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Learning how to see development faithfully from another's point of view

An essay on the study of the development episteme
and technology in the (post)colonial world

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Introduction

How might we faithfully study power relationships and how they construct the development of technology in the (post)colonial world? In this essay, I first discuss visions of the development episteme, then how these visions are operationalized through international organizations and development aid, and finally suggest an analytical approach that may help us scrutinize and decompose hegemonic narratives that are used to justify these visions and initiatives.

I propose the perspective of situated knowledges as a complementing lens to vernacular systems and technology-in-use for the study of everyday life practices with and in technological systems. When we “learn how to see faithfully from another’s point of view” (Haraway 1988: 583), I suggest that we are better equipped to envision the multitude of visions and meanings of global and local development.

The development episteme

In *The Idea of Development in Africa*, Corrie Decker and Elisabeth McMahon (2020) historicize the development episteme: a hegemonic knowledge system representing a certain vision of underdevelopment in Africa. Not only does it contain a particular view on Africa, the “Third World,” or the “Global South,” it also embraces narratives of Western countries as providers of the “gift” of “civilization” to the Global South in the form of one-directional projects of knowledge and technology transfer. However, as Decker and McMahon show, this kind of transfer is conditional upon capitalistic ideals of success: while packaged as gifts, these projects always come with strings attached.

The development episteme has dominated public discourse and funding arrangements over the past two centuries (Decker and McMahon 2020). One contemporary example discussed by Decker and McMahon is how the World Bank characterizes African countries in narrow economic terms, such as unemployment and poverty, and a general notion of “fragility.” Another is Emmanuel Macron’s remark during a discussion of aid programs, where he stated that Africa has a “civilizational” problem.¹ Western countries, in contrast, are frequently portrayed as civilized. In the development episteme, they are additionally envisioned as altruistic

¹ Krug, C. (2017, June 11). Angry reaction to Emmanuel Macron’s remark that Africa has a ‘civilizational’ problem. *Politico*. Available on <https://www.politico.eu/article/macron-g20-angry-reaction-to-emmanuel-macrons-remark-that-africa-has-a-civilizational-problem/>

in their mission to spread their ways of living to non-Western countries, which reflects colonial legacies of the “white man’s burden.”²

Intervention in non-Western countries is supported by presentations of development as an issue of global concern and simultaneously as otherwise unachievable for continents like Africa. To Decker and McMahon, the development episteme advocates for a specific Western-style modernity: “a modernity that is constantly changing and thus always out of reach” (2020: 2). The view of modernity as both inherently good and intrinsic to Western societies is paired with visions of Africa as permanently stuck in the past.³ The resulting tale morally justifies interventions in the Global South by framing them as acts to elevate these otherwise helpless countries into superior societal forms resembling those of the West.⁴ However, results of such interventions have historically been ambiguous (Decker and McMahon 2020; Borowy 2018).

Former colonies, wealthy states, and international organizations alike exercise influence over former countries in the Global South. They initiate and fund projects that aim to form non-Western economical, political, and cultural contexts into shapes similar to Western societies (Decker and McMahon 2020; Borowy 2018). In the following section, I discuss how tension and debate within international organizations make them productive sites for the study of political power dynamics between nations in the Global South and the Global North.

International institutions and development aid

The evolution of international institutional structures make evident how science and technology are considered essential to the development of low-income

² Throughout our seminar “Technology, Development, and Colonialism in the Age of Empire (c. 1800–1950),” we have repeatedly discussed texts and sources that justify colonial and imperial intervention in the Global South with ideas of the “white man’s burden.” These ideas present Western agents as on a mission to “civilize” societies different from their particular view of “modern” ones. See Fischer-Tiné, H. and Mann, M. (2004). *Colonialism as Civilizing Mission: Cultural Ideology in British India*. Anthem Press.

³ Whereas Decker and McMahon (2020) consider the development episteme as a concept emerging out of Enlightenment philosophies, Philippa Levine (2010) illustrates how similar views were used to justify the expansion of the empire. Colonial knowledge and cultures were reflected in ideas of the “savage,” connotated with lack of progress, being unfit, and unmodern. In contrast, imperialism and civilization were associated with descriptive antonyms: progress, being fit, and modern.

