Research Notes

Google Earth: A Discussion on Colonial Inscriptions and the Role of Digital Technology Experts in Development

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Introduction

The role of digital technology has changed rapidly over the past decade, with over four million internet users and over five million mobile users spanning across the globe in early 2018.[1] With these rising numbers, it is not surprising that digital technology has become a tool for development, from reducing poverty to achieving sustainable development. This paper tackles the role of digital technology experts as the new experts for development, and the role they play in colonial inscriptions of digital technologies like *Google Earth*.

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[1] Simon Kemp, "Digital In 2018: World's Internet Users Pass The 4 Billion Mark - We Are Social," *We Are Social* (blog), January 30, 2019, https://wearesocial.com/ blog/2018/01/global-digital-report-2018.

In both developed and developing contexts, the everyday use of digital technology has become equated to "making life easier." From the ability and ease of working from anywhere, conducting online meetings, and setting collaborative deadlines, to planning and booking transportation and accommodation through mobile apps from virtually any part of the globe; the limitations seem inexistent. Boundaries no longer hold the same geographical definition as they used to. However, amidst this seemingly ubiquitous tool for problem solving, there is also increasingly pervasive implications and effects on human agency. How much are we actually still in control of?

Gilles Deleuze contends, in his 1992 work, *Postscript on the Societies of Control*, the transition from Michel Foucault's "disciplinary societies" to "societies of control." From enclosed and confined spaces that discipline our lives (e.g. the home, the school, the factory, the hospital, the prison), the rise of neoliberalism has given way for the crises of these spaces. The social landscape has changed to free-flowing systems of networks, wherein the factory is replaced by the "spirit"-like and "gas"-like corporation, the school replaced by perpetual training, and computers, being a "mutation of capitalism," playing a central role. Most importantly, Deleuze emphasizes that although the transition from confinement has led to individuals being "freer" (enabled by

computers), he argues that this freedom is still one that is controlled.[2]

This almost science fiction, dystopian depiction of society is not difficult to agree with. Digital technologies that provide "seamless" user experience when tackling previously impossible feats, such as mapping platforms like *Google Earth*, have enabled users to visualize any corner of the globe through satellite images by simply inputting an address. It is not surprising to see that these same technologies have been paired with ideas and plans for development in the Global South. The possibilities opened by digital technology and the new dimensions that it creates treads upon the ability to operate in a seemingly apolitical space, one that is not fueled by power or interest, designed with intention, or built with context. These masks of neutrality hinder recognition and discussion of the colonial underpinnings of these technologies. This paper cites *Google Earth* as an example of blurring colonial inscriptions in digital technology and the emergence of digital technology experts as the new experts of development.

This paper is divided into four main sections. The first section introduces the rapid dissemination of digital technologies for development in the Global South along with Deleuze's critique of technology's role and power in

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[2] Gilles Deleuze, "Postscript on the Societies of Control," *October* 59 (Winter 1992): 3–7.

restructuring and controlling the social landscape. The second section introduces the main concepts for analysis, mainly from Madeline Akrich's *The De-scription of Technical Objects* and Timothy Mitchell's *Rule of Experts*. The third section brings the concepts together with the overarching example of *Google Earth*. Lastly, the paper concludes with a summary of the discussion's points, policy implications for development and decolonization, and comments and recommendations for further research.

Inscriptions of Coloniality in Technology

In Akrich's *The De-scription of Technical Objects*, she expounds on the interactions between the technical and the human, and the idea that technical objects are neither neutral nor objective. Technical objects are part of a chain of relations in its production and use. Akrich highlights the technical predetermination of settings done by designers of technical objects as they define actors and users according to their "tastes, competencies, motives, aspirations, political prejudices," which are then built or inscribed into the objects.[3] This definition is built into the design of technical objects, which Akrich calls 'scripts.' Emphasizing the risk of technological determinism when analyzing this side of technology and scripts, Akrich also gives focus to the

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[3] Madeline Akrich, "The De-Scription of Technical Objects," in *Shaping Technology/Building Society: Studies in Sociotechnical Change*, eds. Wiebe E. Bijker and John Law (United States of America: MIT Press, 1992), 208.

interactions and movement between the technical and the social, between the projected users according to the designer, and the real user. Because this script is performative, there is the possibility of users performing differently from how the designers intended. However, this idea of inscriptions should not be dismissed in the hopes of creativity by the end user and their de-scription. Inscriptions, by Akrich's definition of predetermination of settings, define; impose boundaries; limit; and prescribe actions, interactions, and performances between the object and the users.

This setting of boundaries and predetermination of roles and performances can give designers of technical objects colonial positions in the chain of forces surrounding the production and use of technical objects. Coloniality, in this sense, should not be limited to the historically bound misconception of territorial occupation or exploitation of indigenous communities. Coloniality in the twenty-first century does indeed persist and continues to manifest in unequal power dynamics, control of (socially constructed) sections of communities, and economic exploitation. For instance, one can still find manifestations of Aníbal Quijano's racially ascribed divisions of labor;[4] his concept of Ethnocentric and Eurocentric epistemology and knowledge production; Mitchell's pervading ideas of universalism and

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[4] See Anibal Quijano, "Coloniality of Power and Eurocentrism in Latin America," *International Sociology* 15, no. 2 (June 1, 2000): 215–232. doi:10.1177/0268580900015002005.

singularity behind the modernity/coloniality project;[5] and Lugones'[6] and Bhambra's[7] expansion of Quijano's and Mignolo's ideas of coloniality into intersectionality and the coloniality of gender.

