

FINAL TECHNICAL REPORT / RAPPORT TECHNIQUE FINAL

IMAGINING A FEMINIST OPEN SCIENCE - A

WORKSHOP REPORT

Chan, Leslie;

Okune, Angela;

© 2018, LESLIE CHAN



This work is licensed under the Creative Commons Attribution License (<https://creativecommons.org/licenses/by/4.0/legalcode>), which permits unrestricted use, distribution, and reproduction, provided the original work is properly credited.

Cette œuvre est mise à disposition selon les termes de la licence Creative Commons Attribution (<https://creativecommons.org/licenses/by/4.0/legalcode>), qui permet l'utilisation, la distribution et la reproduction sans restriction, pourvu que le mérite de la création originale soit adéquatement reconnu.



Workshop Report: *Imagining a Feminist Open Science*

*A Follow-up Event from the
Open and Collaborative Science in Development Network (OCSDNet)*

Workshop Date: June 20th - 21st, 2018



submitted to:

INTERNATIONAL DEVELOPMENT RESEARCH CENTRE (IDRC-CRDI)

By:

Angela Okune	angela@ihub.co.ke
Leslie Chan	chan@utsc.utoronto.ca
Becky Hillyer	becky.hillyer@gmail.com
Denisse Albornoz	albornoz.denisse@gmail.com
Alejandro Posada	alejandroposada71@gmail.com

Submitted: September 2018

Table of Contents

Executive Summary	3
Workshop Attendees	4
I. Workshop Background & Objectives	5
Outputs	7
II. Workshop Activities and Outcomes	8
Day 1: Participant Presentations and Questions on Feminist OCS	9
Day 2: Defining and Integrating Feminist Principles and Methods into Scientific Research	10
III. Contributions to EIPub 2018	17
IV. Moving Forward	18
Bibliography	19

Executive Summary

The Open and Collaborative Science in Development Network (OCSDNet), funded by IDRC and DFID from 2014-2017, had the key objective of gathering evidence to better understand how and whether an open and collaborative approach to scientific knowledge production could contribute to development outcomes across a variety of social, economic and political contexts. As OCSDNet began to develop a more comprehensive framework of OCS, we came to realize that much of the groundwork looking at inclusive science practices and theory has been laid by other scholars in a variety of fields, especially feminist postcolonial technoscience scholars. With OCSDNet coming to a close in its current configuration, it was timely to bring a small subset of scholars and practitioners together to discuss what can be set in motion through situated feminist open science projects in diverse global contexts. The following report highlights the proceedings of the two-day workshop which took place from June 20-21 immediately preceding the Electronic Publishing (EIPub) conference held in Toronto, Canada.

Workshop Achievements

1. Shared what has been learned about knowledge production and circulation processes from the 3-year OCSDNet experience;
2. Identified specific feminist methodologies and frameworks appropriate for the various participating projects;
3. Formulated initial research questions for each of the participating projects.

Find the full workshop notes [here](#).



Workshop Attendees

Full Participant Profiles: : <https://goo.gl/HRJPG4>

Name	Institution	Areas of Interest / Expertise
Alejandro Posada	OCSDnet & Knowledge G.A.P.	Political Economy of Knowledge Production, rent seeking, commodification, infrastructure
Angela Okune	OCSDNet / University of California, Irvine	data ethics, research infrastructures, Science and Technology Studies (STS), anthropology, Kenya
Anne Clino	Oswaldo Cruz Foundation (Fiocruz), member of Interdisciplinary Laboratory on Information and Knowledge Studies (Liinc)	Open Science, Open notebook science, Open Data, Citizen Science, Public Health
Becky Hillyer	Open and Collaborative Science in Development Network	Open science, knowledge diversity, participatory research, inclusive infrastructures
Denisse Alborno	Mini Academy of Science and Technology (Peru) / Open and Collaborative Science in Development Network	Open science, critical pedagogies, data politics, feminist technoscience, digital rights
Katherine Laycock	University of Waterloo	climate change, communication, information barriers, Southeast Asia, and social capital
Leslie Chan	Centre for Critical Development Studies, University of Toronto Scarborough	Scholarly Communications, Open Access, Knowledge Infrastructure, Digital Inclusion
Logan Cochrane	Carleton University	Social justice, collective action, participation, food security, governance
Maggie Huang	Knowledge GAP	international development, open science, critical intellectual property, fictitious commodities
Michelle Murphy	Technoscience Research Unit, WGS, History, University of Toronto	feminist STS, environmental and data justice, Indigenous STS.
Najat Saliba	American University of Beirut	Citizen science, climate change adaptation, environmental pollution, open data
Nancy Saleem	Access to Knowledge for Development Center, American University in Cairo	Open Data, Development, Gender, Digital Economy, MENA
Raed Sharif	IDRC	Research for Development, Digital Innovation, Openness, Gender Equality, Data Economy and Entrepreneurship.
Reem Wael	Tannour Consultants	Gender, research, policy, data, training
Ruhiya Seward	IDRC	Digital rights, cyber policy, gender equality/feminism, open/equitable development, governance/politics/participation
Sarita Abigali	IBICT - Brazilian Institute of Information in Science and Technology	Open science, citizen innovation, sustainable development, STS,

