BOOK REVIEW

The Global Lab: Inequality, Technology, and the Experimental Movement A. Fejerskov (2022)
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In *The Global Lab: Inequality, Technology, and the Experimental Movement*, Adam Moe Fejerskov, senior researcher at the Danish Institute for International Studies, charts a global movement whose efforts have reframed the Global South as a laboratory for technological innovation. This movement has a varied collection of major protagonists – humanitarian organizations, developmental economists, philanthropic private foundations, technology companies in Silicon Valley, social innovation laboratories and pharmaceutical research companies – that each in their way prescribes or enacts the logic of experimentation and supports each other through shared philosophies, funding and opportunities.

The efforts of these actors, so argues *The Global Lab*, have made experimentation a structural force in the daily lives of the inhabitants of the Global South, permeating disaster and crisis relief, healthcare and economic development with an experimental logic. Humanitarian organizations use experimental new technologies such as biometric technologies to identify and deliver aid to refugees, developmental economists enact universal basic income (UBI) experiments with private foundations that circumvent local institutions and deliver money straight to villagers in Kenya and pharmaceutical companies conduct drug trials on populations that do not enjoy access to basic or specialized healthcare. While often under-addressed, *The Global Lab* outlines the normative implications for affected vulnerable populations that this structural experimentation brings about.

Fejerskov holds that we cannot understand the social and political ramifications of this global movement as long as we narrowly conceptualize experimentation as a neutral methodology that is necessarily empowering. Data do not fall from the sky, states Fejerskov. They are extracted from an environment. They are obtained through a laborious and political exercise, which employs specific methodologies, serves certain strategic and ideological interests and influences affected populations and environment. Inherently, (field) experimentation is an interventional practice. It's a deeply value-laden activity – shaped by the nature of the investigators, research context, history, choice of subject of study, methodology and results.

In *The Global Lab*, Fejerskov engages in a critical study of these factors and lays bare problematic, yet sometimes invisible, power relations and inequalities at play. Subjects in the Global South are, for example, easily accessible due to being economically or socially disadvantaged – with participation in pharmaceutical drug trials replacing access to specialized or even basic healthcare. This leads to an inequality of exposure within a community of those who can afford regular healthcare and those who need to turn to experimental trials to maintain their well-being. These populations face a stark choice between participating in experimental practices or exclusion from aid or benefits, and their decision to participate cannot be understood as free from influencing forces.

The same is the case for refugees. Risks are not free-floating entities that similarly affect everyone. Risks are imposed, controlled and benefited from (Hermansson and Hansson, 2007). They disproportionally affect vulnerable people and populations. Natural disasters or humanitarian emergencies, for example, affect groups often oriented along an axis of inequality, such as income or geography. Consequently, when experimental technologies are used in interaction with refugees, those who might be seeking aid likely already come from disempowered communities. As Fejerskov puts it: 'I can choose to delete my social media accounts, although my data may already have been sold to third-party companies and therefore, in a sense, remain everlasting, but refugees who are

required to give up their material and digital identification in order to receive food aid do not have the same option to decline. That is the inequality of exposure' (p.163).

One of the core claims of *The Global Lab* is that experimentation and its effects often have an inherently unequal nature; perpetuating inequalities already present in the local context. Such inequalities can manifest in a plethora of ways. They can concern a person or group's ability and access to shape the direction and target of a given experiment, who is being experimented on, how different groups are treated during a certain experiment or how the effects are distributed between communities. The question is whether experimentation is inherently and necessarily unequal or whether certain kinds of experimentation in certain contexts are more likely to bring about, perpetuate or strengthen existing inequalities and power asymmetries.

The Global Lab includes examples of a wide range of interventional practices under the moniker of 'experimentation'. Some of these practices – such as drug trials or randomized control trials conducted by development economists – are reminiscent of 'action-guiding experiments' (Hansson, 2015, 2016). Such experiments are characterized by (1) being primarily aimed at finding specific action-guiding knowledge instead of knowledge of regularities of the world and (2) their object of study being candidates for eventual treatment or deployment, meaning a policy or technology is iteratively improved upon within a use setting until its functioning meets a certain benchmark of satisfaction.

