public participation presuppose people have both the ability and space to assemble outside of corporate or government monitoring.

Please join us in **Reclaiming Digital Infrastructure for the Public Interest**. This is a 3-part series to build awareness, intention, and engagement in an ecosystem of ideas and practices that could bring into being digital infrastructure that aligns with community aspirations, protects personal and group safety, and prioritizes people, communities, and a public good.

The three part series will take place on:

- **October 20**, from 9:00 AM–10:30 AM / PDT – [Register here](#) ▶
- **October 27**, from 9:00 AM–10:30 AM / PDT – [Register here](#) ▶
- **November 10**, from 9:00 AM–12:00 PM / PST (including a short break) – [Register here](#) ▶

The first session features Ethan Zuckerman making a case for **digital public infrastructure**. He will join in conversation with activists and policy advocates who approach these ideas through the lens of equity, indigeneity, and public responsibility. All of the sessions will include time for participation by attendees.

The second session features John Gastil and Todd Davies’s proposal for a **Corporation for Public Software**. They will be in conversation with experts on regulatory, legal, and conceptual approaches to how we think about infrastructure.

Laura DeNardis will join in conversation with Beatrice Martini for the third session. They will consider the internet as an “on/off” switch and how the digitization of physical systems and places influences our most fundamental rights. They will be joined by experts building physical/digital alternatives. This session will include breakouts to give participants time to discuss potential paths forward.

FULL SERIES AGENDA

Reclaiming Digital Infrastructure for the Public Interest

It is time to design and build digital infrastructures that specifically serve and protect public interests. Such systems include software, hardware, protocols, and governance mechanisms that align with the principles and practices they are being used to uphold. There must be equitable access for all; technological and legal structures that ensure safe participation; systems, applications, and regulations that protect human dignity; and oversight and governance mechanisms that embody the principles of democratic societies.

Models and ideas of such infrastructures exist at various stages of development and come from many parts of the world. The Digital Civil Society Lab sees the entirety of these efforts as fundamental to the existence and future of civil society and democracies. We are hosting this series as a means of expanding awareness and encouraging participation in creating alternatives to the corporatized and surveilled digital world that we know and developing the digital infrastructures that we need. In addition, each session will include time for California residents and policy makers to consider if and how the State might support or advance the presented ideas or develop and suggest additional options.

This series consists of 3 conversations in which we will frame the broad opportunities, consider them from a variety of perspectives, and provide time for audience members and stakeholders to contribute additional examples and/or join on to any of the efforts underway. We invite creators, thinkers, policy makers, funders, and activists to imagine the next steps. Background materials are provided at the end of this booklet and we encourage participants to familiarize themselves with those materials so that we can make the most of the shared discussion times. We encourage people to participate in the entire series as a means of building community and moving ideas to action.

OCTOBER 20, 2020 | 9:00-10:30 AM PACIFIC DAYLIGHT TIME (90 MINUTES)

SESSION 1: Digital Public Infrastructural Possibilities

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What is digital public infrastructure, how does it build on work communities are already doing, how do we center equity and access, and how might we make more of it a reality? The first session features Ethan Zuckerman making a case for **digital public infrastructure**. He will join in conversation with activists and policy advocates who approach these ideas through the lens of equity, indigeneity, and public responsibility.

Presentation: Ethan Zuckerman – Digital Public Infrastructure

Panel responses from:

- **Janice Gates**, Director, Equitable Internet Initiative at the Detroit Community Technology Project
- **Katy Knight**, Executive Director, Siegel Family Endowment
- **Sabelo Mhlambi**, Founder, Bantocracy; Technology and Human Rights Fellow, Carr Center for Human Rights Policy
- **Marietje Schaake**, International Policy Director, Stanford University Cyber Policy Center; President, Cyber Peace Institute

Q/A and audience discussion

OCTOBER 27, 2020 | 9:00-10:30 AM PACIFIC DAYLIGHT TIME (90 MINUTES)

SESSION 2: Digital Public Infrastructure: A Corporation for Public Software

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When TV went off the rails, the U.S. created the Corporation for Public Broadcasting. The Corporation for Public Software builds on that history, proposing an institutional approach to the possibilities of digital public infrastructure. What is a CPS, how might it work, and what else might need to change to make it work? This session features John Gastil and Todd Davies's proposal for a **Corporation for Public Software**. They will be in conversation with experts on regulatory, legal, and community-based approaches to how we think about infrastructure.