I. Workshop Background & Objectives

The Open and Collaborative Science in Development Network ([OCSDNet](#)), funded by IDRC and DFID from 2014-2017, operated with the key objective of gathering evidence to better understand whether and how an open and collaborative approach to scientific knowledge production could contribute to development outcomes across a variety of social, economic and political contexts. Composed of twelve two-year-long research projects located throughout Asia, Latin America, the Caribbean, Sub-Saharan Africa, and Middle East and North Africa regions, the distributed research teams collected a variety of observations and developed conceptual tools that are contributing to a fuller understanding of the emerging field of “Open and Collaborative Science” or OCS that is distinct from the mainstream discourses of Open Science (OS), which has a tendency to privilege technology and standards while paying little attention to the historical and institutional contexts of knowledge production.

As the OCSD Network Coordination team developed a more comprehensive framework of Open and Collaborative Science (OCS), we came to realize that much of the groundwork looking at inclusive science practices and theory has been laid by other scholars in a variety of fields, especially feminist postcolonial technoscience¹ scholars (e.g. Harding 2006, 2011, 2015; Haraway 1988; Pollock and Subramaniam 2016; Noble 2018, Foster 2017). Given the close of OCSDNet’s latest configuration², we identified the mid-2018 as a timely moment to bring these fields together in conversation to discuss the additional perspectives and insights that could be gained by developing an explicitly feminist framework to Open Science. The expanded workshop proposal (which can be [found here](#)) details several lessons learned from OCSDNet that provided an important starting point for workshop discussions on what a more integrated feminist open science framework should be considering.

These key lessons revealed that just because the technical groundwork might be in place for virtual collaboration, users of such infrastructure do not necessarily benefit equally from its availability. Building on the last three years of work under OCSDNet, we arrived at the concept of “[inclusive knowledge infrastructures](#)” as a core guiding topic for the workshop discussion. We defined “inclusive knowledge infrastructures” as tools, platforms, networks and other socio-technical mechanisms that deliberately enable multiple forms of participation, that allow

¹ We use these terms as placeholders for now to signpost to the types of practices and conversations that we are interested in engaging. We seek to include a pluralistic set of views and recognize that some of these fields have been critiqued for example, some Latin American scholars prefer to use the term decolonial instead of postcolonial. In the same way, some authors adopt the perspective of postfeminism, not as a denial of feminism, but as a questioning of an elitist/white feminism. There are a number of approaches that converge and diverge on key issues that interest us here and we should give floor to this debate. At this point, we keep these terms here given their widespread usage, but acknowledge the importance of the pluralistic set of views.

² For more insights from OCSDNet, read the full final report available here:

https://docs.google.com/document/d/1iOhwDr4a5JcMX_i39dExnCcp5HYXmxi_lelUCe2Mp30/edit#

for multiple ways of knowing amongst a diverse set of actors, and which purposefully acknowledge and seek to redress power relations within a given context.

The workshop aimed to bring together existing OCSDNet projects as well as other relevant stakeholders (academics and practitioners) to begin to co-develop a project proposal that integrates feminist technoscience perspectives with Open and Collaborative Science. The workshop especially focused on facilitating space for reflection and supplementary learning for three existing OCSDNet projects which have already demonstrated themselves to be rich sites for action research. These projects were used as a starting point to see how a more gender-transformative, feminist technoscience lens could be applied to expand their existing findings and enable further nuanced reflection on the dimensions of power and inclusivity within existing practices and local contexts.

To this end, we were able to bring together a diverse group of 16 people drawn together by a shared interest in exploring the intersection between feminist and indigenous STS and Open Science. These included two members of the OCSDNet Ubatuba project [in Brazil](#) and one member of the OCSDNet AUB [project](#) in Lebanon. The Ubatuba-Brazil project (presented by Anne and Sarita) described a spin-off from their original project that could be relevant as part of future work; LindaGeo is a GeoSpatial Data Platform of Northern Coast of Sao Paulo and is interested in exploring possible infrastructures and design for collaborative data production, and sharing different local groups such as researchers, professionals, high schools, unis, NGOs and traditional communities. A third representative from the OCSDNet project based in Kyrgyzstan presented an overview of their project via Skype, but was unfortunately unable to join the meeting in-person due to visa constraints.

Ongoing projects (non-OCSDNet) from Egypt (presented by Nancy and Reem) were also presented and discussed, while mentorship for all on-going projects was provided by workshop participants from a variety of backgrounds, including Logan Cochrane (action research, social justice, participation), Michelle Murphy (feminist technoscience) and Catherine Laycock (climate change, urban planning, information barriers).

