Global Perspectives on Citizen Social Science

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INNOVATION
GATHERING

Global Perspectives on Citizen Social Science

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CSS Global Perspectives

This CoAct co-publication brings together voices from around the globe to unpack what CSS needs to account for to be truly inclusive. Voices from diverse contexts share what science should look like when accounting for multiple voices, needs, and traditions worldwide.

In a ten months process, we are collecting blog post-style contributions from around the world organized along five key topics. In November, we will compile all voices in an open publication format.

Two years ago, we came together with a group of *Open *Citizen *Social Science (OCSS) experts from all around the world -from remote and urban settings, from striving and challenging contexts- and asked ourselves, **What do Open Science and Citizen Social Science have in common? What can we learn from each other? And why should we collaborate?** Deriving from the many conversations we had with the Open Citizen Social Science community, including many of you, we identified **five crucial topics** to bring forward in this compilation through contributions from everyone who seeks to share their approaches, best practices, failures and essential lessons learned from across the world.

Learn more at -> CSS Global Perspectives ⋆ CoAct (coactproject.eu)

Locally driven protocols and local traditions in Science

"The first way of openness is to depart from the perspective of the people we work with and not to perceive our perspectives as expert knowledge. We need to understand, learn, and depart from local perspectives and practices, adopting together the protocol local communities will use. Those protocols will differ from those in the lab or the walls of academia, but the direction shall be to learn from them. Part of this is to embrace mythology and ritual as an integrative part of the participatory methodology. We need to take care of this contextualized knowledge wherever, and with whomever, we are working. This includes connecting ancient science (mythology) and contemporary science. " Deriving questions → What is required to reframe the mainstream understanding of expertise and adopt protocols of local communities as common practice? How can local traditions, such as rituals and mythology, be embraced as a central component of CSS methodology?

Locally driven protocols and local traditions in the Open Citizen Social Sciences

On April 21, 2022, GIG hosted the first out of five hangouts addressing pressing issues to enable inclusive, bottom-up practices in the most diverse contexts worldwide. The given topics have been identified throughout a series of conversation formats. In addition, as we are heading towards a co-created publication aiming to capture the critical understanding of inclusive Citizen Social Science from a gloCal perspective, we provide a space for questions and discussion around one of the topics each month.

The first way of openness is to depart from the perspective of the people we work with and not to perceive our perspectives as expert knowledge. We need to understand, learn, and start from local views and practices, adopting the protocol local communities will use together. Those protocols will differ from lab or academia walls, but we shall learn from them, including embracing mythology and ritual as an integrative part of the participatory methodology. Finally, we need to take care of this contextualised knowledge wherever, and with whomever we are working. This includes connecting ancient science (mythology) and contemporary methods (science).

Thus, our discussion circulated two driving questions:

1. What is required to reframe the mainstream understanding of expertise and adopt protocols of local communities as standard practice?
2. How can local traditions, such as rituals and mythology, be embraced as a central component of the Citizen Social Science (CSS) methodology?

We discussed fascinating local practices derived from regional traditions, rituals, and mythology with a small group of community practitioners from Colombia, Cameroon, Singapore, Brazil, and Spain. This exists from a present understanding that 'research environments' are not accessible to

many of us by default. We need to understand that entering other people's territories should require permission, and this permission is also necessary to create together.

Lilian Chamorro, from APC-Colnodo, shared some of her practices with us in Colombia. The central learning here was recognising that different localities have different ways of communicating their knowledge. As a result, identifying local communication traditions and rituals as a fundamental point of departure in CSS practices would be an essential step. Liberating us from mainstream interpretations of science but acknowledging science as language, thus as one way to interpret the world, pushes us to understand that languages differ in different contexts. Consequently, we can only learn and analyse using the lens of those who own these languages, such as their traditions, rituals, etc. Acknowledging that mainstream science is just one type of knowledge creation out of many, such as traditions and rituals, multiplies how we can see and understand the world.

Nadine Mowoh from MboaLabs Bio-Innovation Hub emphasised that ancient, local, and heritage practices are the foundation of modern science. Moreover, while ancient science is already developed and practised over long periods, modern science is constantly under development. Therefore, embracing local rituals and traditions as foundational and departing elements in contemporary science can only strengthen and have a legitimate effect. Through the departure from local knowledge and respective practices, foregrounding regional science is a way to seize power. People understand that they have potential and assets in their direct proximities by using local traditions as much as locally existing and commonly used ingredients or resources. It is about adapting methods to local resources and traditions, not vice versa.

Those reflections help us reframe the mainstream understanding of expertise and adopt protocols of local communities as standard practice. Accessing a research territory through the traditions and needs of the environment and its inhabitants, and thriving through locally existing resources, triggers a power redistribution. This way, we can enable co-creation through a framing of science that acknowledges all knowledge forms, ancient and modern, equally valuable.

Locally driven protocols and local traditions in Science

Decentralising Science – Locally driven validation protocols in MboaLab Cameroon

by Nadine Mowoh, MboaLab Cameroon

Scientific methods are repeatable by definition and validated for accuracy, specificity, reproducibility and robustness – meaning the same steps must be followed to predict future results. They also follow a systematic and standardised methodology based on evidence.

In the context of local protocols, such as traditional rituals, used by local communities or by citizens who may not have the academic or scientific knowledge, or even the scientific terms, to explain the reason behind a specific result generated by these methods, it is still true that most of their traditionally used methods are robust and when repeated or several experiments are carried out, they produce the same results. This makes them transferable, and one can argue that traditional practices shall be considered solid scientific methods. However, there is the possibility of modification and standardisation in the future to make them more acceptable in the educational or scientific context. A practical example is the case of a yoghurt production workshop in Mboalab. Listening to locals share their production methods. One would hardly hear a scientific explanation of the control of the fermentation process and the Bacteria responsible for this. Still, the end product is yoghurt which is consumable, and this same method has been used for generations to feed families.

Although theoretical scientific methods are strongly encouraged for the sake of standardisation of procedures, they have a limitation of applicability-requiring advanced skills and equipment and the means through which knowledge is obtained and shared. This contradicts local methods, whose implementation and validation do not require specific skills. They are easily comprehensible as they use perspectives of the local population and their relevance. Also, while scientific methods are easily understood and applicable by formally trained persons, local methods are quickly adopted,

relatable and transferable in the local context because they are directly rooted in the local cultures of doing and communication.

Community visits in MboaLab Cameroon

To successfully implement scientific methods, local protocols are inevitable as the locals generate these protocols to meet their specific needs and suit their context. This has shown to be a precondition to engaging local communities in critical making and building together entirely. Furthermore, by recognising science assets of local practices, it becomes possible to "decentralise" it and develop a framework within which all knowledge systems are shared. It is worth understanding that these local protocols are

the foundation of modern science and possess confidential information, some of which have been recovered, enriched, extended and refined, while others have remained unchanged for generations. One of the reasons for the latter is that they require specialised tools and skills to implement, making their conversion into modern science a challenge. Another critical factor is these methods' cultural and spiritual significance in people's lives, as some are considered ancestral heritage that can not be modified or tampered with.

An example is the medical use of the "Quinine tree", as it is known by the locals in most parts of Cameroon to be effective in treating Malaria. The reason that the methods used for preparing and consuming this tree bark are not systematic or standardised is by no means the absence of proper tools or skills (human and material) to extract, analyse and identify its active components. The lack of such methods is due to the community's belief that this "medicine" is more effective in its "raw state" and would be made less effective if transformed into some "white tablets" by scientists or "westerners".

Considering all these factors, Mboalab Biotech in Cameroon specifically recruits the local populations and community-based researchers. Community-based researchers are non-academic or certified researchers and local stakeholders who make health decisions for the community, gather data by sharing social and cultural experiences, and consider the diversity of their communities' views and beliefs. This is done through workshops, including practical hackathons and critical-making sessions together with academic scientists of Mboalab. These ideas are fitted into the laboratory and modern science context through processes like verification, validation, and testing for robustness led by academic scientists. By doing so, we ensure that the voices of the underrepresented can be heard and better understood by institutional actors, such as government authorities. Applying these processes, local concerns are easily converted into scientific and modern methods that can be deployed within the communities without disregarding anyone's beliefs or cultural heritage. This approach also allows for togetherness and oneness between the academia or certified scientists and the locals whose methods are based on observation but who have to be equally engaged in decision-making processes on science policies, e.g. concerning local health situations, to ensure a democratic approach in which everyone has a say. This equal engagement creates a feeling of voice and matter, resulting in trust and active engagement from the community members.

After several such workshops and experience-sharing seminars, it was realised that the local communities with no essential scientific background or skills were more ready to share their experiences and learn better amongst themselves and "community researchers". Community researchers are people from the communities who have acquired formal education but have not attained certifications nor possess the required skills and equipment to practise in formal institutions or carry out independent research. The local communities see and understand them often since they share the same heritage and culture. These local stakeholders are now considered intermediaries, whereas academic scientists who come into the communities are perceived as "strangers", and people are reluctant to share their ancient knowledge and local protocols.