Presentation: John Gastil and Todd Davies – idea for a Corporation for Public Software

Panel responses from:

- **Derrick Cogburn**, Professor, American University
- **Mélanie Dulong de Rosnay**, Associate Research Professor, CNRS
- **Jasmine McNealy**, Associate Professor of Telecommunication, University of Florida
- **Catherine Sandoval**, Associate Professor of Law, Santa Clara University

Q/A and audience discussion

NOVEMBER 10, 2020 | 9:00-11:30 AM PACIFIC STANDARD TIME (2.5 HOURS)

SESSION 3: Digital Public Infrastructure: Where, what, and who is infrastructure?

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Everything from education to energy, protest movements to transit planning now depends on digital connections. The internet of things, 5G, “smart” cities and so on make digital systems infrastructural in vast ways. How do we ensure such pervasive systems are governed, built, and understood as public infrastructure with commitments to equity, access, participation, and safety built in?

Part 1: A world with no “off” switch | 9:00-10:15 AM (PST)

Interview: Laura DeNardis – The Internet in Everything

Laura DeNardis will be interviewed by Beatrice Martini of Access Now. They will consider a **world with no “off” switch** and how the digitization of physical systems and places influences our most fundamental rights.

Panel responses from:

- **Lydia X. Z. Brown**, Policy Counsel, CDT, Disability rights, algorithmic fairness/justice
- **Greta Byrum**, Co-Director, Community Tech NY and The New School's Digital Equity Lab
- **Rachel Coldicutt**, Technology Strategist and Director of Research Consultancy, Careful Industries
- **Jimmy Garcia-Meza**, Co-Founder and CEO, Cloudplugs
- **Marleen Stikker**, Founder, Waag
- **Sander van der Waal**, Project and Concept Developer, Waag

Brief break (15 minutes)

Part 2: Advancing the ideas | 10:30-11:30 AM (PST)

Breakout discussions with speakers and panelists:

This series is designed to advance all of the ideas discussed within the concept of digital public infrastructure and engage participants in conceiving of and implementing next steps. We will spend 45 minutes in breakout rooms to provide additional reflection, insights and engagement on the calls to action presented throughout the series. The breakout rooms will include our previous speakers and panelists.

We will then reconvene to close out the series and give people a chance to make final reflections and commitments to next steps.

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The Digital Civil Society Lab will facilitate these conversations, provide brief notes for each session, and produce a final brief on the series.

Questions? Contact Heather Robinson, DCSL Program Manager at hnrbtnsn@stanford.edu or Lucy Bernholz, Lab Director, bernholz@stanford.edu

SPEAKER BIOGRAPHIES

SESSION 1: DIGITAL PUBLIC INFRASTRUCTURAL POSSIBILITIES



JANICE GATES

Director, Equitable Internet Initiative at the Detroit Community Technology Project

Janice is the Director of the Equitable Internet Initiative, a program of the Detroit Community Technology Project (DCTP). In this role, she works with organizations in three Detroit neighborhoods (Islandview, Southwest and the North End) to build community governed ISPs and bring their communities online. She works to seed community technology programming, including DCTP's Digital Stewards training program, and supports these organizations with local/national expansion, outreach strategies, managing partnerships, program implementation, sustainability planning, evaluation and internet adoption. Janice has a background in program management, community engagement, marketing, public relations, and communications.



KATY KNIGHT

Executive Director, Siegel Family Endowment

Katy Knight is the Executive Director of Siegel Family Endowment, and works closely with founder and chairman David Siegel to develop and refine the organization's grantmaking strategy and vision. Before joining SFE, Katy worked on the community engagement team at Two Sigma, and before that at Google on the public affairs team. She has also held roles in nonprofit management and real estate. Katy is a member of the advisory council of READ Alliance, a literacy and youth employment organization, as well as a board member of CSforALL, the national movement to bring high quality computer science education to all students. She also sits on the board of the Regional Plan Association, which develops and promotes ideas to improve the economic health, environmental resilience, and quality of life of the New York-New Jersey-Connecticut metropolitan area. Katy earned a BA from the University of Pennsylvania and is a proud alumna of Prep for Prep.