Outputs

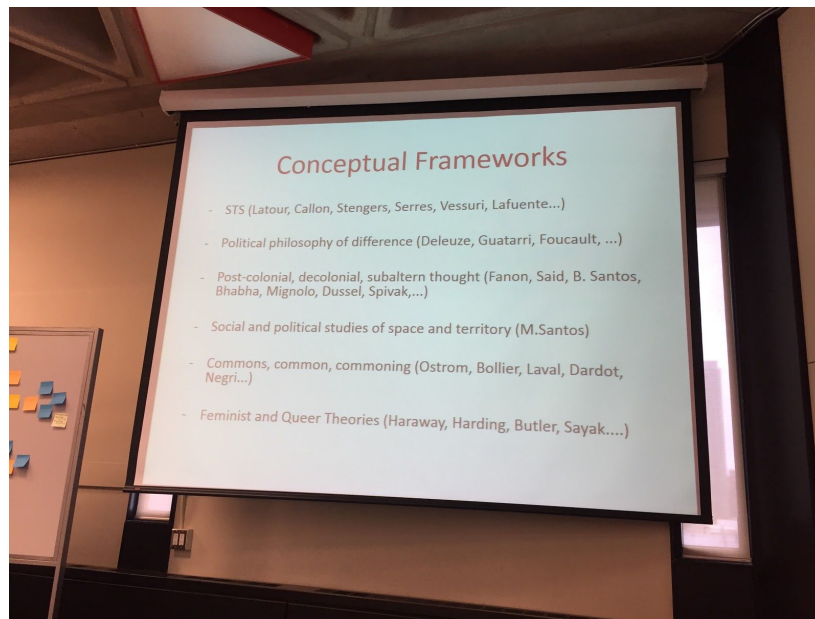
White Paper

During the workshop, we brainstormed concepts, methodologies, outcomes and assessment mechanisms that are important when considering what inclusive knowledge infrastructures might be. Leveraging these brainstormed concepts (see next section), we have begun a **white paper** ([draft available here](#)) addressing the question of how one might imagine and design inclusive knowledge infrastructures that promote feminist Open Science. The ideas within the paper have stemmed largely from notes taken during the workshop, and new project ideas centre around how to shift existing contemporary and historical factors in the production of

knowledge within a given context, to be more inclusive of intersectional identities - especially those that have been historically marginalized. The white paper also intends to outline the various development agencies and funders that are beginning to inquire critically about open science and questions of inclusive infrastructure, as well as the different NGOs that are paying attention to these questions right now.

Blogs

The workshop also resulted in a series of blog posts (drafts [here](#)) co-authored with participants that recount the key learnings from the workshop, which will be published via www.ocsdnet.org.



Caption: Slide by Sarita Albagli (2018).

II. Workshop Activities and Outcomes



The workshop included two days of focused and interactive discussion about how we could understand equitable knowledge infrastructures in the context of open science, especially drawing on existing work from feminist postcolonial and indigenous STS. Activities included flash presentations by attendees on existing work, projects, and ideas and break-out discussions about areas of concern and potential collaboration. The full agenda is available [here](#).

An important point raised by [Cochrane and Cundill \(2018\)](#) is that simply linking individuals is not enough to support collaborative synthesis. The analysts mention the importance of strengthening the way that collaborative spaces are facilitated and enlivening spaces where individuals are better able to interact, know one another and identify mutual interests and then develop collaborative projects. As part of such network building, a key aspect of the workshop was therefore also facilitating time for participants to get to know each other and share areas of interests more informally.



In addition to a walking tour of the downtown UoT campus, Leslie Chan organized a group tour of the [Thomas Fisher Rare Books Library](#), the largest repository of publicly accessible rare books and manuscripts in Canada. Leslie also hosted the group for dinner at his home in Toronto.

Day 1: Participant Presentations and Questions on Feminist OCS

During the first day of the workshop, opportunity was made available for participants to articulate their interest in the event and respective research backgrounds. Thus, after icebreakers and an overview presentation from IDRC representatives, each team was allocated ten minutes to highlight they key aspects of their work. A brief summary of their presentations, as well as any key challenges or questions that were raised, are presented in the table below:

Table 1: Brief Overview of Day 1 Presentations

Presenter(s)	Synopsis	Key Questions / Challenges
Sarita & Anne, IBICT Brazil	<ol style="list-style-type: none"> 1. Their current project is LindaGeo: a GeoSpatial Data Platform of Northern Coast of Sao Paulo. The objective is to explore possible infrastructures for collaborative data production. 2. Min actors include: local groups such as researchers, professionals, high schools, unis, NGOs, traditional communities, articulated with initiatives aiming to improve community development and empowerment. 3. Project questions technical, territorial (land) and embodied (body) "infrastructures" and how they interact with diverse modes of knowledge and existence (biopolitics). 4. Could also draw from indigenous techno-studies. 	<ol style="list-style-type: none"> 1. To what extent and how do changes in scientific knowledge and information production and circulation affect social change and power relations? What is the role of technological change in those processes? 2. What infrastructures? Not only technical but territorial, and body as infrastructure. 3. How does feminism / open science intersect? What do they bring to each other? Mainly referring to new feminism - new means, and new instruments.
Najat, AUB Beirut	<ol style="list-style-type: none"> 1. Previous OCSDNet project explored connections between behaviour and interaction with nature through community science. Current project is a collaborative university and community-led Atmospheric Chemistry program that aims to mitigate cardiovascular diseases and air pollution. 2. Objective: to find link between air pollution, coronary artery diseases, & diet through an 	<ol style="list-style-type: none"> 1. How much are informed citizens, particularly women, able to reverse health risks and environmental damages?