It is interesting to find out that even though most of these local protocols are carried out as routine with no significant scientific reason, they hold a substantial value in the lives of the populations. With the help of intermediaries and the use of these local protocols and essential knowledge and terms, scientific methods can be made more applicable in the local context or by the locals, and a highly decentralised knowledge-learning and sharing framework can be employed not discriminate but is inclusive.

The Ownership of Science

"We should acknowledge the constant interaction of science and 'living hood'. We are taking care of others, enacting rituals, and making remedies. Is Citizen Social Science about bringing science back to its original 'owners'? Do we have to admit that science is social and has always been? An example is traditional medicine, which was open source before being compromised by the industries." Deriving question → What role should/can Citizen Social Science play in bringing science back to its 'original owners'?

The Ownership of Science

Diversifying the ownership of science – lessons from our 3rd community hangout

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Kersti Ruth Wissenbach, June 2022

On May 19, 2022, GIG hosted the first out of five hangouts addressing pressing issues to enable inclusive, bottom-up Citizen Social Science practices in the most diverse contexts. The topics have been identified throughout a series of conversation formats with makers, citizen [social] scientists and activists worldwide. As we are heading towards a co-created publication aiming to capture the critical understanding of inclusive Citizen Social Science from a gloCal perspective, these hangouts also provide a space for questions and discussion around one of the topics each month.

This time we discussed the **Ownership of Science** with an inspiring group of participants from Kenya, Cameroon, Singapore, Brazil, and Spain. We wanted to investigate **what role Citizen Social Science can or should play in bringing Science back to its "original owners"**.

The lively discussion departed from the observation that science is commonly perceived as a product of European academia. European thought, however, constitutes a massive gap in traditional knowledge. One fundamental difference is the approach to knowledge creation and processing. Participants from African and SEA contexts pointed out that the European academic system is driven mainly by competition. In contrast, other knowledge forms, science in other contexts, are not based on the comparison, resulting in different cultures of science.

Nonetheless, traditional approaches are usually compared with Western approaches. In SEA, e.g., with an upheld reference to the latter as ´real science´, we see that the validation of science relates to a dominating culture of practice rather than the roots of specific knowledge and the original practices thereof. Observations from Kenya and surrounding African countries stressed that these dynamics maintain the colonisation of science, which is still enforced in academic institutions. This includes decisions on what is funded, the remaining advantage to publishing in western journals to be accepted, and your research to be validated.

Another aspect of this validation culture, driven by comparison, relates to people´s publishing records. Measuring how often and where one is published reinforces the biased recognition of which methods are accepted. Change is underway as open access journals and alternative archives have entered the scenery, opening the competitive fortress of academic publishing races to ´count as a scientist. However, language, writing styles, accessibility of findings for those who should benefit on the ground, and awareness about and feeling of agency to contribute remain significant exclusion factors. Open-access journals resolve the remaining European idea of what is considered science alone.

Driving conversations gradually include more diverse voices, as seen in Open Science or Citizen Social Science contexts. However, fundamental questions concerning power dynamics should not happen in isolation but in different environments driven by academic and non-academic scientific communities. But here we run into the dilemma of recognising all these other actors as actual scientists to have an eye-level discourse.

Participants shared their experiences of increased civic involvement to increase inclusion in science. For instance, in Singapore, participatory design approaches to developing public spaces are increasingly becoming standard practice, seeking to make the outcomes more relevant to the people it intends to serve. Train stations have route planning signs and locality maps next to each station, which is currently being redesigned, including residents of the neighbourhoods. Whilst usually, such redesigns would be done by highly paid professionals, this process has now been opened up and co-designed. As a result, signs now mark the entry sides of each building, making things much easier for people in wheelchairs, for example. These practices are new to the Southeast Asian context. However, these practices are consultation based thus do not tackle the gaps mentioned above when it comes to shifting the ownership of science.

If we want to address the ownership of science and bring it back to its origins, we need to understand how to define science. If we see science as access to knowledge and understanding, we can better comprehend to whom science belongs. As expertise should not be tied down to particular groups, to the popular understanding of scientists, tearing down restrictions to access becomes a much more complex endeavour. Open access journals and involving citizens in research directly impacting their living environments can be seen as a first step, yet it instead invites in than shifting ownership. Finding ways to bring science back to its original owners becomes more manageable if we **understand better why we know what we know and the origins of what we call science**. The first enables us to seek evidence or explanations of what we observe around us, our living experiences, etc. The latter gives us an understanding of how things have been done before to explain the past to everything that happens.

For instance, visitors to Mboa lab in Cameroon who do not have science backgrounds show immense interest in their work in the lab. Understanding specific processes departs even from explaining the instruments used in the lab, such as light microscopes and how they work. **Opening up barriers to scientific environments** for direct civic learning constitutes one precondition to breaking with historically created power dynamics, thus, opening up science to more actors and gradually shifting ownership.

One approach is, therefore, the **opening up of science**, whilst another is to critically **address the roots of knowledge and scientific practices** to **give recognition back to the original owners** of these scientific practices and knowledge. But our conversation revealed various accounts of quite the contrary. Kenya has seen an active campaign against traditional

medicine, arguing that being unable to predict precise doses causes dangers. The same observations came from Brazil, where authorities advised people not to take traditional medicine. Undoubtedly, the approaches to communicating about traditional medicine are different. For example, leaves on the street markets are sold with information on what they are for rather than their names. Adding information that specifies ways and doses of consumption would be a further step. In that sense, everything we do is science, but it surfaces once we have, or communicate, the method to systematize it. Without systemization, consumption can be harmful. A constructive approach, rather than forbidding, would be to collaborate with traditional practitioner communities to apply methods that specify the right ways and doses of consumption and enable the communities to sell their remedies in other markets.

If we perceive the systematization of practices as science, one driving question would be how we get people engaged in systematizing their practices. How do we adapt existing methods to what is made by local people and to local practices, rituals, and protocols? Engaging the owners of practices into systematization can also be seen as limiting or intruding ownership, as it somewhat presumes that people would want to systemize or that there is no other form of systematization in place that, yet again, does not suit the western idea of systematization. Overall, we need to come to terms with the fact that **methodology also exists behind traditional practices**, as to validation, robustness etc., as we can be sure that local communities would discontinue certain practices, such as the use of natural and traditional remedies, if they would not prove to be effective.

So what do all these observations leave us with? What role can or should Citizen Social Science play in bringing Science back to its "original owners"?

A critical question is if opening up science does have to mean diversifying, or let´s say re-diversifying, rather than seeking to broaden engagement within an existing scientific culture. We need to radically think beyond existing structures and imagine a future concept of science that consists of very different cultures of science, methodological schools, institutional and non-institutional conglomerates, and hybrids. This means we must come to terms with the methodology behind traditional practices such as validation, robustness, etc. We could be sure that local communities would discontinue certain practices, such as conventional remedies, if they were ineffective.

Perhaps some crucial contributions *Citizen *Social Science can make are:

- Embracing ownership of practices and acknowledging the owners of those practices as the leading scientists.

Ideally, this would mean getting into a conversation that respects the local methodologies and those for the specific scientific process. Other methodological perspectives that could benefit specific purposes can be suggested but only enacted if invited. It would be about the systematisation of practices reaching places it has not reached before without appropriating them, such as identifying doses of certain traditional herbs. Doing so is about aggregating the value of different forms of already existing science, including those practices that are not recognised by western frameworks of science.

- Actively contribute to a diversification of knowledge-sharing practices and formats.

Ownership should perhaps never become a practice of opening up a dominating western conceptualisation of science and adapting traditional practices to the existing model but embrace all different framings of science and leave it to the owners as to how they wish to share and open up.

Advocating for the conditions to enable opening up on all these different scientific communities would become sth to strive for. Building on diversity can be seen as enforcing resilience! If we recognize the responsible individuals and communities, embracing their methodologies, languages, knowledge-sharing formats, etc., ownership can be claimed to have been established.

*Citizen *Social Science can become a driver to respect those practices and perhaps play an active role in supporting the creation and use of facilitating infrastructures, such as archiving, translations, a critical engagement with what participation and power mean in each collaborative process, and how to rigorously push for equal ownership opportunities for actors from diverse cultures of science in funding and programming schemes.

The Ownership of Science

Data generation as citizen science // A favela agenda to opening science

Gilberto Vieira [1]

In recent years I have come across an instigating debate that sometimes, depending on where it takes place, asks us: who does science belong? This seems to be a fundamental question for us to understand the paths that democracies will take in the coming decades, especially as the countries of the global south claim a more significant role in the geopolitical future of the world. It is that science and politics must be thought of together. Suppose we believe in the centrality of the peripheries for constructing societies with full rights. In that case, it is also necessary to question where the boundaries are (territorial, sensorial, socioeconomic, of thought) [2] in constructing future science.