⁴ These interventions, as noted by Decker and McMahon (2020), are often advanced with good intentions among Westerners, for example those working in NGOs in Africa. By referring to the Nigerian-American writer Teju Cole, they argue that development additionally is driven by the struggle among wealthy individuals in the Global North to “do something” about societal problems in their own countries. Sending “aid” to Africa creates a sense of being helpful while dampening their sense of guilt, Cole suggests.

countries. Exactly how this development ought to come about has been the focus of debates in the UN for decades. Iris Borowy (2018) shows how debates challenging the development episteme and its view of global order recurrently have been stifled through financial means.

Similar to Decker and McMahon (2020), Borowy (2018) emphasizes the problematic episteme that underlie efforts to “develop” countries in the Global South. Borowy argues that assumptions with roots in modernization theory portrayed people in low-income countries as incapable of learning how to effectively address problems in their specific localities. Instead, higher-income countries considered the import of knowledge into lower-income countries as the only way to solve their problems. This reasoning was reflected in international policy in the 1960s, which emerged together with new ideas in the field of economics. Like policymakers, economists considered an import of knowledge into lower-income countries as beneficial. Their envisioned beneficiary was the increasingly interlinked, global financial system and those invested in its flourishing.

Paul Rosenstein-Rodan was one of the proponents of these new ideas, which came to be labeled “development economics.” In 1943, Rosenstein-Rodan argued that policy interventions for economic growth are not in the interest only of underdeveloped countries, but of the world as a whole. The high share of unemployment in undeveloped countries, in Rosenstein-Rodan’s view, was a “waste of labor” that hindered the maximization of world income (1943: 202). To enable maximization of income, labor must either be transported towards capital, or capital transported towards labor. Rosenstein-Rodan discarded the first as too costly and concluded that maximization of world income “will have to be solved by industrialization” of underdeveloped countries. When paired with modernization theory, development economics added a financial dimension to arguments against local learning in “underdeveloped” countries.

Financials is precisely what Borowy (2018) argues undermined attempts to change the development episteme in the UN in the 1960s–80s. These attempts demanded a shift in development strategy away from imported technology, as advocated by development economists and many policymakers, and instead towards support of lower-income countries in their own efforts to learn and endogenously develop knowledge. These debates, Borowy argues, were fundamentally marked by competing visions of global order, development, and justice between higher- and lower-income countries.

Development policy and their related investments still favor the import of knowledge into lower-income countries. Borowy (2018) shows how global investments in research and development (R&D) in the 1970s were heavily skewed towards the United States (US). According to the most recent Science Report by UNESCO, spending allocation does not look much different today.⁵ For example, the investment in R&D as a share of Gross Domestic Product (GDP) is more than five times bigger in North America than in Sub-Saharan Africa. This is not a gap that seems to be closing. Between 2014 and 2018, the investment in R&D as a share of GDP increased with 14% in the US but only 4% in Sub-Saharan Africa, thus increasing the discrepancy between the investment into R&D in the Global North and the Global South.⁶

A group of researchers, appointed by the UN in the 1970s, emphasized the overwhelming imbalance in investment in science and education between higher- and lower-income countries (Borowy 2018). One of their main recommendations was to reform institutions to better coordinate international investment efforts. As a result, the UN repeatedly replaced and added to its infrastructure new committees responsible for science and technology for development. These committees developed several proposals for new funding schemes to support science and education *in* the Global South, which were agreed upon by both higher- and lower-income countries. Yet despite their agreement, most of the voluntary financial contributions towards these schemes were shunned by higher-income countries.