SABELO MHLAMBI

Founder, Bantucracy; Technology and Human Rights Fellow, Carr Center for Human Rights Policy

Sabelo Mhlambi is the founder of Bantucracy, a public interest organization that focuses on ubuntu ethics and technology, a Technology & Human Rights Fellow at the Carr Center for Human Rights Policy, and a Fellow at the Berkman Klein Center for Internet & Society. Mhlambi's work is at the intersection of human rights, ethics, culture, and technology and emphasizes global south perspectives in AI policy.



MARIETJE SCHAAKE

International Policy Director, Stanford University Cyber Policy Center; President, Cyber Peace Institute

Marietje Schaake is the international policy director at Stanford University's Cyber Policy Center and an international policy fellow at Stanford's Institute for Human-Centered Artificial Intelligence. She was named President of the Cyber Peace Institute.

Between 2009 and 2019, Marietje served as a Member of European Parliament for the Dutch liberal democratic party where she focused on trade, foreign affairs and technology policies. Marietje is affiliated with a number of non-profits including the European Council on Foreign Relations and the Observer Research Foundation in India and writes a monthly column for the Financial Times and a bi-monthly column for the Dutch NRC newspaper.



ETHAN ZUCKERMAN

Associate Professor of Public Policy, Information & Communication, University of Massachusetts at Amherst

Ethan Zuckerman is associate professor of public policy, information and communication at the University of Massachusetts at Amherst and director of the Institute for Digital Public Infrastructure. His research focuses on the use of media as a tool for social change, the use of new media technologies by activists and alternative business and governance models for the internet. He is the author of *Mistrust: How Losing Trust in Institutions Provides Tools to Transform Them* (2020) and *Rewire: Digital Cosmopolitans in the Age of Connection* (2013). With Rebecca MacKinnon, Zuckerman co-founded the international blogging community Global Voices. Previously, Zuckerman directed the Center for Civic Media at the MIT Media Lab. In 2000, Zuckerman founded Geekcorps, a technology volunteer organization that sends IT specialists to work on projects in developing nations, with a focus on West Africa. He and his family live in Berkshire County in western Massachusetts.



DERRICK COGBURN

Professor, American University; Executive Director, Institute on Disability and Public Policy (IDPP); Faculty Co-Director, Internet Governance Lab

Dr. Cogburn is Professor at American University in Washington, DC. He has a joint appointment in the School of International Service where he serves in the International Communication and International Development Programs; and in the Kogod School of Business where he serves in the Department of Information Technology & Analytics. He also serves as the founding Executive Director of the AU Institute on Disability and Public Policy (IDPP), is Faculty Co-Director of the Internet Governance Lab (IGL), and is Director of COTELCO: the Collaboration Laboratory. He has published widely, with his most recent books being: *Transnational Advocacy Networks in the Information Society: Partners or Pawns?* (Palgrave-McMillan, 2017); *Making Disability Rights Real in Southeast Asia: Implementing the CRPD in ASEAN* (Lexington, 2016); and *The Turn to Infrastructure in Internet Governance* (Palgrave-McMillan, 2016). He is Editor of the Palgrave Macmillan book series *Information Technology and Global Governance* and serves on editorial boards for *Journal of Information Technology and Politics*, *Review of Policy Research*, and *Journal of Political Science Education*. He is former Chair of the Review Panel for the American Academy for the Advancement of Science (AAAS), Diplomacy, Security and Development, Science Technology Policy Fellowships, and served as a member of the inaugural AAAS Big Data and Analytics Fellowship Committee and returned to serve as its chair. He served as a member of the High-Level Panel of Advisors for the United Nations Global Alliance for Information and Communication Technologies and Development (UNGAIID). Dr. Cogburn has been Principal Investigator on grants from a wide variety of government, private sector, and foundation sources including, the National Science Foundation Department of Education, Microsoft, Microsoft Research, Hewlett Packard, Cisco Systems, JPMorgan Chase, the WK Kellogg Foundation, and The Nippon Foundation. He also served on the Committee of Visitors for the Office of Cyberinfrastructure at the National Science Foundation. At Syracuse University, he was tenured Associate Professor in the School of Information Studies and Senior Research Associate in the Moynihan Institute at the Maxwell School. He is past president of the Information, Technology, and Politics section of the American Political Science Association and of the International Communication section of the International Studies Association. He served as Executive Director of the Global Information Infrastructure Commission-Africa and Vice Chair of the Global Internet Governance Academic Network. He holds a PhD in political science from Howard University in Washington, DC, where he was a W.K. Kellogg doctoral fellow at the Ralph J. Bunche International Affairs Center.