Other examples that *The Global Lab* uses, that are conducted in a comparatively less controlled research context, could be conceptualized as 'practical experiments' (Kroes, 2016, 2017). These practices are akin to 'action-guiding experiments' but are additionally characterized as having a different relation to the scientific notion of control, due to an absence of a clear separation between the experiment and the environment. Hence, practical experiments are not experimenting with technology as such, but with technology within a larger socio-technical systems, i.e., the collection of technologies, regulations, laws, institutions and populations (Kroes, 2016, 2017).

The Global Lab covers plenty of practices that earn their experimental label in a very different manner. Examples include the use of biometric data technologies by humanitarian organizations and the US military in Afghanistan, drone testing sites in Malawi, Facebook's failure to moderate inciting content in Malaysia, blockchain technologies aiming to cut intermediaries from delivering financial aid and even the global response to covid-19 crisis – which Fejerskov dubs 'the greatest social, political, and economic experiment witnessed in our lifetime' (p.169). These practices are dubbed 'experimental' mainly in the sense that there is a limited operational experience to guide expectations on their effect on society.

This idea of experimentation is more in line with the concept of 'technology as a social experiment' (Van de Poel, 2016). Van de Poel argued that the introduction of (emerging) technologies in society can be characterized as a kind of social experiment due to the inherent uncertainties and ignorance involved so that social benefits and risks cannot straightforwardly be assessed. Subsequently, these situations present a need for learning and are, like Popper's piecemeal social engineering and Lindblom's concept of incrementalism, best approached through a process of local iterative, trail-and-error learning (Van de Poel, 2016; Lindblom, 2018).

The Global Lab fits into a larger debate on experimentality, a concept which expresses the idea of 'government-by-experiment' and captures how experimentation is being used to render sociopolitical problems governable (Aradau, 2022; Hoijtink, 2022). Experimentality allows natural disasters such as the 2010 Haiti earthquake to be recast as a 'living laboratory for humanitarian innovation' (Hunt, 2019) and the development of solar geoengineering as a 'collective experiment' (Stilgoe, 2016). Experimentality has further been discussed concerning the technology-mediated treatment of migrants in border zones (Aradau, 2020), innovation of warfare (Hoijtink, 2022), the globalization of clinical trials (Petryna, 2009) and the global humanitarian HIV programmes (Nguyen, 2009).

While all these examples seem rather distinct, what binds the different experimental practices in *The Global Lab* is an attitude towards understanding and shaping the world, often manifested through technology, that goes beyond mere epistemic benefits. What Fejerskov repeatedly

stresses in *The Global Lab* is that, while some of these practices have epistemic merit, we should critically engage with how the experimental movement and its ideology of experimentation shapes, produces and justifies a certain attitude and interaction with the Global South and its inhabitants. This ideology is founded on the belief that reductionist experimentation will effectively unleash social process and productive change, through technological innovation and specific types of evidence. In other words, *The Global Lab's* target is the neutrality myth of technologies, the political life of methodologies and experimental thought, and their combined ability to shape, produce and justify certain social, economic and political lives.

The entry point of *The Global Lab's* engagement with this global experimental movement is humanitarian development organizations and their increasing turn towards experimental technology as tools for aid and relief. States of emergencies as states of exception, *The Global Lab* argues, both justify and incite this experimentation. While the goals of humanitarian agencies have remained the same – to alleviate human suffering – *The Global Lab* shows that its methods have not. Humanitarian organizations turn to the use of biometric, drone and blockchain technologies – inspired by an ideology out of Silicon Valley built on notions of experimentation, urgency, progress and fast failure, reinforcing the inevitability of technology as a means to social progress. However, while the productive force of failure – captured in the mantra 'fail faster, succeed sooner' – is often lauded within innovation, failure during humanitarian disasters can mean a failure to provide food, safety or care or allow sensitive data of very vulnerable populations to end up in the wrong hands.