	<p>intervention of females affected by disease.</p> <ol style="list-style-type: none"> 3. The project also aims to educate women to take care of themselves and their households by measuring correlation of lifestyle, socioeconomic, and environmental determinants of maternal and offspring obesity. 	
Denisse, Mini-academy of Science and Technology, Peru	<ol style="list-style-type: none"> 1. Goal of current project is to empower girls by providing access to science and technology to lower science illiteracy and close the gender gap in science and technology in Peru. 2. Project aims to do this by building a more equitable scientific knowledge production infrastructures than those you find in classrooms through the inclusion and collaborative work between expert and non expert actors, peer to peer learning methods and the use of low cost tools. This methodology looks to lower fear, question authority hierarchies and exercise citizenship. Think of science as a process, not necessarily the outcome 3. Viewed through feminist technoscience lens, project looks to challenge perceptions of what science is, who can be a scientist, and how to do science. Think of science as a process, not necessarily the outcome. 	<ol style="list-style-type: none"> 1. What might monitoring and evaluation of open science projects look like, from a feminist lens/perspective? What can feminist scholarship teach us about monitoring and evaluation to move beyond just quantitative measures of "impact"? Can culture change be measured in a more meaningful way? 2. How to reach communities that are excluded by socioeconomic and infrastructural barriers? 3. How to cut dependency from international standards that define value of investing in science in Global South countries?
Nancy, Access to Knowledge for Development Centre, American University Cairo	<ol style="list-style-type: none"> 1. Access to Knowledge Global Academy looks at knowledge production and policy, alternative metrics and questions of surveillance and biopolitics. 2. Project worked to create solar data platform and negotiate what open data would mean for the people working in the sector. They ended up creating a very masculine space; women were 	<ol style="list-style-type: none"> 1. How to build inclusive infrastructures? 2. How do you integrate considerations about diversity and inclusion into methodology and the design of open data platforms?

	not engaged in the platform, despite working in the sector.	
Reem, Access to Knowledge for Development and HarassMap, Cairo	<ol style="list-style-type: none"> 1. Research institutions demonstrate resistance to incorporate gender lens. Projects failed to take into account the gender assumptions under which they were formulated. 2. HarassMap: Sexual harassment changed from being an individual issue to a public issue 3. Realized the importance creating spaces for anonymity as a catalyst for openness 	<ol style="list-style-type: none"> 1. How do we frame a research question to include a critical gender lens? 2. How to influence funding for gender related research? 3. What is the influence of “hashtag feminism?”
Aliya, Camp Alattoo, Kyrgyzstan	<ol style="list-style-type: none"> 1. In natural resource management funding tends to focus on infrastructure and not on the need of marginalized populations 2. Camp Alattoo wants to make space or quotas for women in pastures committees (tend to be mostly males) and also mobile applications through which they could increase their participation. 	<ol style="list-style-type: none"> 1. What are the obstacles for women’s participation in Natural Resource Management, including pasture management? What are the positive and negative impacts of the current pasture management system on rural women? 2. How rural women’s involvement in natural resource management and their access to environmental data change with the introduction of science technologies on the base of citizen’s science approach? 3. Who are the (expected and unexpected) stakeholders involved in and influenced by the introduction of application based interventions?
Katherine, University of Waterloo Canada	<p>Three Strands of Research:</p> <ol style="list-style-type: none"> 1. How do experts in the Philippines communicate around climate change issues. What are some of the barriers of communication and how do we deal with experts communicating with the public? 2. What are the relationships between effective mentorship and gender in an academic context? 3. Resiliency amongst recent rural urban migrants in Cambodia. Use social network analysis to look at language and information barriers in this space. 	<ol style="list-style-type: none"> 1. How can we better enable experts to think about their biases before/after they are conducting their research?
Alejandro and Maggie GAP (Colombia / Toronto)	<ol style="list-style-type: none"> 1. The Knowledge GAP research project is an early-career researcher and student led 	<ol style="list-style-type: none"> 1. How is academia implicitly participating in an extractive system