TODD DAVIES

Academic Research and Program Officer, Symbolic Systems Program and Center for the Study of Language and Information, Stanford University

Todd Davies is the associate director and a lecturer in the Symbolic Systems Program, and a researcher at the Center for the Study of Language and Information, at Stanford

University. He holds a Ph.D. in cognitive psychology, an M.S. in data analysis and statistical computing, and a B.S. in statistics, all from Stanford. He has also served as a computer scientist at the Artificial Intelligence Center, SRI International, assistant professor of psychology at Koç University in Istanbul, and, most recently, faculty in residence at the Stanford Bing Overseas Studies Program in Oxford and a visiting fellow at Brasenose College. His research focuses on group deliberation, technology and methods for social decision making, and information policy.



MÉLANIE DULONG DE ROSNAY

Associate Research Professor, French National Centre for Scientific Research

Mélanie Dulong de Rosnay, PhD in law University Paris 2, 2007, is Associate Research Professor at the French National Centre for Scientific Research (CNRS) since 2010. Since 2019, she is the co-founding director of the CNRS Center for Internet and Society, and since 2020, she also directs a CNRS national research network on Internet, AI and Society. Her research focuses on digital commons, regulation by technology, information technology law and policy. She recently worked on network infrastructure as a commons with the netCommons European project.



JOHN GASTIL

Distinguished Professor of Communication Arts & Sciences, Penn State University

John Gastil (PhD, University of Wisconsin-Madison) is Distinguished Professor in the Department of Communication Arts and Sciences and Political Science at the Pennsylvania State University, where he is a senior scholar at the McCourtney Institute for Democracy. Gastil's research focuses on the theory and practice of deliberative democracy, especially how small groups of people make decisions on public issues. The National Science Foundation has supported his research on the Oregon Citizens' Initiative Review, the Australian Citizens' Parliament, American juries, and how cultural biases shape public opinion. His most recent books are *Legislature by Lot* (Verso, 2019) with Erik Olin Wright, *Hope for Democracy* (Oxford, 2020) with Katherine R. Knobloch, and the novel *Gray Matters* (John Hunt, 2020).



JASMINE MCNEALY

Associate Professor of Telecommunication, University of Florida

Jasmine is an Associate Professor of Telecommunication at the University of Florida, where she teaches courses on regulation. She researches media, technology, and law with an emphasis on privacy, surveillance and data governance. She is also the Associate Director of the Marion B. Brechner First Amendment Project at UF, and a Faculty Associate at Harvard University's Berkman Klein Center for Internet & Society.



CATHERINE J.K. SANDOVAL

Associate Professor, Santa Clara University School of Law

Catherine J.K. Sandoval is a tenured Law Professor at Santa Clara University who teaches and conducts research on Communications, Energy, Antitrust, and Contract law. Her scholarship analyzes legal and policy drivers of communications, energy, and water infrastructure safety, reliability, and access gaps. She served a six-year term as a Commissioner of the California Public Utilities Commission, appointed by Governor Brown. During her term as a CPUC Commissioner, she led the reform of the CPUC’s lifeline program, increasing access for millions of low-income California to Internet and mobile phone service. She led initiatives to use technology to address the drought, increase energy and water savings, and improve safety, reliability, and equity. She serves as Co-Director of SCU Law’s High-Tech Law Institute. She hails from a trailer park in East Los Angeles and became the first Latinx CPUC Commissioner, first Latina Rhodes Scholar, and first in her family to earn a BA degree. She earned a BA from Yale University, a Master of Letters from Oxford University, and a JD from Stanford Law School.

SESSION 3: DIGITAL PUBLIC INFRASTRUCTURE: WHERE, WHAT, AND WHO IS INFRASTRUCTURE?



LYDIA X. Z. BROWN

Policy Counsel, Privacy and Data Project at the Center for Democracy and Technology

Lydia X. Z. Brown is a Policy Counsel with the Center for Democracy and Tehcnology’s Privacy and Data Project, focused on disability rights and algorithmic fairness and justice.