"The level of scientific development of a field, country or region is not measured simply by publications indexed in conventional scientific databases and the impact of their citations. It is equally important to evaluate the results of local and regional research work to understand the

configurations of science and their importance in each context." This is what researchers Dirce Santini and Sônia Caregnato say [3]. They claim that the peripheries (understood in their broader dimension) have systems for generating and using knowledge and evaluation, which may require different indicators. The simple copying of epistemologies from the "main science" to the peripheral spaces tends to generate preliminary analyses and harmful effects on the very idea of science.

It is not new that data_labe has guided the concept of citizen data generation in some debates dedicated to the intersection between technology and social transformation. These data types are disputed in the context of large cities, especially ours, in Latin America and Africa. That is why we have carried out projects that involve popular participation in the production of data, such as Cocôzap, which maps complaints of sanitary problems in the Conjunto de Favelas da Maré here in Rio de Janeiro. In a simplified way, the objective of the prototypes we have been experimenting with is to steer a public debate on the production and dissemination of data about the realities of our favelas.

Anyone who understands political game work knows that decisions are almost always supported by research, analytical and conjuncture reports, and numbers that justify interventions here or there. Of course, you don't need to be an expert also to know that countless political decisions are taken on a pure whim or demagogic impositions. But I am not interested in the debate about the political model that has challenged our democracies. This critical and little-discussed stage has called our attention: the research methodologies, mathematical and statistical models formulations allowing one or another result, the narrative in reports telling stories between the lines, and the research teams and the design of their instruments. And we ask ourselves one more time: to whom does science belong?

As part of the Global Innovation Gathering – the GIG – I was at the 2022 edition of the re:publica festival in Berlin, Germany. I used the opportunity to discuss how we can contribute to opening data sciences and social sciences, especially in processes involving public data and leading to political decisions about our daily lives. Global slums and peripheries, which are the centre of data_labe's work, have been excluded from the scientific processes of the modern era. It wasn't always like that.

Empires, communities, and ethnic groups spread across Amerindian and African territories developed methods of analysis and interpretation of the stars, nature, human behaviour and technological production that sustained their livelihoods on the planet for many centuries. The arrival of Western

science, which was initially linked to firearms and diseases that decimated and enslaved these populations, undermined our possibility of continuing to construct interpretations about the world as historically done. Of course, we resist, but we cannot help but ask: what is the science we know today? What is she made of? Who participates in your decision-making processes?

The answers become more evident as more people, projects, and programs flourish, especially from social movements located in famous territories. We have participated in several recent initiatives that seek to value local knowledge and mobilise the logic of research usually carried out in research centres and universities, producing a displacement of historically authorised instances to know. During the COVID-19 pandemic, for example, many collectives organised themselves to provide material support to families in situations of vulnerability but also to collect data that show inequalities. (I spoke about it especially here).

In recent months, here at data_labe, we have been working on organising and analysing information generated during a campaign to collect citizen data on police approaches in Brazil. We listened to more than a thousand people part of our network and found "two protocols" for personal searches: one for black people and one for white people. The chances of a black person being approached by the police in Rio de Janeiro and São Paulo cities are four times higher than for a white person.

We call this model of openness and dynamics of thinking about research and data production citizen social science. It is an experiment seeking to revive a debate that has seemed lost (or weakened) in universities and research centres in recent decades. The arrival of black women and men in the laboratories, the growth of debates on decoloniality of thought and action, and access to bureaucratic models for maintaining social organisations are factors that call my attention to a fight that promises not to retreat in the face of the advancement of neo-fascism. We have always been at the forefront of struggles for civil, human, and environmental rights. Thus, we will now partake in the battle for a more open, diverse, participatory and citizen social science.

[1] Gilberto is the director and co-founder of data_labe, a research lab on technologies, education and journalism, at the Favelas da Maré Complex, Rio de Janeiro.

[2] Manifesto Jararaca. -> jararacalab.org.br

[3] SANTIN, Dirce Maria; CAREGNATO, Sônia Elisa. The binomial center-periphery and the evaluation of science based on indicators. Investigación bibliotecológica; México, 2019. Check it here.

Photo credit: Eloi Leones

The Ownership of Science
Open Citizen Social Science and Collaboration – A key element in driving STEM Education in South Sudan.

By Yine Yenki Nyika

For a very long time, and globally, women and girls have shied away from science. Yet, our mothers, in one way or another, practice science daily. The limited recognition of local traditional activities, such as brewing and distilling alcohol as science-driven practices, is because the ownership of science has always been seen as a western idea rather than having its roots in ancient and modern Africa.

GoGirls ICT Initiative is a Juba, South Sudan-based non-profit initiative founded by a group of dedicated young women in Computer Science,

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Information Systems, ICT4D Innovation, hacktivism and peace-building. Our mission is to engage, educate and empower girls. While involving schools and the communities where these girls come from in the areas of Science, Technology, Engineering, and Mathematics (STEM). We integrate STEM with the Arts (STEAM) to bring STEM education closer to young girls in South Sudan artistically and playfully. In 2019, as South Sudan joined the rest of the world in the fight against COVID-19 and communities had gone into lockdown, GoGirls took a series of actions to directly respond to the needs of their local communities in the fight against the pandemic.

On a national level, recommendations, like washing hands with soap or using an alcohol-based sanitiser, had been implemented to help fight the spread of the disease. The outcome was panic, as we all rushed to the nearest pharmacies and supermarkets to get hand sanitisers, rubbing alcohol and disinfectants to keep ourselves and our families safe. South Sudan, as a country, depends on imports from neighbouring countries. We quickly noticed that the supply of hand sanitisers did not meet the demand, and the prices were so high that they were not affordable for the average South Sudanese. Available products also failed to meet the WHO recommendation of at least 65% alcohol content for an effective hand sanitiser. This resulted in a false sense of security from COVID-19 for those who used them.

To respond to those shortcomings, the GoGirls team produced higher-quality hand sanitisers to help their communities. The team started searching for an existing laboratory in the country so that they could at least buy ethanol for use, but we did not find a laboratory that sold or produced ethanol. At GoGirls, we believe in sharing open knowledge with stakeholders, so we reached out to the schools that were part of the science educators' hackathon that led to the creation of the Open Science Framework for Classroom Experimentation, challenging them and the GoGirls team to come up with a hand sanitiser from locally available resources in South Sudan.

The science educators' hackathon was organized and hosted by the GoGirls ICT initiative in 2020 to find ways to improve feedback channels between curriculum developers, policymakers, teachers and learners or break stereotypes of girls not taking sciences. During this session, three key discussion points took centre stage: What Innovative #OpenScience approaches can be used to conduct Science experiments in Primary and Secondary Schools? How can Science Educators, Schools and Institutes of Higher learning collaborate to bridge the gap between theory and investigations related to science? And how can science teachers improvise with locally available materials /resources to overcome the challenge of

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limited or no materials for conducting experiments?

As usual, the team of teachers, who were chemistry and biology experts from these schools, were all male except the GoGirls team, who were female. The GoGirls team pondered how women could gain more agency and take on leading roles in the research and development process of hand sanitiser.

While pondering on how to integrate women better, we realised that there is a large community of female brewers in South Sudan who have been brewing alcoholic drinks and who made a livelihood out of its sales. Through the male teachers, we connected with these local female brewers. We organized a joint one-day capacity-building session on distilling highly concentrated alcohol for making hand sanitisers in one of the schools. Through this session, we came to learn the ingredients the women use in making their alcoholic drinks. This included the spices or fruits they use to mask the smell of the strong alcohol, the correct measurements of ingredients they use, how long they ferment before they make the alcohol, the time they usually distil their alcohol and the kind of temperatures they maintain when distilling. Based on this knowledge -shared by women for women, the GoGirls team was able to decide how to move forward with producing a hand sanitiser that would help their local communities. They decided what they would use, such as orange epicarps as an oxidant, and when they should be added to the brew before they distilled. They were enabled to distil highly-concentrated alcohol (Ethanol), above 80%, that can be diluted with other reagents to 60% and be used as a hand sanitiser.

That's how the female brewers and the GoGirls team produced a hand sanitiser locally. These local female brewers make their alcoholic drinks based on methods and traditions handed down to them from their ancestors, directly from their mothers and grandmothers over generations. These methods and productions are upheld over generations because they demonstrate reliability.

Without their locally embedded contribution, the intention to solve a lack of crucial hand sanitisers through local production wouldn't have succeeded. During our engagement with the female brewers, we didn't face any resistance from them because we have been collaborating in an engaged, co-creative manner, in which they have been part of the entire process of producing the ethanol.