	<p>collective looking to map and bring light to the inequalities in knowledge production.</p> <p>2. The GAP project has focused on economic behaviour analysis of academic publishers, authorship of academic papers and policy discourse analysis of open science.</p> <p>3. Knowledge GAP has also become a self reflective space of the privilege of participation in “critical” spaces and conversations</p>	<p>of knowledge production?</p> <p>2. How can GAP be a disruptive space that allows students to be co-producers and not just consumers of academic and critical thinking content</p> <p>3. How can feminist open science theory inform the inequalities inherent in academic knowledge production?</p>
Logan	<p>1. How do we challenge the incentive structure in university. Logan has studied ways in which to decolonize language in Ethiopian universities.</p> <p>2. We must look beyond open access: at where the journals are based? Who owns them? What languages do they publish in?</p> <p>3. In many instances Southern Universities can not afford to publish open access, because they need to produce knowledge that fits into the current system of knowledge hierarchy.</p>	<p>1.What are alternative incentive structures (for us to get behind/advocate for?); How do we broaden ethics beyond IRB?</p>

Day 2: Defining and Integrating Feminist Principles and Methods into Scientific Research

Following the individual presentations from Day 1, Day 2 brought participants together to reflect on the new and interesting things that they had learned the day before, while questions were raised regarding concepts and theories that were of interest, but which required further explanation. Given the diversity of participants in the room - stemming from the fields of environmental conservation, to online safety reporting infrastructures, to feminist-indigenous technoscience scholars and others - there was a recognition that some overlapping themes existed, but there was a considerable amount of important knowledge and concepts to learn from one another.

Overview of OCSDNet and OCS Manifesto

The day began with an overview presentation by Angela Okune and Becky Hillyer (OCSDNet Coordination Team), outlining two years of work undertaken by the twelve research projects and coordination team of OCSDNet, including some of the key areas of learning and analysis. Particular focus was placed on the open and collaborative working model of the network, as well as outlining some of the core knowledge-inequality challenges that the network has been attempting to challenge. The [OCSDNet Manifesto](#) video was presented as a cumulative

example of the core concepts and outputs that members of the network have agreed were of importance to the successful practice of a fair and open science in development.

In hindsight, members of the coordination team have come to recognise that **the principles outlined in the OCS Manifesto overlap considerably with feminist principles and methodologies around research collaboration and knowledge sharing**. Hence, there is a recognition that open science has much to learn from feminist scholars, which resulted in the need for this workshop. Like “feminism,” OCSDNet believes that “openness” is not a product or an end goal, but an *approach* to doing research. Many practitioners and scholars of open science fail to critically consider the role of power relations in their work. At the workshop, we sought to acknowledge and unpack some of the key concepts used by feminist technoscience scholars in order to bridge the divide between these two disciplines and turn a critical lens on power relations within the the creation and sharing of inclusive knowledge for development.

Understanding Key Feminist Concepts (presentation by Michelle Murphy)

One of the pivotal learning moments of the workshop was during a presentation by Michelle Murphy - a Feminist-Technoscience scholar at the University of Toronto and member of the Metis community - that sought to unpack some of the key concepts and methodological approaches that many feminist scholars position in their work. This presentation led to invaluable reflection and discussion by other participants from non-feminist backgrounds, as many recognised the utility of applying the concepts within their respective research. A brief summary of some of the useful concepts and follow-up discussions are highlighted below.



Intersectionality

This term was originally coined by Kimberle Crenshaw, who recognised that ‘gender’ is not an adequate term to understand the lived realities of black American women (See: Crenshaw, 1989). Rather, she noted, the lives of black women are shaped by interlocking layers of oppression - including race, class, gender and histories. Thus, the concept of ‘gender’ alone is not sufficient when acknowledging, for instance, the lived realities of “American women,” since black, caucasian, hispanic, rich, poor, able-bodied, trans women all experience different levels of privilege and/or oppression depending on their specific, nuanced identity. In essence, intersectionality seeks to pinpoint how power relations converge on a specific subject. There is an emphasis on interlocking commonalities while remaining cognisant of the *situatedness* of a

given context. Intersectional analyses done in NYC and Lebanon would not yield the same results although some intersections would be identified.

Within OCSDNet, we have borrowed the feminist concept of “situatedness” to discuss “situated openness.” This term reflects the experience of network members that there is not necessarily a right or wrong way to do open science; but rather, the design of methodologies, tools and workflows should be established based on the unique contextual factors of those who are involved and for what purposes. In other words, there is a need to understand the way that power relations coalesce within a given circumstance in order to identify the opportunities and challenges for an inclusive open science. Interestingly, Michele Murphy suggested that “situatedness” should be understood beyond merely human actors. For instance, the tools that you have at your disposal (such as high-powered lab equipment, laptops, Internet access) shape the context for knowledge creation and the amount of real or perceived power that one has within such contexts.

Consent

The notion of “consent” was also a topic of discussion that Michelle articulated as being highly embedded in feminist research and methodologies. While the majority of university-centred research involves some form of prescribed “informed consent process,” these procedures are often one-size-fits-all prescriptive models across academic disciplines, topics and research methodologies. However, as Michelle articulated, and as at least [one OCSDNet project thoroughly recognised](#), there is a tendency for a high degree of tension between “openness” and “consent.” In the tech industry, for example, we are witnessing issues of privacy around open data, and whether or not users are aware that their data can be or is being exploited for private gain.