The increased presence of experimental technology in the practices of humanitarian agencies creates both a need and opportunity for the technologies created by innovators, companies and organizations centred in Silicon Valley. Fejerskov positions social innovation labs as key brokers between Silicon Valley and humanitarians in the Global South. These are for-profit or non-profit organizations and companies that adopt the moniker of laboratory in the sense they develop solutions to social-economic problems, often formulated as technological innovation or digital revolutions. Like Silicon Valley, social innovation labs exemplify a culture of failure built on laboratory attitudes – of testing, tweaking the real world to see reactions and consequences – furthering a focus on material technological experimentation that accepts failure as inherent to progress.

The Global Lab traces back the ideological origin of Silicon Valley from its countercultural utopian origins of yearning for freedom from governments, big business and the church to their current libertarian form that puts the individual above all institutions within society. Fejerskov characterizes one's full and uninterfered control over one's own life as a foundational Silicon Valley value. Similar to the individual, businesses should remain unchecked and free from government interference and efforts to help unionize workers or curb inhumane business practices need to be resisted. At the same time, the government is also urged to break their perceived inertia through the adoption of its ideology and transform overbearing bureaucratic practices constraining the lives of people, to take an experimental, tech-inspired approach to the planning and execution of policy.

Which evidence and expertise can and should weigh in on deciding which policies to enact has been a matter of debate – and, according to Fejerskov, part of the political agenda of a group of developmental economists that alternatively are known as the randomistas. They are nicknamed so for pushing an ideology that prescribes that only interventions that are organized as a randomized control trial (RCT) or a similar methodology produce reliable results and that only those policies and technologies that produce positive results captured through this methodology are worthy of funding. In turn, this mindset creates a hierarchy of worthy and unworthy methodologies, experts and evidence-types.

The RCT has become a dominating methodology in developmental economics. Fejerskov charts the rise of the randomistas from their origins in the 1980s and 1990s – when relative disappointment over the inability to measure the effectiveness of large-scale governmental and developmental bank aid programs and a credibility revolution within labour economics paved the way for their empirical methods to take hold – to several core members winning the Nobel Prize for Economics in 2019.

The randomized control experiments' core purpose is to measure whether – within certain established boundaries – an effect occurs or not. Generally, a population is divided into two groups. A 'treatment' – e.g., a policy or medicine – is provided to one. The other remains 'unaffected' for control purposes. Participants are assigned randomly to either group; aiming to minimize any selection bias. Regardless, as Fejerskov states, the real world does not offer itself up ready to be experimented with. The discrepancy between an idealized experiment design and the complicated and messy reality of conducting a field experiment can cause findings to be less reliable than desired. Furthermore, RCTs might produce certain conclusions that do not justify implementation for independent reasons. As a methodology, they also say little about whether the solutions RCTs themselves test are preferable in the first place relative to other intervention types.

Fejerskov points to interesting friction in the narrow applicability of the RCT as research methodology and the randomistas' goals of generalization of results and the large issues they tackle. The translation is made through a worldview that allows for social issues to be broken down into small, manageable chunks, like an engineering system, driven by scientific desires to reduce complex realities to a set of logical causal chains. The purpose of this fragmentation, according to Fejerskov, is to create problems that are manageable through RCTs and create a sense of control, accountability of effectiveness and reliable comparative knowledge. The question is to what extent this fragmented knowledge can be sufficiently decontextualized to be reliably generalized or translated to other use settings.

This philosophy of fragmentation appears frequently in *The Global Lab*, for example, in many private philanthropic foundations. Fejerskov notes how many of them consider the social world as a 'system of linear causality where levers and handles can be pulled to change different parts and achieve an anticipated outcome' (p.88). Within this ideology, decision-making based on the quantifiable outcomes of RCTs is presented as apolitical or value-neutral and forms the basis for designing and executing interventions. *The Global Lab* positions the Bill and Melinda Gates Foundation as the most prominent champion of this line of thought. Fejerskov states that, whatever the nature or scope of a social problem, the Gates Foundation will – built on a firm belief in the productive force of a capitalist society – articulate a solution in terms of experimentation and the necessity for technological innovation to enable progress.

The work of private foundations such as the Bill and Melinda Gates Foundation normalizes experiments as a daily part of the life of populations in the Global South. A similar role is ascribed in the Global South to the pharmaceutical industry and contract research organizations (CROs). These parties have created an infrastructure of experimentation in the Global South to conduct drug trials at various research stages. Driven out of the Global North due to the high costs of drug development, high regulatory bars on compliance and documentation, expensive and difficult subject recruitment, high standards of care and growing prices on trial infrastructure, companies conducting experimental drug trials have landed in the Global South.