Since South Sudan lacked any laboratories in which we could handle our product, the team opted for methods such as combustion analysis. An

alcohol sample is weighed and then burned in a furnace in excess oxygen to test the percentages of the alcohol produced by the women compared to the industrial ethanol provided by one of the schools during this experimentation phase. This was done on-site, in the GoGirls office or Juba Day secondary school laboratory. It's such open collaborations that advance Citizen Social Sciences. Bringing a new product to the local market is exciting but entails the challenging step of gaining the trust of its potential. To build trust with the potential target customers, the GoGirls team distributed their first product sample to different individuals for free to get their feedback. We also reached out to the South Sudan Bureau of Standards (SSBS) for certification of the hand sanitiser brand in South Sudan. However, the fact that the SSBS was not involved from the beginning of this research process created a gap, as they couldn't understand which kind of ethanol we were using. We had to re-do the process of producing the Ethanol and making the hand sanitiser with them. After clearly understanding our operation, the **Gosanitize** hand sanitiser brand has been certified and approved for official sales in the South Sudan market, like any other product by SSBS, as it meets all industry requirements. Based on this experience, the SSBS changed their perspective on locally distilled Ethanol.

However, new obstacles also arose. With the product approved, the Bureau of Standards requested to inspect the Laboratory/space where the production process is. Unfortunately, such a space didn't exist for GoGirls. But we mobilized resources to acquire a shipping container modified to laboratory space. With the support of the Bureau of Standards, they recommended the equipment we need in this laboratory to aid the production of hand sanitisers.

Furthermore, the Bureau of Standards raised the question of the safety of the local female brewers since they are producing highly concentrated and flammable alcohol. Based on this, the GoGirls team and an expert from SSBS held a peer-to-peer virtual exchange with Bibliothèque-MboaLab, based in Cameroon, to learn from their sanitisers' production methodologies to understand how they are addressing the question of laboratory member safety in their lab.

Bibliothèque-MboaLab is a lab committed to educating, transforming and positively impacting the lives of the Cameroonian people through its DIY (Do It Yourself).

In another session, the GoGirls team, together with our local female brewers, held a capacity-building workshop to learn from each other which safety

precautions they have normally in place when distilling alcohol. The team was able to document these practices, adapt them to the South Sudanese context, and present their safety plan to the Bureau of Standards for approval. The Bureau accepted them as Standards of Operation (SOP) for the brewers and the team.

Today, Gosanitize is legally recognized as an independent entity and a social enterprise under the constitutional laws of South Sudan authorized to produce hand sanitisers, disinfectants, rubbing alcohol and ethanol for schools. Through this laboratory, students, both boys and girls, from three schools within Juba have been able to test their science theories practically.

Image 1: Gosanitize laboratory safety measures for the female brewers

Have you ever wondered what role Citizen Social Science plays in bringing Science back to its 'original owners'? The different approaches applied in this research by GoGirls ICT Initiative clearly reflect science being more social and open than we think. A key element needed in driving STEM education.

Read more:

https://www.undp.org/south-sudan/news/undp-accelerator-lab-south-sudan-launches-experiment-locally-produce-hand-sanitizers-nelson-mandela-international-day-celebrations#.XxmLM9TEQ68.facebook

https://gogirlsict.org/gosanitize/

https://globalinnovationgathering.org/2022/04/29/gosanitize-go-girls-ict-south-sudans-response-to-covid-19/embed/#?secret=nTH8mVOOUZ#?secret=Km3ruljE2L

Decolonizing our educational/institutional influences

"Talking from an African scientist context, our role as social scientists has to be being the 'pacemaker' to establish good connections between our mythology and the western knowledge learned in school and academia. The biggest challenge for African scientists, who have been trained in western institutions, is to liberate themselves from western instructions to understand what people locally are saying and seeing. How can we approach this for western scientists trained in western institutions?" Deriving question → How can western and non-western scientists liberate themselves from western institutional "instructions"?

Decolonizing our educational/institutional influences

Decolonizing our educational/institutional influences – Towards open science funding and mental decolonization

by Kersti Ruth Wissenbach

On June 23, 2022, GIG hosted three out of five hangouts addressing pressing issues to enable inclusive, bottom-up Citizen Social Science practices in the most diverse contexts. The topics have been identified throughout a series of conversation formats with makers, citizen [social] scientists and activists worldwide. As we are heading towards a co-created publication aiming to capture the critical understanding of inclusive Citizen Social Science from a gloCal perspective, these hangouts also provide a space for questions and discussion around one of the topics each month.

This time we discussed **how to decolonize our educational/institutional influences** with an inspiring group of participants from Kenya, Ghana, Germany, and Spain. We wanted to unpack the question of how western and non-western scientists can liberate themselves from western institutional 'instructions'.

We departed from acknowledging the power divide between those with platforms to provide capacities and those lacking such access. Scholars and practitioners training or being trained abroad find themselves aware of these dynamics and more likely to know how to navigate them.

One can say that this makes it a personal matter of how one has the local ecosystem in their home country benefit. Despite this, some systems and respective power dynamics will always be with us, and so will there always be people with advantaged backgrounds who will build their capacities in western contexts whilst, simultaneously, the system intrinsically carries a level of barriers for people to move forward in peripheral environments.

Perhaps we expect people who try to develop capacities in the western educational system to be responsible and identify this bias by understanding through which potential privilege they enter into this environment. Once they understand this, they can understand the first instance of bias and question how we can overcome such systemic power dynamics from its roots.

Being self-reflective can therefore be considered the first step to decolonising our influences.

But self-reflection is by no means an automated deliberation from our practices as we are mostly all bound, if not tied, to structural frameworks beyond our control. Researchers training abroad are usually bound to funding schemes that link them to that system. Those ties often apply once researchers return to their home countries in African contexts. As elsewhere, funding mainly comes from the same sources, following the same agendas.

So the question we asked ourselves was **how to be a responsible individual within these dynamics.**

Rather than concentrating on opportunities abroad, some opportunities can be channelled by developing homegrown systems. Localizing opportunities enables us to begin seeing problems from a local point of view. If decision-making rests in local contexts, it is more likely to act, aka to research, in regional interests.

Redirecting the focus of collaboration to a ´from local to local´ level can thus be seen as the second step we can take to foster decolonization in our practices. However, funding has to come from somewhere, and gaining experiences abroad, in whatever direction, is still considered a valuable experience.

And, of course, this all is easier said than done. As was emphasized during our conversation, Africa generally lacks a sufficient number of scientists, which creates a central gap. This brings us back to a critical discussion we had in our last hangout, addressing the ownership of science. We discussed the need to diversify the understanding and subsequent practices of science. For instance, Africa holds a massive and diverse critical mass of scientists if we acknowledge the many traditional ways of doing things. The documentation gap, however, creates a massive gap to date.

This leaves us with the need to foster **other documentation infrastructures and practices** than Western mainstream academic journals and databases, including language diversification. That infrastructure alone will not solve the challenge but needs a massive shift in how scientific excellence is measured to date.

Getting back to the challenge of securing funding schemes that adhere to local contexts and are agile to adapt to actual local needs, research traditions, etc. Our conversation pointed out that even if the sustainability of research projects is mostly also limited to European projects, given the time-bound funding scheme situation that results in most efforts dying after funding dries out, primarily not witnessing any follow-ups.

This is a structural problem which, however, can also be linked back to the general lack of local integration. Where projects are not rooted in or come from communities who would benefit from the research results and would care about building on them in real life, independent of academic publication tick boxes, motivation for take-up remains minimal. As long as research findings are locked up on library shelves, local communities, potentially being researched without being engaged in the research design, will not have access to the results, nor will they be relevant by default.

A first thought that would come to mind is to **enable local communities to address research institutes with their needs** for locally held challenges to be brought to the awareness and take-up of academic researchers. **Actively engaging communities in research design and execution** seem the logical step. But most funding systems are not yet prepared for diversification like such an approach to multidisciplinarity.

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How to diversify funding in a way that it can be equally accessible by local actors, academics and non-academics, as well as to locally driven, however, multidisciplinary teams, is, therefore, a central question. Participants reported obstacles to accessing certain institutions and funding schemes without certain institutional degrees. In African contexts, western university degrees, no matter the institution's quality, still mostly rank higher than outstanding degrees from local universities.

One constructive approach to this is to foster an **Open Science funding framework**. In an open science framework, researchers and practitioners do not depend on an institutional system governed by university grades and foreign funding. Enabling an Open Science framework still also requires **mental decolonization,** as we need people to trust local institutions rather than having to study abroad.

To be sure, going abroad still beers rich opportunities. The challenge is that people who get trained abroad and lack opportunities in their home countries are likely to seek a career abroad.

So, what does that leave us with?

As the problem we face is generated on a systemic level and determined by individual challenges, we need **structural trans-border pathways to knowledge creation, distribution, and uptake** – including trans-border, multi-directional and cross-disciplinary economic flows.