Outside of their work at CDT, Lydia is an adjunct lecturer in disability studies at Georgetown University’s Department of English, and the founding director of the Fund for Community Reparations for Autistic People of Color’s Interdependence, Survival, and Empowerment. They serve on the American Bar Association’s Commission on Disability Rights, and chair the Section on Civil Rights and Social Justice’s Disability Rights Committee. They are also lead editor of *All the Weight of Our Dreams: On Living Racialized Autism*, a groundbreaking anthology on autism and race published by the Autistic Women and Nonbinary Network. Lydia is Director of Policy, Advocacy, & External Affairs for the Autistic Women & Nonbinary Network, founding board member of the Alliance for Citizen-Directed Supports, and member of several advisory committees, including the Mozilla Foundation project on the Law and Politics of Digital Mental Health Technology, the Lurie Institute for Disability Policy at Brandeis University, and the Coelho Center for Disability Law, Policy, and Innovation at Loyola Law School.

Before joining CDT, Lydia worked on disability rights and algorithmic fairness at Georgetown Law’s Institute for Tech Law and Policy. Prior to that, Lydia was Justice Catalyst Fellow at the Bazelon Center for Mental Health Law, where they advocated for disabled students’ civil rights in schools, and an adjunct professor of disability policy and social movements at Tufts University. Lydia has spoken internationally

and throughout the U.S. on a range of topics related to disability rights and disability justice, especially at the intersections of race, class, gender, and sexuality, and has published in numerous scholarly and community publications. Among others, they have received honors from the Obama White House, the Society for Disability Studies, the American Association of People with Disabilities, the National Disability Mentoring Coalition, and the Disability Policy Consortium. In 2015, Pacific Standard named Lydia to its list of Top 30 Thinkers in the Social Sciences Under 30, and Mic named Lydia to its inaugural list of 50 impactful leaders, cultural influencers, and breakthrough innovators for the next generation. In 2018, NBC named Lydia to its list of Asian Pacific American breakthrough leaders, and Amplifier featured them in the We The Future campaign honoring youth activism. Most recently, Gold House Foundation named Lydia to its A100 list of America's most impactful Asians for 2020.



GRETA BYRUM

Co-Director, Community Tech NY and The New School's Digital Equity Lab

Greta Byrum reimagines the way we design, build, control, and govern communications systems. As Co-Director of Community Tech NY and the Digital Equity Laboratory at the New School for Social Research, and as a co-founder of the Community Tech Collective, she builds digital justice through applied research, popular education, partnerships, and policy strategy. Previously, Greta founded and led the Resilient Communities program at New America, where she designed and led Resilient Networks NYC, an initiative bringing storm-hardened mesh WiFi to five neighborhoods in NYC's flood zones. An urban planner, poet, FM broadcaster, and digital justice organizer, Byrum also serves on the board of the Metropolitan New York Library Council and was a Harvard Loeb Fellow 2016-17. Her goal is to seek and share learnings everywhere on how to build communication systems as a fundamental human right.



RACHEL COLDICUTT

Technology Strategist and Director of Research Consultancy, Careful Industries

She was previously founding CEO of responsible technology think tank Doteveryone where she led influential and ground-breaking research into how technology is changing society and developed practical tools for responsible innovation. Prior to that, she spent almost 20 years working at the cutting edge of new technology for companies including the BBC, Microsoft, BT, and Channel 4, and was a pioneer in the digital art world. Rachel is an influential voice on the UK technology scene, and is an advisor, board member and trustee for a number of companies and charities. In 2019, Rachel was awarded an OBE in the New Year's Honours for services for the digital society.

She is currently writing a book about careful innovation.



LAURA DENARDIS

Professor and Interim Dean of the School of Communication, American University

Laura DeNardis is globally recognized as one of the most influential scholars in Internet governance. She is a Professor and the Interim Dean of the School of Communication at American University and a Faculty Director of the Internet Governance Lab. Among her seven books are *The Global War for Internet Governance* (Yale University Press 2014) and *The Internet in Everything: Freedom and Security in a World with No Off Switch* (Yale University Press 2020). She has received grants of more than a million dollars to support her work. In 2018, she received American University's highest faculty award, Scholar-Teacher of the Year. She is an affiliated fellow of the Yale Law School Information Society Project and previously served as its Executive Director. Her expertise and scholarship have been featured in the *Wall Street Journal*, *Bloomberg*, *Wired*, *Market Watch*, the *Washington Post*, *Science Magazine*, *The Economist*, *National Public Radio*, *New York Times*, *Newsweek*, *Time Magazine*, *Christian Science Monitor*, *Slate*, *Reuters*, *Forbes*, and *The Atlantic*, among others. She has served as a State Department advisor and the Research Director of the Global Commission on Internet Governance. She holds an Engineering Science degree from Dartmouth College, an MEng from Cornell, a PhD in Science and Technology Studies from Virginia Tech, and was awarded a postdoctoral fellowship from Yale Law School.