As soon as proposals suggested that the financial contributions from higher- to lower-income countries ought to be mandatory, they were met with fierce resistance (Borowy 2018). This, I argue, suggests that development aid is an indispensable tool for higher-income countries to maintain and reinforce their asymmetric power relations with lower-income countries.⁷ With voluntary development aid, donating

⁵ See Figure 1.2 “Investment in research and development as a share of GDP, by region and selected country, 2014 and 2018 (%)” on page 34 in UNESCO. (2021). *UNESCO Science Report: the Race Against Time for Smarter Development*. Schneegans, S., Straza, T. and Lewis, J. (Eds). UNESCO Publishing. Available on <https://www.unesco.org/reports/science/2021/en/report-series>

⁶ Note that this is a comparison of GDP fractions, not absolute numbers. Since the GDP of North America is many times larger than that of Sub-Saharan Africa, even if the investment in R&D measured as a share of GDP was the same for both regions (say, 5%), much less money would be directed towards the development of endogenous knowledge in Sub-Saharan Africa.

⁷ Kwame Nkrumah calls the asymmetric power relationship between earlier colonies and former empires “neocolonialism” (Decker and McMahon 2020). In theory, he argues, many previous colonies are now sovereign, independent states. In reality, however, these states are still under significant influence of economic and political direction from the outside. Development aid provides means for former empires to maintain neocolonialism. For example, Britain threatened to withdraw

countries may at will financially extend, or withhold, funding to their recipients and so direct their social, cultural, and political development. Without it, the hegemony of the Global North might be seriously threatened.

Power relationships and technology

History of technology scholars actively debate how best to study power relationships and how they construct the development of technology in the (post)colonial world. With *Technologies of Power*, Gabrielle Hecht and Michael Thad Allen (2001) honor the work by Thomas Parke Hughes and Agatha Chipley Hughes and, in particular, the analytical tool “large (socio)technical systems” (LTS), which they accredit Thomas Parke Hughes.⁸

Whereas the LTS framework, which attempts to help scholars analyze how technological change both shapes and is shaped by social change, has significantly influenced scholarship on the history of technology, its relevance for (post)colonial studies in the Global South has recently been questioned.

Jonas van der Streeten and Ute Hasenöhr (2016) discuss multiple lines of criticism against the LTS approach. For example, the Western focus and emphasis on system builders as the main agents of change makes the LTS framework less suitable for (post)colonial histories of technology. In their essay collection, van der Streeten and Hasenöhr demonstrate how infrastructure appropriation processes reflected and (re)produced colonial spaces and identities in ways different from Western experiences of technical modernity. Technical systems, they argue, do not gradually grow towards universality, as suggested by the concept of LTS. Instead, they were characterized by a “racially and socially exclusive, contested, erratic and largely incomplete processes of planning, financing and building Western-style infrastructure in the (former) colonies” (2016: 381). They call for a shift in perspective away from system builders and towards everyday lives with technological infrastructures.

development funding to its former colony Uganda when the parliament discussed an anti-homosexuality bill in 2011.

⁸ Despite the squarely directed praise for Hughes (and his partner) by Hecht and Allen (2001), he was not alone in the concept development of LTS. For example, Hughes edited the book *The Development Of Large Technical Systems* in 1989 based on shared conference discussions and together with Renate Mayntz. The essays collected in the influential publication *The Social Construction of Technological Systems* were also not solely edited by Hughes, but together with Wiebe E. Bijker and Trevor Pinch. The focus on Hughes throughout Hecht and Allen’s *Technologies of Power* might have something to do with the fact that half of the authors completed their PhDs together with Hughes, or at the University of Pennsylvania, while Hughes taught at the university.

Locating the analysis in the everyday practices of people and communities produces narratives on power relationships and technology different from the diffusionist “tools of empire.”⁹ A situated analysis, I think, has significant potential to contribute to the project of challenging the development episteme.