Michelle iterated that consent must always have the option for refusal, and that it should be deeply considered at all layers of a research process, beginning with the formulation of a research question. Through a feminist lens, consent is always happening through the signalling of permissions. Sometimes these signals manifest mindfully, but often they are subconscious, and frequently overlooked by those in positions of power.

In contexts of open science, consent is particularly contentious. While there is often an assumption that consent is implied, perhaps through willingness of users to engage in an open process, sufficient foresight might not have been established to understand the consequences of such engagement. Again, this is particularly relevant when knowledge or data is being ‘opened,’ as it can easily lead to the entrenchment of power relations through the exploitation of knowledge shared by marginalised users and consequent loss of privacy or ownership.

Non-innocence

“Non-innocence” is a concept that refers to the constant state of self-reflection of a feminist researcher, whereby one must recognise that s/he works in a context of messiness, where relationships are never purely ‘innocent,’ and where privilege and mixed agendas create

complex working terrains. Given this recognition, Michelle suggested that intentionalising *harm reduction* in the undertaking of research is central to feminist thinking and methodologies. There is a need to prioritise non-judgement in the research of messy situations and to recognise that people make difficult choices to get by in difficult situations. While goals and ideals might be utopian in nature, people and circumstances never are and this factor must be centred within the research process.

Responsibility

Similar to the concept of non-innocence highlighted above, “responsibility” also refers to a reflective process on the intersection of one’s own body and power relations, and the varying degrees of privilege that may be afforded due to their coalescence. In that sense, one can consider “response” and “ability” as separate but related; or in other words: understanding how your response in a given situation is shaped by your own positionality. This position may affect not only ourselves and other humans, but also organisms we’re studying, tools, spaces, etc.

Summary

Michelle’s presentation was well-received by workshop attendees and is very topical at the present moment. For instant, recent news shows that [tech companies are beginning to consider questions of ethics](#) as new conversations emerge around privacy and consent.

For OCSDNet, we recognised that many of the concept shared by Michelle were observed and have become embedded in network-thinking after three years of learning from the twelve research projects that compose the network. However, this was not always the case. During the conception phase of the network, the majority of our thinking was borrowed from the ICT4D community, which spoke about the potential for technology to “empower” and “transform lives” for marginalised communities. However, through critical reflection and discussions of power relations within the network, we have come to recognise that many of the new “open” tools and technologies simply recreate (or further entrench) existing power relations in new domains.

As Anne Clino, a member of the Ubatuba project in Brazil articulated:

Non-innocence is very important to talk about in science. We think science is a very ‘clean’ activity [...] but to work with community is to really focus on the messiness, and to recognise that we are part of this mess. It entails different scientific backgrounds working with people without formal education. Have to learn to create common language, work together. We are doing ‘slow science,’ but [mainstream] open science speaks about faster science. We have to contrast the idea that open science is faster science -- have to dialogue, negotiate, think differently.

Anne’s comments reflect experiences shared by other members within the network. Although mainstream discourses on open science promise efficiency and cost-effectiveness in the collection of data and creation of knowledge, this conveyor-belt model of science falls apart when applied in a context of complexity and diversity. This differentiation is important for

researchers, institutions and funders to recognise: **in order to sufficiently ground feminist principles in the creation of inclusive and locally meaningful models of knowledge creation, a sufficient time frame and a high degree of research flexibility must be allocated.**

Nancy Salam, drawing on her own experiences as a data analyst, also shared some of her dilemmas in regards to the ethics of data collection, particularly in contexts of development. Salam noted that the way that 'development' tends to treat people is highly relevant to the conversation. For instance, often the mode of creating and collecting certain types of data reproduces the development 'subject.' This subjectivity is further entrenched given that often the only data available is in regards to personal income or the ownership of 'things.' With this one-sided, capitalist-oriented data, it is very difficult to achieve an intersectional lens in regards to the people from whom the data is collected.

Moreover, the types of data and research results that are deemed valuable are pre-defined by a donor or research institution. For instance, as Denisse Alborno explained,

Conditions are different in Peru, where there is a strong reliance on foreign donors. The government won't invest in social programs. It's either foreign donors or the private sector [who fund local development initiatives]. I find a lot of NGOs or social workers that may agree with the theory [of open science], but find themselves in a catch-22. They have to speak a language they don't necessarily agree with. There is a lot of guilt. When applying for grants - do we put our theory first, or prioritise resource-securing?

In response, Michelle suggested it is necessary for organisations and institutions to develop and adhere to a Theory of Change, even if you can only make a "small change," based on the resources available. For her own work, she derives her ToC from Indigenous-Feminist thought, whereby the world continues to colonise, and her work sets out to make the world better for those who have suffered through the colonisation process.

Critiquing Theories of Change

The second activity of the day arose following Michelle's final comments regarding the need for institutions to develop well-grounded theories of change. Workshop participants were divided in to groups to discuss the theories of change of each researcher-practitioner in the room. Following these small-group discussions, the ideas were shared back to the larger group.