The benefits of the Global South are clear: fast and treatment-naive recruitment, weaker regulations and regulatory bodies, struggling public health sectors and high poverty rates entailing a lack of resources and limited access to specialized medicines and treatment, creating a large number of either willing or cheap subjects. Future developments aim at decentralization; integrating experimental practices into the daily lives of people. Through digital technologies such as personal devices, trials can turn remote and reach participants in their everyday locations.

Drug trials have started to fill a pressing need for populations that are unable to afford regular care or specialized drugs. Participation is often not based on a willingness to participate or based on trust in medical professionals. Instead, trials become a substitute for treatment. The result is a selection bias to experiment on vulnerable populations that participate out of necessity and not out of choice. Any informed consent that participants give is of little value when it is given under the influence of coercive economic forces.

When drug trials end, patients are left without access to (experimental) medicine or treatments or even the regular health consultation that often comes with participation. While trials are

often encouraged through ethical frameworks to offer post-trial care to participants, this is seldom awarded, and when the medicine that a local population helped to develop is released, its cost often exceeds local financial capabilities. Globalized drug trials thus create friction between a fair distribution of the benefits and costs of participation.

Here, a need emerges, argues Fejerskov, to include populations in early-stage design and innovation processes and decisions about how technologies intervene in their communities, instead of only passively reacting to how technology shapes their lives. Investigators and innovators are often less concerned with finding out whether or not it is reasonable to experiment with a technology, system or policy in the first place. Often, that decision has already been made. Instead, what is at stake, is how to make it work. Questions about whether an intervention is desirable for a community are only asked after an experimental policy or technology is in place and taken into effect. Inequality of control over – and exposure to – experimental innovation means often that intended beneficiaries or patient pools are unable to exercise influence at all other than after a technology has already been introduced.

This, Fejerskov argues, will lead to a deeply unequal future if left unchecked. Real participation is having a say in whether a technology should be considered at all and having a level of choice in whether you want to be exposed to technological innovations. To reach this level of participation, new precautionary principles or heightened ethical awareness are not enough. Instead, Fejerskov calls for methodologies and practices to be radically reconfigured and redesigned based on democratic and inclusionary values; advocating self-reflectivity on the investigators' positionality and impact and taking participation seriously 'to the extent of appreciating the effects and qualities of the interaction itself to be as important as the eventual end goals' (p.184). Here, an opportunity for 'design-for-value' methodologies presents itself; a collection of philosophical design theories that hold that moral values can be embedded through design within artefacts, technologies, institutions and socio-technical systems (Van den Hoven et al., 2015; Friedman et al., 2017)

Scientific and technological advancements have undoubtedly improved global human well-being. *The Global Lab* acknowledges this. Yet, the history of human experimentation shows that often progress is being made over the backs of the vulnerable. As technological experiments aim to deliver an improved future, we need a critical analysis of the directionality of innovation and the issues of justice arising between those who benefit from innovation and those who bear the costs. While the thesis that experimentation is not a neutral, apolitical practice, but a deeply value-laden activity, is not a novel one, *The Global Lab* does deliver on this.

Overall, *The Global Lab: Inequality, Technology and the Experimental Movement* is an ambitious book. It is rich in examples and casts a wide net. Not just spatially – covering organizations, practices and interactions from Myanmar, Thailand, Malawi, the United States, Denmark and Afghanistan – or temporally, tracing the historic and ideological developments of Silicon Valley and private philanthropic organizations such as the Bill and Melinda Gates Foundation, but also conceptually. Occasionally, this makes the book narrative unfocused and unorganized, yet the core message throughout the book remains clear: real progress is not just progress that works for a few and perpetuates inequalities. Real progress is ethical, equal, democratic, self-reflective and inclusive. With *The Global Lab*, Adam Moe Fejerskov has made a convincing case for experimentation that is reflective of its methodologies, assumptions and ideologies and that takes human beings in the Global South seriously as participants and collaborators in creating a better future for everyone.

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