Agency and situated knowledges

In contrast to the assumptions of the development episteme and “tools of empire,” moves towards colonial power with social, cultural, ecological, and technological interventions were not merely passively received by the colonized. By reading the archive along *and* against the grain, recent studies in the history of technology have illuminated how the colonized both contributed to, repurposed, and resisted colonial technology. This was particularly poignant in our discussion of colonial road infrastructure, as narrated by Andreas Greiner (2022), during the seminar *Technology, Development, and Colonialism in the Age of Empire (c. 1800–1950)*. Greiner shows how colonial activities were contingent on day-to-day activities in the African colony; both for infrastructure development, maintenance, and use. Roads were not simply a “tool of empire” that facilitated European dominance and imperial rule. They evolved alongside pre-existing infrastructure that was maintained through use in colonized communities. In this sense, technology use (and non-use) may serve as a form of resistance against oppressive power and its embeddedness in technological infrastructure.

What Greiner’s work brings to the fore, I think, is the importance of making visible the elements of human agency in postcolonial studies of technology and development. Colonial road infrastructure in itself, Greiner argues, did not possess any power (2022: 347). Colonized communities retained and nurtured their own visions of space and travel. Attempts by seemingly more powerful agents to impose a certain identity upon colonized or “underdeveloped” does not need to define nations, communities, and people. Humans are much more and, importantly, often different than labels assigned to them. The emphasis on agency effectively highlights the lack of power of infrastructures and inflicted identities.

Similar to Greiner’s (2022) focus on vernacular processes, Decker and McMahon (2020) draw our attention to the variety of meanings attributed to “development”

⁹ Along a similar vein, van der Straeten and Hasenöhr (2016) build on the British historian David Edgerton and call for a history of “technology-in-use” rather than a history of innovation.

“Tools of empire” was a concept introduced by Daniel Headrick in 1981. It described infrastructures as “instruments of advancing the colonial project of exploitation and subordination of non-European peoples and environments” (van der Straeten and Hasenöhr 2016: 355).

among communities in Africa. Together, people in local communities define what development means to them, which often diverges significantly from the way the term is used by the World Bank or the UN.¹⁰

In addition to vernacularity as locus, I suggest the concept of situated knowledges as a generative lens for postcolonial studies of technology that attempts to challenge the development episteme. Donna Haraway insists on a better and richer account of the world that she argues enables us to “live in it well and in critical, reflexive relation to our own as well as others’ practices of domination and the unequal parts of privilege and oppression that make up all positions” (1988: 579). In “Situated Knowledges: The Science Question in Feminism and the Privilege of Partial Perspective,” Haraway insists on situated knowledges as a doctrine of feminist objectivity. It resists myths of a conquering technological gaze from nowhere by attempting to see from locations of periphery and depth. These positions, Haraway argues, are not innocent. They are preferred because they are the least likely to deny the inherently critical and interpretive character of all knowledge. By taking situated knowledges seriously, we might “learn how to see faithfully from another’s point of view” (1988: 583). This, I suggest, is a doctrine that may open fruitful avenues for the deconstruction of the development episteme.

Conclusion

The development episteme is alive and kicking. It uses rhetorics of science and claims to truth in its representation of underdevelopment in the Global South. Underdevelopment is presented as an issue of global concern, in particular to those invested in neoliberal capitalism. As a reductionist concept, underdevelopment is portrayed as a permanent national identity antonymous to every-changing modernity.

Behind altruistic claims to lift the Global South out of poverty, development aid has a controlling function in the asymmetric power relationship between higher- and lower-income countries. When push comes to shove, it becomes clear how the maintenance of Global North hegemony remains a priority of higher-income countries.

¹⁰ In Senegal, for example, the Wolof word *yokute* means to “add” or “increase” and might be translated into the English word “development” (Decker and McMahon 2020). However, *yokute* evokes not only accumulation, growth, or forward movement, but also a broader connotation that refers to progress for all. In other African communities, terms that carry some meaning of development refer to spatial and/or temporal change. In Kenya, *maendeleo* can be used to describe travel abroad (movement in space) or planning for the future (movement in time).

In this essay, I have proposed that scholarship in the history of technology together with feminist theory offer apertures that may challenge the development episteme. Through richer accounts of the world that are non-Western and open to a variety of agents of change we may be better equipped to see what is at stake in asymmetrical power relations in and with technology than with the LTS approach. Such accounts together with a commitment to situated knowledges offer promising avenues for seeing development and technology faithfully from another's point of view.

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