Towards a Feminist OCS Framework

Throughout the two days of the workshop, participants were frequently encouraged to write and post themes, questions or concepts that were interesting or relevant to their own work and/or that they had learned through workshop interactions. By the end of day two, there were at least one-hundred sticky-notes posted on the wall of the seminar room.

These sticky-notes, which kept a running log of workshop ideas, were then used as the basis of a sorting activity, with the aim of developing ‘thematic clusters’ that everyone in the room could agree were of relevance to the concept of ‘feminist open science.’ In the end, three larger conceptual themes emerged, as follows:

1. Inclusive knowledge infrastructures;
2. data justice; and
3. community-researcher mutuality

A summary of the concepts that made up each of the clusters is included below:

Inclusive Knowledge Infrastructures

The theme of ‘inclusive knowledge infrastructures’ (IKIs) has been discussed, to some extent, during the working phase of OCSDNet, and has become a core principle embedded within the OCS manifesto.. However, during the two-year lifespan of the network, little time was made available to develop a deeper understanding of what inclusive knowledge infrastructures could or would actually entail, and whether good models already exist, which could be shared and adapted in different contexts.

Of relevance to this topic, participants were interested in how to develop tools, technologies and infrastructure that were “low cost,” which could assist with linking open data and policy makers, which would be sustainable in the longer term, which could be integrated into practices of critical pedagogy, which might be used for creating alternative funding metrics, and which might integrate existing scholarly infrastructures.

The theme of ‘ethics’ was notably important in participants’ understanding of inclusive infrastructures, with questions raised around how we might use IKIs to broaden research ethics beyond IRB and individual incentives, positioning intentionality within the design of open infrastructure, drawing comparisons of value versus risk of collaboration, and the relevance of a situated view in the design of IKIs.

In terms of defining inclusive knowledge infrastructures, one commenter suggested that infrastructures are not only technical, but are shaped also by the *territory* and *bodies* with which they interact. For that reason then, the biopolitics of inclusive knowledge infrastructures must be thoroughly acknowledged within their design.

Data Justice

- Inclusive infrastructures (urban + Knowledge)
- Environmental Justice
- Questioning the system is good, but challenging it with counter/better science is even better
- Open data is good is but it is a biased towards people equipped with the technology
- Data Justice as feminist open science
- Suspending damage/desire based research
- Feminist methodologies in open data and open government
- Violence through data is violence on the land is violence on data
- Working with and against data
- Harm reduction
- Open data and public health
- Power dynamics around open data
- With and against technoscience/data
- Alternative data methodologies
- Qualitative data sharing practices and cultures
- Participatory methodologies
- Data can be violent - follow the WHO IARC model in grouping chemicals
- How metrics structure and design science & technology education
- Women are key actors as data builders and knowledge providers for sustainable development
- Inbetween:
- Reducing dependency on traditional impact metrics
- How to measure scientific production methods

- Open metrics for open science
- Data visualisation + social cartography

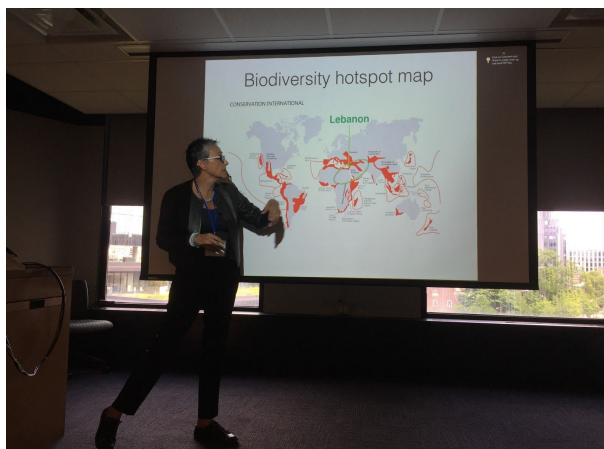
Community-Researcher Mutuality

- Turning the gaze on the university
- citizen/grassroots innovation
- Community science / open science, data science - who what where why?
- When decisions about inclusion lead to exclusion
- Knowledge plurality
- Common commoning
- Citizen science
- Collaborative, horizontal equity and responsible protocols
- epistemic/ cognitive diversity
- Lived experience research of technologies
- Social innovation citizen labs
- Epistemicide, knowledge democracy
- Ethics
- Boundary organisations
- Knowledge co-production
- Community based involvement public participatory approach
- Open as comprehensible
- Being honest about problems with community and open science
- From citizen to community science (avoid nation state frame)
- Gender methodologies in science
- Application of femtech lens for practitioners
- Community university knowledge co production
- Addressing internalized colonialism
- Querying research methods
- Dismantling colonial and racist technoscience
- Avoid expression that decreases peoples agency and knowledge
- Facilitating critical discussion about power/oppression
- Meaningful public participation and evaluation

III. Contributions to EIPub 2018

The workshop concluded with a half-day public forum on June 22 targeting the broader University of Toronto faculty and students and also attendees of the 2018 ELPUB conference, which had the theme of sustainability of community-based scholarly communication infrastructure. The public event focused on discussing qualities and practices of feminist open

science in development across various global South contexts. Workshop participants presented on their own projects and offered reflections based on the previous two days' discussion on scientific knowledge infrastructures and feminist theory and practice. The workshop attracted an audience of approximately 40 participants. Many were familiar with OCSDNet due to our online social media presence and blog posts. We framed the two-hour session around presentations as well as group work and found that individuals in attendance were open to engaging with our arguments and also were struggling with how to incorporate greater epistemological diversity into their framing of "Open Science" without tokenizing particular groups or people.