This would require some parallel steps, such as:

- Sensitizing researchers and institutions from all sides on the centrality of solving challenges locally;
- Sensitizing policy makers and African public sector institutions that prioritise foreign degrees results in a lack of sensitization for local problems, thus locally relevant and embedded research;
- Diversifying collaboration by enabling respective funding schemes
- Enabling south-north and south-south collaborations
- Advocating for and building supportive alternative infrastructures, such as repositories

Decolonizing our educational/institutional influences

Discourse on Decolonizing the Education System in South Sudan

By Andrew Anda Wöndu

The formal educational system in South Sudan has its origins in the mid-nineteenth-century British colonial period. Christian missionaries set up mission schools to train natives for evangelization and recruitment into the colonial administration. UNESCO defines formal education as "institutionalized, intentional, and planned through public organizations and recognized private bodies." Its activities also often take place in a fixed location. Our present schools are the institutional descendants of these

colonial mission schools. For at least a hundred years, the pre-colonial systems of passing on cultural and intergenerational knowledge have lost pride in place as the norm. According to a recent publication by USAID, 72 per cent of primary school-age youth do not attend school. This is the world's highest proportion, leaving a significant knowledge gap.

Modern schools do not have to oppose indigenous knowledge—much of which is informal. However, indigenous knowledge has been neglected and marginalized as outdated by the indigenous community and the government due to the emphasis on modern, formal schools. Some indigenous education traditions could already be formalized because of their systematic nature. For example, in some South Sudanese cultures, youth are organized into age sets and social groups of a similar age. This group then undergoes initiations and training together. These are analogous to academic levels, a core feature of formal education. These influences and practices ought to have been the foundation on which indigenous communities build their institutions. But they lack government recognition and support.

Not all indigenous knowledge has to be formalized to compete with a school system. But if schools don't incorporate local perspectives, independent formalization should be available and remain an option. Such indigenous knowledge may include arts & crafts, medicine, sports, or anything from sociocultural practices. Foreign knowledge can itself, of course, be appropriated and indigenized. Even if parents and the indigenous community acknowledge the value of indigenous knowledge, hard choices must be made about where and how best to educate children. This is delicate balance parents and education officials must strike. A colonial legacy that continues today is governments applying a mix of coercion and incentives to get the population to take their children to school—some communities being more accepting than others. There is a common joke in South Sudan that in the face of government pressure, some parents would instead send their mediocre son to school and send their brightest son to the cattle camp—the vital school.

Confronted with these problems, some academics like myself at the School of Arts and Humanities, the University of Juba, in the Department of Philosophy, our current focus is on updating the philosophy curriculum. Decolonization of African philosophy means a shift of focus to African philosophies from a predominantly European curriculum, as is the case now. The curriculum review process has been slow and lacks the urgency it ought to have: the last review occurred almost over a decade ago. In my experience, such curricula review and updating processes are only

undertaken when the highest university administration makes it a priority. Since this is not the case in my institution, we, as lecturers, try to steer change by adapting our lectures' content and wording. However, still within the limitations of the old curriculum. In practice, that means providing wider scopes of philosophical schools and significantly increasing the perspectives of African and other indigenous global voices. Nevertheless, the classes take a critical view, subjecting all schools of thought to rigorous critique. Higher administration at the School of Arts and Humanities has supported these Africanization initiatives.

The curricula reform process points to other obstacles, such as education officials and policy-makers oblivious to the colonial roots of policy frameworks and their historical contexts.

In my experience as an administrator at a public university, I have seen first-hand the rigid and top-down nature of the higher education sector. In South Sudan, this starts with the national Ministry of Higher Education, Science, and Technology—which oversees five public universities, the largest being the University of Juba. An autonomous university administration system would be the solution instead of ministers' orders.

In my lecturing experience, students appreciate their lecturers'' attempts to explain concepts in more understandable terms. Being more understandable or 'relevant' for my lectures means preferring local examples. For example, in formal logic, the logical operations of negation, conjunction, and disjunction are introduced as representing the English words 'not,', 'and' 'or', respectively. These words don't necessarily map neatly into local languages, such as Bari, Juba's indigenous language. One word ('ko') can be used for all three logical operations. All this does not constitute a problem for logic because the English terms are also approximations. Decolonization, in this case, implies a transfer of ownership to students and their lecturers at the university.

Another case in point: during British rule in South Sudan, the use and teaching of vernaculars and English was the official policy. After independence in 1956, Arabic and English became Sudan's official languages—but Arabic was dominantly spoken. South Sudan became independent of Sudan in 2011, where English is now the sole official language. But in reality, an uneasy balance exists between the two languages for influence in society and the education sector. For example, some lecturers still use Arabic to lecture. Finally, this year, the University of

Juba scrapped Arabic as a compulsory unit for students in the School of Arts and Humanities. It is my observation that for African scholars who have been trained in western institutions, to find themselves enveloped within western instruction instead reinforces their intention to understand and respond to the needs of their local environment, which they have been distanced from. The justification for the decolonization of education is that knowledge should be locally situated.

It could be more evident that naturally interested academics would eventually encounter the need to decolonise educational influences. In the sciences, for example, most scientists are engaged with what the philosopher of science Thomas Kuhn called "normal science." Most will rarely make career-shaking discoveries or find irregularities and inconsistencies in their field that question its philosophical foundations. The modern African scientist is indeed a pacemaker for our societies, a leader across time. They link our indigenous traditions with foreign knowledge. But this should not be identified with an "African past" and a Western future. After all, the colonial period gave way to our post-colonial present, hopefully ushering in a golden renaissance.

The important thing is a move away from the model where western experts drive the research agenda in totality to centre people who were formerly mere consumers of knowledge, even about themselves, because Africa is in a unique position to lead an inclusive research model to decolonize its education system.

Practices to overcome false representation in participatory processes

"It is important to differentiate levels of participation and acknowledge that participation in international collaboration is often characterised by false representation since it is like a black box if people on the ground do not have access to the real knowledge of the project. We need to work towards opening this black box to truly speak about participation with people from the margins." Deriving question → What is required to fully open the black box of participation?

Practices to overcome false representation in participatory processes

Overcoming False Representation – Nurturing shared understandings of concepts and opening up knowledge in cross-disciplinary research.

Hangout Recap by Kersti Ruth Wissenbach

Jaiksana Soro – Platform Africa & Stephen Kovats – r0g_agency
Picture credits CC-BY-SA Pawel Ngei

On September 15, GIG hosted the 4th out of 5 hangouts, addressing pressing issues to enable inclusive, bottom-up Citizen Social Science practices in the most diverse contexts. The topics have been identified throughout a series of conversation formats with makers, citizen [social] scientists and activists worldwide. As we are co-creating a publication aiming to capture the critical understanding and gloCal perspective of inclusion in engaged research between civil society researchers and academic researchers, these hangouts also provide a space for questions and discussion for everyone wishing to share their experiences in this publication.

This time we discussed **practices to overcome false representation in participatory processes with a small but disciplinary diverse group of participants**. We wanted to unpack the question of **what is required to fully open the black box of participation and overcome the common practice of false representation.**

Although very few participants joined the hangout, the discussion was quite representative of the dynamics the project seeks to unpack, and it is very worth sharing.

Usually, we seek to bring together people from diverse contexts to reflect on our questions from as many different perspectives and experiences as possible. And the hangouts are usually attended by civil society actors. Academic representatives have shown less interest in the conversation.

It was different this time...

The flyers for our hangouts always feature a quote from one of the members of the Global Innovation Gathering, a global community of makers, innovators, and activist shapers from around the world. The sections stem from an in-depth discussion we had around the topic of decolonisation and inclusion in one of our annual community gatherings. The photos feature one or more GIG members and introduce their local makerspaces or communities. For this hangout, it was the co-founder and CEO of Ethiopia's first innovation hub and tech startup incubator, established in 2011. The flyer featured the quote: *´participation is like a BlackBox if people on the ground do not have access to the real knowledge of the project´*.

Our discussion departed from one participant's concern about the text announcing this week´s topic alongside the chosen picture accompanying the announcement. It emerged from the hangout that the associations of terminology and imagery trigger entirely different associations. In the

specific case of one participant, a female white academic researcher with a computer science background, it led to colossal irritation and the impression of unbalanced, if not racist, connotations. For Social Scientists and activist researchers, those working in international socio-political change contexts or affiliated with movement studies and related schools of thought, the chosen terminology relates to commonly defined concepts. It seeks to hold empowering and inclusive connotations. This showed us once more, and perhaps we tend to forget, that the standard terminology of one community can be perceived as biased by others.

A critical concern was also addressed regarding the terminology which people from social science backgrounds are all too familiar with. One of the participants noted that, as a Social Scientist, she always had difficulty handling deeply complex situations through specific terminology in the discipline. Reference was made to the notion of ´people from the ground´, typically associated with local communities, locally embedded action, context-sensitive activities, etc. She has experienced somewhat elitist attitudes with leftist, progressing, ad action-oriented civil society groups struggling to get their participatory methods acknowledged by Social Science disciplines, participating with rather arrogant, protectionist attitudes.