This coloniality of technology is not a new recognition in the critique of technology for development. Various contemporary examples have been elucidated, from Angola's *Wikipedia* controversy, to the rising treatment of technology companies like *Facebook* and *Google* as if they were sovereign nations.[8] A particularly interesting example is the experience of Saroo Brierley who, in 2011, returned to his childhood home in Ganesh Talai, India after twenty-five years in Tasmania. After riding the wrong train and being separated from his brother at just five years old, Brierley eventually managed to locate his childhood home in 2011 using *Google Earth*, a mapping platform that generates a three-dimensional representation of the Earth using satellite images.

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[5] See Timothy Mitchell, *Questions of Modernity* (Minneapolis: University of Minnesota Press, 2000).

[6] See Maria Lugones, "Toward a Decolonial Feminism," *Hypatia* 25, no.4 (September 27, 2010): 742–759. doi:10.1111/j.1527- 2001.2010.01137.x.

[7] See Gurminder K. Bhambra, "Postcolonial and Decolonial Dialogues" *Postcolonial Studies* 17, no. 2 (2014): 115–121, doi:10.1080/13688790.2014.966414.

[8] Jason Koebler, "Angola's Wikipedia Pirates are Exposing the Problems with Digital Colonialism," Motherboard Radio, March 23, 2016, https://motherboard.vice.com/en_us/article/nz7eyg/wikipedia-zero-facebook-free-basics-angola-pirates-zero-rating; Anjuan Simmons, "Technology Colonialism," *Model View Culture, September 28,* 2015, https://modelviewculture.com/pieces/technology-colonialism.

However, despite the seamless portrayal of enabling digital technologies like *Google Earth* in heartwarming stories such as this (the story was released as *Lion*, a drama film, in 2016), colonial remnants pervade in these unmentioned objects. Mayukh Sen's "Dividing Lines" reminds digital technology users of the spatial inconsistencies depicted in the images found in *Google Earth*. Depending on the address you type in the search bar, the chances of easily viewing the exact infrastructure you're looking for in high definition will vary with the degree of urban centrality. A *sari-sari* store along the street markets on the outskirts of Manila would be increasingly difficult to find and view than a co-op shop in Brighton.

Experts in Development

In Khalid Kadir's creative and insightful video, entitled *The #GlobalPOV Project: "Can Experts Solve Poverty?,"* he discusses the normalized tendency of addressing social issues through lenses that result in the prescription of purely technical solutions. He explains that this tendency comes at the expense of completely ignoring the systemic, structural, and political problems that underlie them in the first place. Because of the bias toward calling on experts to solve problems such as poverty, these "poverty experts" are trained to draw "boxes" around their perceived segmented subproblems and craft highly technical solutions that do not touch on, question, or address the social or political

dimensions that precede the problems' existence. Kadir addresses the various multitude of disciplines that are expected to be mastered by these "poverty experts" (i.e. development studies, engineering, economics, public health, medicine, public policy, and business) and points out how these fields of study address problems from different perspectives, but ultimately do not address or at least question fundamental social and political roots of the problems.

In the video, Kadir cites as an example Timothy Mitchell's book, *Rule of Experts*, where in the three years preceding 1945 a new species of mosquitoes carrying a devastating form of malaria entered Egypt and infected almost 750,000 people. Experts were called to find a solution for the problem, and eventually focused on the eradication of the mosquito parasite itself. Kadir reiterates what Mitchell points out as the two main problems, preceding and succeeding this malaria outbreak: first, that the spread of the mosquito species was a result of the industrialization of infrastructures and agriculture surrounding Egypt before 1942, and second, was the proposition to use toxic chemicals to terminate the mosquito, like dichlorodiphenyltrichloroethane—commonly known as DDT. What the author emphasizes is that these segmented issues all had arguably benevolent intentions to develop society and solve problems but were eventually met with unforeseen problems that various groups of experts were called on to solve again. The DDT chemical was later met with another wave of experts to solve, as tackled in 1962 in Rachel Carson's book, *Silent Spring*.

Kadir also cites Tania Li's *The Will to Improve* (published in 2007) to expound on this idea of experts' reading of human problems as technical problems. The important detail here, which this paper focuses on, is the silencing of history and context when experts essentialize problems to the technical. Along with this silencing of history and context comes the omission of power, politics, and inequality. There comes a shift in responsibility where experts place the problems with the poor and the marginalized, whilst simultaneously reinforcing the dependency on experts for crafting solutions.