JIMMY GARCIA-MEZA

Co-Founder and CEO, Cloudplugs

Advisor to the Stanford Open Virtual Assistant Lab (OVAL), dedicated to advancing and democratizing virtual assistant technology, while protecting public interest in privacy, open knowledge access, and open competition.



BEATRICE MARTINI

Practitioner Fellow, Digital Civil Society Lab; Education Coordinator, AccessNow Digital Security Helpline

Beatrice is a technology capacity builder and researcher. She is the Education Coordinator for the Access Now Digital Security Helpline, a 24/7 real-time resource for civil society groups, activists, journalists and human rights defenders.

Previously, Beatrice led the Human Rights Technology program at the nonprofit Aspiration, driving collaborative initiatives with information security practitioners, community organizers, lawyers, and researchers supporting human rights efforts globally. Before that, she worked at the Open Knowledge Foundation and on several projects leveraging open source technology in support of justice and rights endeavors.

She is also a research fellow at the Harvard Kennedy School, where she explores the implications of Internet infrastructure design on human rights, and serves in a formal advisory role with the Center for the Cultivation of Technology and OpenArchive.

You can follow her on Twitter @beatricemartini.



MARLEEN STIKKER

Founder, Waag

Marleen Stikker is founder of Waag.

Marleen is also founder of 'De Digitale Stad' (The Digital City) in 1993, the first virtual community introducing free public access to the Internet in Amsterdam. She leads Waag, a social enterprise that consists of a research institute for creative technologies and social innovation and Waag Products, that launched companies like Fairphone, the first fair smartphone in the world.

She is also member of the European H2020 Commission High-level Expert Group for SRIA on innovating Cities/DGResearch and the Dutch AcTI academy for technology & innovation.

Marleen Stikker strongly adheres to the Maker's Bill of Rights motto: *"If You Can't Open It, You Don't Own It"*. Marleen believes that society needs open technologies that meet societal challenges.



SANDER VAN DER WAAL

Project and Concept Developer, Waag

Sander van der Waal is the lead of the Future Internet Lab at Waag, working to ensure that human values are core to how technology and data are designed and deployed in society, based on Waag's principles of openness, fairness, and inclusivity.

Sander has an educational background in computer science and philosophy, and has solid expertise and experience in open source software development, open data and knowledge, and data infrastructures.



Stanford PACS

Center on Philanthropy
and Civil Society

—
Digital Civil Society Lab

ABOUT PACS

The Stanford Center on Philanthropy and Civil Society (Stanford PACS) develops and shares knowledge to improve philanthropy, strengthen civil society, and effect social change. Stanford PACS connects students, scholars, and practitioners, and publishes the preeminent journal *Stanford Social Innovation Review (SSIR)*.

Stanford PACS is led by Carla Eckhardt, its executive director, and by faculty codirectors Woody Powell, Rob Reich, and Robb Willer.

Stanford PACS has an Advisory Board led by Laura Arrillaga-Andreessen, founder and chairman; Herbert A. Allen III; Laura E. Arnold, Roy Bahat, Ted Janus; Karla Jurvetson; Kathy Kwan, Xin Liu; Carter McClelland; Felipe Medina, Kim Meredith, Jeff Raikes (ex-officio), David Siegel; Liz Simons; Darren Walker and Yilan Zhao.

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ABOUT DCSSL

The Stanford Digital Civil Society Lab seeks to understand, inform, protect and promote civil society in a digitally dependent world. Our goal is to foster a thriving and independent digital civil society rooted in a democratic commitment to freedom of association and assembly, freedom of speech and privacy. Our approach is interdisciplinary and cross-sectoral:

- We conduct and catalyze research across disciplines,
- We develop learning opportunities for civil society and philanthropic organizations,
- We support an emerging generation of community advocates, technologists and policymakers through teaching and fellowships,
- We promote efforts to better integrate civil society and digital policy advocacy.

[Digital Civil Society Lab](#)

[Reclaiming Digital Infrastructure for the Public Interest](#)

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