So what are the lessons to take away from this unexpected encounter?

Working in coalitions that cut across different communities and disciplines demonstrated the crucial need to prioritize an inclusive approach to a language and use concepts that everyone can identify with as a precondition for collaboration. As a minimum requirement, cross-disciplinary collaborations should practice a sensitive negotiation of speech and create awareness about the standard terminology in each context. In addition, an inclusive Citizen Social Science approach should consider making the opening up of research a precondition. This relates to several practices, including opening up methods, research instruments, data, and results in everyday practice. Advocating for and supporting the vibrant open knowledge community should be a helpful practice, especially for academia, to catch up with all already out there!

This hangout has shown that listening and shaping common understandings when striving for diversity within collaborations is vital. It has also shown that diversity is critical so that more communities engage in cross-disciplinary collaborations that trigger knowledge exchange and learning, escaping each of a kind BlackBox that hinders more inclusive processes.

Practices to overcome false representation in participatory processes

Re-Invent learning. Or how making fosters empowerment and active participation

By **Julia Kleeberger (**founder and CEO of Junge Tüftler gGmbH | **LinkedIn**)

On this school day, the classroom of 7a at the Kurt-Schwitters-Oberschule presents a different picture than usual: In one corner of the room, some students are sitting and building a gripper arm that can be operated with one hand, which makes it possible to fetch books and materials from the upper shelves of the room while sitting down. In the other corner, three girls are busy creating sound recordings from the notices on the bulletin board and making them playback via a microcontroller at the push of a button.

And why? The girls and boys took part in the pilot project "Hackydays", a mini-marathon at their school, in which they dealt with the UN Convention on the Rights of the Child and the question of how they can promote the independence of children with disabilities and facilitate their active participation in school life.

Self-awareness as a tool for building empathy and facilitating a change of perspective

Guided by the idea of what would happen if children with disabilities came to their class who were blind or in a wheelchair, they developed solution ideas and prototypes to fulfil their right to independence and support. To be able to put themselves in the shoes of disabled people, the students were supported by two coaches, one of whom was blind, and the other was in a wheelchair. They guided and supported the students in their self-awareness. Equipped with a wheelchair or blindfold and a cane, the 25 students explored their familiar school environment. They attempted to perform everyday tasks: changing classrooms, finding out about news such as lesson cancellations, substitutions, or school festivals on the bulletin board, or simply getting the extra materials from the shelf in the geography room. Everyday activities that they would otherwise hardly give a second thought to – but now the students quickly realized that a stair step posed an almost insurmountable problem in getting to the German room; the materials on the shelf in the geography room became inaccessible, and the bulletin board is non-existent for blind people – and they were always dependent on the help of others to read out the information to them.

With this experience, in which the students felt the problems firsthand, it was easy to develop ideas for solutions: First, they exchanged views about their experiences and developed initial ideas. Then our coaches introduced them to digital tools such as microcontrollers and programming: making tools that enable them to implement their working solutions and harness the power of technology.

The power of Maker Spaces

By making, we mean the self-directed and playful tinkering process with various analogue and digital materials. Accordingly, Maker Spaces have a special significance when it comes to developing one's solutions and unleashing creativity and innovative power: Due to their openness, which promotes self-directed, playful learning, they offer the ideal environment for gradually gaining new professional experience in dealing with technologies and materials, while at the same time acquiring essential skills for the future.

In doing so, people in Maker Spaces always work on real challenges that affect them (or another person) and for which they are looking for a solution. This open, project-based work fundamentally differs from the traditional closed questioning and learning process in traditional learning settings. Thus, project-based work involves the individual finding a solution – unlike closed questioning. The difference can be easily traced in the following example: In a closed question setting, there is only one possible answer, for instance, to the question, what is the result of 4+4? In addition, the teaching person and the learner are not at eye level: as one person has a knowledge advantage, the other is automatically put in the testing role, and an imbalance is present. It would be completely different if the task would be: what is the result of 8. For this, there are infinite answers and possibilities. Thus, my creativity is required, which is what I answer here. And the person who sets the task is also challenged to think since he does not know my answer either. This is exactly what we achieve in project-based work. It allows us to develop different solutions to a problem – and thus opens up

enormous creative freedom.

This spirit of taking students seriously could be felt at the Kurt Schwitters School through the concentration and eagerness with which they worked on their solutions. At the same time, they learned critical digital skills such as programming and physical computing – as well as collaboration, solution-finding and creativity. The teachers were also able to observe this:

*"Students who reach their limits in normal lessons had a sense of achievement here! It worked great." (*Mrs Schuster, Teacher Kurt-Schwitters Oberschule)

Active participation: Shaping society together

The pride with which the students presented their results and the sparkle in their eyes spoke for itself: the young people experienced fulfilment when they could shape things independently and experience self-efficacy in the process. Through the *Hackydays*, they were strengthened in the belief that they carry the solution within themselves. But what exactly is needed to unleash this potential and allow them to help shape society in a participatory way? In our view, the following three things are essential for this:

- Sharing & Access: Knowledge and tools.
- Trust and respect: Addressing people at eye level
- Mentoring: being a compass and offering orientation
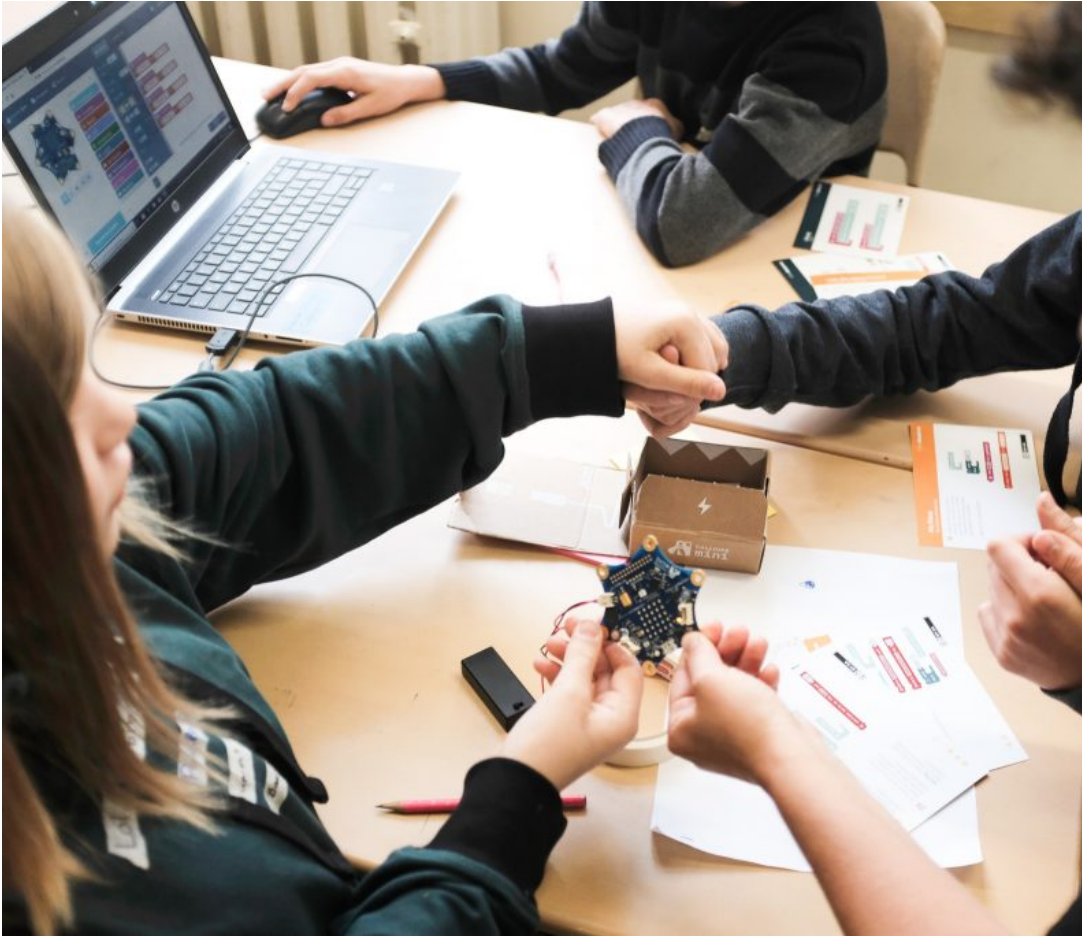
Maker Spaces are open learning spaces that provide **easy access** to tools, technologies, materials and know-how. **Sharing knowledge and tools** is the basis of all collaboration here, which is why much documentation is published and shared under a free license to encourage learning from each other and developing and building upon each other. This enables innovation through collaboration and exchange.