IV. Moving Forward

As Leslie Chan mentioned explicitly during the workshop, this workshop was viewed by the coordination team as part of an ongoing synthesis of findings from the three year network. Given the network's observations that there is a very matter of fact way of thinking about what Open Science is and generally agreed-upon acceptance of the definition of "Open Science", members of the coordination team have become interested in how these definitions have become universal (see for example, [Albornoz et al. 2018](#)). Chan highlighted the importance of trying to get policy makers and scientists to rethink how they think about science. As part of this effort, Chan has started a Knowledge Equity Lab that seeks to be a trans-disciplinary, academically transgressive space that facilitates collaboration and partnerships with community members who are underrepresented and marginalized knowledge producers. The vision is to cultivate a collaborative network of community partners that seek to challenge forms of exclusion within the socio-technical-structural conditions of knowledge production and exchange. This vision would support the goal of greater knowledge inclusion, epistemic diversity, and ultimately, social justice and social change.

In addition to this physical space that will provide an important nexus for furthering this work, there are additional threads and connections made through this workshop that will be important to track. For example, Angela Okune, a member of the coordination team is working together with Dr. Laura Foster (decolonial feminist STS scholar) to run a panel at the upcoming 4S 2019 conference and spur greater discussion around these topics related to STS work in Africa. Through her own PhD project, Angela is working on questions of data sharing amongst qualitative researchers in Nairobi and in 2019 will be hosting several public and private forums in Nairobi with various stakeholders to discuss what opening up data analyses might look like and the social and technical infrastructures required for such collaborations. This project includes the development of online organizational data repositories through the [Platform for Experimental Collaborative Ethnography \(PECE\)](#). The current [President of the Society for the Social Studies of Science](#), Dr. Kim Fortun is part of the leadership of PECE and is interested in exploring opportunities to partner on studying and implementing more equitable forms of scholarly infrastructures for collaborative knowledge production.

Further, emerging scholars such as Bárbara Rivera López (Asesora Producción Científica, Chile), Nancy Salem (Access to Knowledge for Development Center (A2K4D), The American University in Cairo, Egypt), Asura Enkhbayar (PhD student at Simon Fraser University, Canada) and Anne Clinio (postdoc at Federal University of Rio de Janeiro, Brazil) to name a few are growing their interests in topics that have emerged from the OCSDNet and Knowledge Gap Initiatives. We believe an important component of the next steps will be to further support and facilitate this next generation of work.

Bibliography

Albornoz, Denisse, Maggie Huang, Issra Martin, Maria Mateus, Aicha Touré, and Leslie Chan. 2018. "Framing Power: Tracing Key Discourses in Open Science Policies." *Electronic Publishing Connecting the Knowledge Commons: From Projects to Sustainable Infrastructure* (June). <https://elpub.episciences.org/4612/pdf>.

Cochrane, Logan, and Georgina Cundill. 2018. "Enabling Collaborative Synthesis in Multi-Partner Programmes." *Development in Practice* 0 (0): 1–10. <https://doi.org/10.1080/09614524.2018.1480706>.

Crenshaw, Kimberle. 1989. "Demarginalizing the Intersection of Race and Sex: A Black Feminist Critique of Antidiscrimination Doctrine, Feminist Theory and Antiracist Politics." *University of Chicago Legal Forum* 1989:139-167.

Foster, L. A. (2017). *Reinventing Hoodia: Peoples, Plants, and Patents in South Africa*. Seattle: University of Washington Press.

Haraway, D. (1988). Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective. *Feminist Studies*, 14(3), 575–599. <https://doi.org/10.2307/3178066>

Harding, S. (2006). *Science and Social Inequality: Feminist and Postcolonial Issues*. Urbana: University of Illinois Press.

Harding, S. (Ed.). (2011). *The Postcolonial Science and Technology Studies Reader*. Durham: Duke University Press Books.

Harding, S. (2015). *Objectivity and Diversity: Another Logic of Scientific Research*. Chicago: University Of Chicago Press.

Noble, S. U. (2018). *Algorithms of Oppression: How Search Engines Reinforce Racism*. New York: NYU Press.

Pollock, A., & Subramaniam, B. (2016). Resisting Power, Retooling Justice: Promises of Feminist Postcolonial Technosciences. *Science, Technology, & Human Values*, 41(6), 951–966. <https://doi.org/10.1177/0162243916657879>