Colonial Inscriptions through Google Earth

Sen's *Dividing Lines* highlight the apparent "seamless" interface of *Google Earth*'s mapping platform. This apparent seamlessness, however, comes at the condition of central and identifiable addresses. Mimicking the colonially motivated ancient European maps that emphasized areas important for trade and travel (i.e. rivers, cities, harbors), Google Earth's interface and ability to depict areas is slightly different, as it depends on what one inputs in the search bar[9]— it is easier for certain places or addresses, while much more difficult for others. Some apartments or cities take less than a second to locate, while some rural villages or small towns may take multiple attempts.

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[9] P.L. Madan, *Indian Cartography: A Historical Perspective* (New Delhi: Manohar, 1997), 25 as cited in Ryan Nock, "Maps in Colonialism," *Scholarblogsemory.edu* (blog), last modified October 2017, https://scholarblogs.emory.edu/postcolonialstudies/2014/06/21/maps-in-colonialism/.

Sen also discusses the emphasis of the movie portrayal of Brierley's experience finding his home in India, wherein "*Lion* represents *Google Earth* as a boon for India that can help repair its frayed connections, literally reconstituting scattered families." This portrayal represents (a) just one of the many ways in which there is a growing dependence on technology and (b) the increasing role of digital technology in the field of development and of experts of digital technology for solving development problems. From the corporations' standpoint, it is an incentive as well. The Global South can be viewed as an "untapped market," which again does not stray far from the "unexplored territories" of the historical colonial era.[10] This then cycles back to the argument in which coloniality can and is inscribed into technology.

In this way, this presents a "Trojan horse" to sites of development and social and political problems. Not only presenting ill-fitting technical solutions and technological fixes to larger, systemic, structural, social, and political issues, these solutions also conceal biases, perceptions, prescribed roles, disconnected contexts, interests, and agendas. Not discounting the freedom of the end user/s to de-script, tinker, and innovate said technologies in any way, shape, or form they deem fit or feasible, the argument still holds that these technologies cannot be taken as neutral, universal, or

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[10] Mayukh Sen, "Dividing Lines: Mapping Platforms Like Google Earth have the Legacies of Colonialism Programmed into Them," *Real Life Magazine*, March 27, 2017, https://reallifemag.com/dividing-lines/.

all-encompassing solutions to ignored social and political problems.

Mitchell's and Li's arguments, and ultimately what Kadir brings together in his video, point not only to the reduction of the social and political to the technical, but the silencing and omission of the historical and colonial. This inevitably leads to a cycle that reinforces structures of oppression and marginalization in development that are blanketed by benevolent intentions. This paper argues that with the rise of technological advancements and the increased shift toward and dependence on digital technology, in both developed and developing contexts, the fundamental reduction to technological fixes, silencing of the colonial, shifting of responsibility, and reinforcing of social dichotomies in the name of development has shifted and evolved along with it.

It is a bold claim. However, digital technology and the multitude of ways it can be developed and used as a tool for "progress" in society is only in its initial steps, with innovation happening left and right. With projects such as blockchains in the works, potentially big impacts to what was previously held as unwavering principles in economics and communal trust are coming into question.

Given this, how much change will digital technology really bring to society? Will change occur only in the manner in which development will be done, or will the matter itself change as well? How does digital technology challenge paradigms and structures of power? Lastly, can digital technology be used for decolonization?

Conclusion

This paper briefly tackled the concepts of technological scripts and the idea of inscription, as well as the role of experts in development. Specifically, this paper investigated how digital technologies like Google Earth are inscribed with and thus propagate colonial underpinnings, and the role in which digital technology and its experts play in the field of development. Beginning with Deleuze's almost dystopic view of society under the control of technology, the paper introduces the critique amidst the promises of technology. The discussion then introduces how coloniality is inscribed in technology, and the implications of the role of experts in development. These are then brought together using the overarching example of *Google Earth* representing this colonially inscribed digital technology used for development, however, inadvertently overlooking the social, political, and historical dimensions of development problems.

This paper presents a critical stance of the increasing role of digital technology in development, but ultimately does not intend to discount digital technology's malleability. Akrich's scripts point toward non-neutrality, but not manipulation or control. Not all technologies are necessarily colonially inscribed. With the complementing idea of de-scription, an important side of the human-nonhuman interaction is given focus and power. Additionally, Kadir's discussion of Li's and Mitchell's concepts provides the viewer with the opportunity to question paradigms. With the knowledge of technology not being neutral or apolitical and the lack thereof of experts

and experts' training to acknowledge preceding systemic, social, political problems, we are left not with more walls or limitations, but more questions to open new opportunities.

Unsurprisingly, it is difficult—in fact, foolish—to say there is a single solution. This paper's concluding thoughts point toward a system of solutions that acknowledges digital technology's role in development as a role that should facilitate this opening up of ways to solve problems. Beginning with this awareness and sharing of knowledge, there is now a call for action in the ways in which technology is inscribed, an examination and analysis of the content of these scripts, and how these scripts are de-scripted. To complement this, there is a call for action to be critical of the role that society gives experts of technology and digital technology for development. This role can be easily skewed and abused as a position of power. However, more than just criticism toward the experts, it is also crucial to question and reshape the way in which society trains these experts as well.

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