In this context, addressing each other at eye level is essential. To promote innovative processes, everyone must think and participate equally in the innovative process. On the one hand, we achieve this by ensuring everyone has access to the same knowledge and resources. On the other hand, however, it is also achieved by how we approach Maker activities. By formulating open problems and **taking all those involved equally seriously,** and integrating them into the innovation process, we often succeed in developing the best solutions. Because the people involved are the best experts for their problems: our task is to enable them to find answers and solve them. This includes access, respectful encounters at eye level, and support to provide **orientation**. As mentors, it is our task to strengthen and enable the learner in his or her process by skilfully asking

questions and motivating him or her to overcome moments of frustration and to develop strategies to acquire knowledge independently and to be able to take the following steps on their own.

Outlook. What needs to happen now? Edu Maker Spaces for the global south

We truly believe that innovation lies in the people, and locals are the best experts for their problems and the ones who are the best innovators. Thus, we aim to bring innovation spaces in different parts of the globe to enable people to solve their problems. What that means in concrete terms: We want to support the creation of Maker Spaces and look for opportunities to share our knowledge and get in exchange experiences. Always with the attitude that we don't have answers to all the problems yet – but together, we will find a solution. #simpleMaking #actAsOne

*The Hackyday Makeathon is documented and published under CC-BY-SA 4.0: https://tueftelakademie.de/hacky-days-ideen-fuer-ein-besseres-wir/

Practices to overcome false representation in participatory processes

Democratization of Knowledge – Street Level Citizens Conversation Circles in Torontoge

By Khan Rahi, Canadian Community-Based Research Network, Toronto, Canada

In 2016, the Canadian Community-Based Research Network (CCRN) and its volunteers, based in Toronto, Canada, held a series of community-wide conversations to identify community-driven issues of interest to everyday citizens. The interviews with thematic experts, community-based researchers, civic society activists, and volunteers pointed out various scenarios. The recurrent thought centred on the disconnections within the community and the lack of gathering space to discuss openly relevant local

and global issues of interest to everyday citizens.

The conversations led to the creation of the "Conversation Circles Project". The CCRN and a team of volunteers developed and implemented a series of open forums on various themes and topics identified throughout the conversations.

The project sought no funding from any sources. The meeting room was donated by the owner of a popular private market plaza without any business promotions or conditions attached. The organizing, facilitating and outreach work was all done by volunteer labour.

The social and cultural context for the "Conversation Circles" initiative was an environment where serious discussions took place. Until then, research on such issues typically took place at the universities, government and business jurisdictions. These were mainstream, conventional top-down practices. They maintained a particular science communication mindset, streamlined knowledge creation and restricted dissemination of research outcomes, which kept everyday citizens unaware or denied them access to participate.

The conversations we undertook raised two questions:

1. Could open street-level discussions enable everyday citizens to challenge conventionally created knowledge competently;
2. Without university, government or corporate funding, would such an initiative retain independent research status?

The literature supporting the big picture of the "Circles" reflected that scientific research, technological progress, and infrastructure need not be solely confined to the universities to keep the monopoly to conduct research and maintain a tab on the outcomes. The "Circles" created a conduit designed to provide an opportunity to recognize civil society's role in producing knowledge and to act independently on research outcomes typically produced by the universities. The initiative helped prevent civil society from becoming a passive consumer of knowledge (Hess, David 2007). In their attempts, the "Circles" ensured the discussions had relevance to the communities and provided insights into the affected communities and their issues.

The "Circle" project was inspired by the Loka Institute's "Democracy Project" which promoted that openly accessing and acquiring knowledge of societal

issues is vital in a democratic society. It advocated for a pathway towards building a strong civic culture and empowering everyday citizens to competently challenge conventional knowledge to effect positive change and to benefit from the democratic dimension of disseminating knowledge outcomes (Sclove, Richard 1995).

The "Circles" encouraged civil engagement to increase science and society interaction to define community-driven problems, the choice of solutions and to design effective ways to intervene on the issues (Minkler, Meredith & Wallerstein, Nina 2003).

The search and consultations identified a gradual decline in civic engagement, alienation, and barriers to accessing the conventional knowledge-making process, retained by the universities and restricted the involvement of everyday citizens to use research outcomes to improve daily lives.

The scope to come up with a viable initiative was, indeed, huge. The "Circles", to be sure, without core funding, did not have the capacity or infrastructure to collect data to address these critical issues raised throughout the consultations.

Against these backdrops, the "Circles" project was a local breakthrough.

The "Circles" provided space for everyday citizens who could walk off the street to participate in these monthly discussions free of charge. A monthly thematic topic was featured in a non-lecture, hierarchical or prescriptive manner using a storytelling format. The "Circles" offered informed conversations, discussed different perspectives, raised questions about the dissemination of research outcomes and proposed action plans to resolve issues to improve the quality of life in the community.

Over two years (2016-2018), the "Circles" reached everyday citizens from diverse neighbourhoods to join the conversations in the famous Greek Town neighbourhood of Toronto. A two-hour interactive conversation was accessible to anyone.

In this neighbourhood, the "Circles" were unique citizen-driven walk-in forums, a distinct departure from university lectures or paid public speakers. A billboard placed in the plaza's courtyard announced the event. Flyers and bulletins posted throughout the neighbourhood, civil society service agencies, and word of mouth helped spread the events.

Each "Circle" focused on a theme with a topic and had an invited or "In House" "Conversation Starter" who unfolded the discussion. The profile and size varied from one "Circle" to the next.

The "Starters" included academic and non-academic researchers, civil society actors and experts known for their works and contributions to civil society and community-driven issues. They were invited to share their knowledge, research outcomes and lived experiences. They were not asked to lead but to focus on the topic in a conversation, pose questions or describe scenarios to engage the participants in the discussion.

The selection by invitation was balanced off with "In-House Conversations" on a given topic, which involved one or more designated "Starters" from the "Circle".

The "Starters" spoke for 20 minutes, then joined the discussion afterwards. All conversations were facilitated to ensure focus and continuity.

The "Circles" avoided formalized platforms and digital presentations altogether. The participants sat in a circle, a cultural practice accredited to Aboriginal traditions. This ensured that anyone who spoke realized their potential to be heard and remained engaged.

The "Circles" did not function as an opinion-gathering entity to lead to studies or project agendas. No attempt was made to solicit project funding for "bondages" and treadmills. They provided the participants with space to access evidence-based resources to discuss civic-driven issues and the CBR method of inquiry.

The final segment was reserved for specific suggestions from the "Circle" for a new theme or topic for the upcoming "Circles" or to initiate spin-off proposals for action. The involvement in the spin-off was voluntary. They were beyond the "Circles" and took their own life.

What did the "Circles" do? – Overview of themes and Spin-Offs:

"Local or Global, does helping matter?"

The Canadian Director of Doctors Without Borders/Médecins Sans Frontières (MSF) and

The Director of the Local community-based Shelter for Women shared different perspectives and the nature of helping people at critical times. MSF

provides critical medical and civilian help their volunteers provide in war and disaster zones. They dashed in to reach out regardless of the circumstances.

A local shelter for women also dashes off into the Toronto streets to shelter women left out of the city shelter regime. Both delivered critical services by volunteers without government or corporate funds. The "Circles" discussion linked the local and global dimensions of helping those in urgent circumstances.

"Sponsoring Syrian Refugees"

Global refugee migration issues touch everyone emotionally and financially, locally and globally.

The "Circle" heard from sponsors and sponsored Syrian refugees.

The unique Canadian Private Citizens Sponsorship Program helped a large number of Syrian refugees. The myth and realities of voluntarily sponsoring refugees without prior knowledge or contact shared, and the sponsored individuals informed about entering a new and unknown destiny were explored. The Syrian sponsorship had a twist; everyday citizens joined at the street level to offer to sponsor refugees.

The "Circle" formed a spin-off group to directly help Syrian refugees stuck in hotels. The group linked up with a neighbourhood medical clinic to provide further resources.

"Poverty Is Everyday Hardship"

"Toronto's Poor, A Rebellious History (2016)"

Historian/Anti-Poverty Advocate started the conversation, featuring ten-year research on the history of poverty in the city and the fight against it.

"Toronto's Poor" inspired a spin-off group to look further into the nature and impacts of poverty, using CBR research tools to uncover the hidden myths of poverty in their immediate neighbourhoods.

"Anti-immigrant and Local Rise of Alt-Right Politicians"

The "In-House Starters" shared anecdotes and media reports on anti-democratic and anti-immigrant trends in light of the impacts of Donald Trump's government in the US. The conversation focused on the emergence

of the elected politicians calling for "Anti-Canadian" screening tests for new immigrants and refugees.

A Political Scientist "Rejoinder" provided the context for the anti-immigration and alt-right movements impacting the multicultural character of Canadian society. The "Rejoinder" provided a set of questions to challenge further the myths associated with global migration.

Conclusion

The "Conversation Circles Project" is small and limited in scope to produce significant outcomes. That said, the "Circles" received enormous support from multiple civil society sources. Not being dependent on the funding regimes, middle operators, and agency agendas, was praiseworthy. The circle participants also found it refreshing not to be the "subject" but rather the users and creators of knowledge and research outcomes. The interactive open space provided the participants' the security to share their anecdotes safely and assured their views of respectful treatment.

The challenges were enormous. The project lacked research infrastructures and resources to carry extensive community consultations to stream the "Circles" and promote the democratization of knowledge to enable everyday citizens to collect data from challenging conventional knowledge of the issues to effect change. Also, the spin-off initiatives could have used extensive CBR research tools to create team research and a collaborative environment to establish a community-based evaluation system to measure the impact of the spin-offs. They became "run-away" projects.

The participants were diverse. Most typically have no experience speaking in public or sharing their views with strangers.

The "Circles" were discontinued due to Covid19 epidemic.

Examples of and learnings from ethical standard setting in OCSS communities

We need more advocacy for the ethics in Open Science (and we will need it for Citizen Social Science, too) to foster better documentation of open science processes. We need to create protocols to account for the voices of all those communities rooted in oral traditions in this process. The end goal of a participatory process needs to be the community and what needs to be done to get impact as defined by them. Deriving question → What is required to establish and follow ethical standards and enact deriving protocols in OpenCitizen*Social Science processes?

Examples of and learnings from ethical standard setting in OCSS communities

Ethical standard setting in OCSS communities

Nurturing shared understandings of concepts and opening up knowledge in cross-disciplinary research

By Kersti R. Wissenbach

On September 22, GIG hosted its final hangout addressing pressing issues to enable inclusive, bottom-up Citizen Social Science practices in the most diverse contexts. The topics were identified throughout a series of conversation formats with makers, citizen [social] scientists and activists

worldwide. As we are co-creating a publication aiming to capture the critical understanding and gloCal perspective of inclusion in engaged research between civil society researchers and academic researchers, these hangouts also provide a space for questions and discussion for everyone wishing to share their experiences in this publication.

This time we discussed **the need for better ethical standards when seeking collaborations between academic and civil society researchers**. We wanted to unpack the question of **what is required to establish and follow ethical standards and enact deriving protocols in *Open* Citizen Social Science processes.** This is, in any process where academic and civil society actors engage in shared, participatory research processes.

This topic, and the demand to pay more attention to it, initially emerged in a gathering with many international colleagues, most working in their local contexts, frequently in significantly remote settings. Subsequently, the discussion of ethics focused on the need for better documentation, incredibly inclusive documentation, to account for the voices of all those communities, for instance, those rooted in oral traditions, in this process. Accounting for all diversity, the need to ensure that research always impacts the communities on their terms was highlighted to need much more attention.

However, for this very hangout session, people who mostly do not work in the contexts of this initial group came together. Mostly being white researchers, the discussion, therefore, got a different twist, but a fascinating discussion emerged.

We had an intense conversation about handling ethics, where participatory research is rooted in academic institutions. Participants agreed on the essential fact that ethical procedures in universities are not equipped for participatory processes!

All participants were working on ethics in their respective academic participatory research projects. Given their attention to the subject matter, everyone knew that ethical standards or framework setting need to be an ongoing process and can never be fixed. As agile as participatory processes must be, and as much as academia is struggling to find its way into this, as much do ethical standards require the flexibility to be adapted to any potentially upcoming issue within a co-creative research process.

The dilemma? As with many topics discussed in the Global Perspectives hangout series, a fundamental challenge lies in the disconnect between institutional systems and on-the-ground realities and needs. Usually, university ethical review processes are developed at the beginning of a project and once approved. Thus, ethical standards become a statical artefact inscribed into an entire research process. Whilst this practice leaves room for critique in any project setup, it certainly does not work for participatory research processes nor working across, and in collaboration with, diverse actor groups and in challenging contexts that are exposed to rapid changes. To adhere to ethical principles in such processes, ethical standards must be kept alive through revisions and adjustments throughout the project.

As minimum criteria, therefore, feedback moments should be built into a research process at various points, whilst a communication stream for frequent communication among all stakeholders should be standard. More aligned with the nature of participatory research, which cannot be perceived as a linear process, an agile approach enabling the identification of ethical challenges by any stakeholder, at any time and in any way feasible for them would be required. Such an approach would be deliberated from specific moments and reporting mechanisms but acknowledge different understandings and framings of ethics across actor types and cultures and their respective political and other contexts. This relates to time, formats, and ways to engage and act upon identified ethical challenges. Moreover, ethical standards within a participatory research process are multifold, thus requiring different layers of actions as challenges can occur anachronical.

We discussed the example of consent. Ideally, re-consent moments should be built into a process to enforce frequent re-attention, and the opportunity to adjust the initial framing may situations require it. In an ideal case scenario, the possibility to identify and announce challenges with specific consent mechanisms should be fluid and possible to address at any point in a process. As challenges can occur rapidly and unexpectedly, they might relate to identifying risks for local actors, and it should be possible to make their resolution a priority at any time. This not only links to safeguarding the communities we work with but also enables a smooth project flow without getting stuck.

Beyond the lack of agility, other dynamics of participatory processes also hit the limitations of academic protocols. One of the participants, engaging youth in their citizen social science project, had the issue that the co-researchers could not be involved in all steps, such as publication writing, as

this would have meant that they write about themselves. In such a case, existing data protection measures would not hold.

Another participant mentioned an example of a project which envisioned the handing over of cameras to school children to film certain situations from their perspectives. Whilst this is a common participatory practice, e.g. in international development collaboration contexts, mostly engaging adult participants, the crucial topic of the need to account for time and trust building in participatory processes came up. Many situations, not only in processes involving minors, do require time to build up trust and relations, time that is hard to calculate in conventional academic research frameworks.

Such situations do not align with the academic ethical systems, and ethical committees reportedly frequently lack the expertise to address such challenges constructively.

Rapid response mechanisms based on agile project designs would, therefore, primarily benefit process flows and the safeguarding of participatory research in and outside academic institutions.

Overall, the underlying driving factors for ethical standard setting in academic research, as much as in other research situations, such as big projects in international development cooperation, is to get the approval of the ethics committee rather than to secure ethical standards in the interest of safeguarding all actors, and their respective communities, engaged in a research process. It often appears to be a mechanical process rather than a profoundly humane act of prioritizing values. The end goal, thus, should always be to enable the safeguarding of all actors across all potentially accruing situations. Needless to say, this is impossible to pre-identify and plan by agenda.

It was also recognized that many topics that require attention are not new but appear ´too new´ to be structurally integrated into existing institutional frameworks. These relate to gender aspects and how to address them as much as to any questions around data ethics and responsible digital and data handlings processes.

Our academic participants perceived pushing for these shifts within their academic institutional boundaries as a form of activism. They are trying to push for changes through workarounds, through being verbal about it, etc., wherever given structures are not sufficiently responding to the needs of

citizen social scientists and all actors involved in such participatory endeavours.

Also, we come back to challenges similar to those identified in other topics of the Global Perspectives hangout series. Enabling agile participatory processes in the ethical standard setting does require more time, more freedom as in less preidentified indicators, and the gradual crafting of expertise through the creation of spaces that allow for shared learning and exchange of challenges and learnings cutting across the very different actor groups that should be found in the Citizen Social Science. This should also include an open approach to failure. Whilst the recognition and sharing of losses has found prominent attention in particular communities of practice over time. It does not have any space in academia so far. The current academic and other research environments prominently lack funding schemes to enable such shared learning dynamics through fostering of community discourse and knowledge sharing across more diverse channels and inclusive formats. It has been noted that this situation began to shift in the UK, where interesting funding calls are slowly appearing, responding to the importance of building time to establish relationships with communities into research frameworks and respective funding schemes.

Moreover, funding distribution remains channelled through institutions rather than diversifying funding access for the various actors involved in citizen social science processes. Whilst this has a demonstrated negative effect on active participation, it also needs to be perceived as an ethical dilemma in itself! Participatory research, driven by an ethical framework, requires a severe catch-up with the understanding of ´professional research actors´ and, thus, how civil society should be engaged and on which terms. For instance, co-researchers are the topic experts in Citizen Science or Citizen Social Science. Identical financial conditions should therefore be a logical consequence. However, to date, this is not the case.

Lastly, the participants discussed the ethical dilemma of opening up standards, findings, and methodologies that might be misused. The example of right-wing groups using one's data or methods was raised. On the other hand, opening up standards, data, and methods has also shown power in opening up locked-up data that is otherwise kept by large industries, not always in the public interest, such as in the case of the pharmaceutical industry. These questions have mainly been discussed in other communities, such as the open knowledge and access to information community. This reinforces the crucial need to create resources that enable the engagement and exchange of learnings across different communities.

In conclusion, academia, to be able to adhere to the ethical needs of participatory research, requires an open culture of engagement, a transparent and constructive approach to share failures, and, most importantly, much more agility – allowing for reactive research processes build on the safeguarding and equal treatment of all actors at any cost.