



Between Tech and Trade, the Digital Turn in Development Policies

Marine Al Dahdah¹ · Mathieu Quet²

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Abstract

The ‘digital turn’ that took place in development policies since the early 2000s is characterized by the growing use of digital devices as development and governance tools, and by the growing use of large sets of data that goes hand in hand with it. This article points to three major changes that accompany this evolution. The first is the diversification of economic strategies that are permitted by the multiplication of markets dedicated to technological devices and data management in the developing world. The second is the evolution of relations between public and private institutions in the Global South; the interactions between public and private sectors have indeed been renewed through the kind of technological development partnerships allowed by digital devices. The third is the reconfiguration of issues as crucial as control, inequalities, exclusion at the individual and population level—digital devices don’t make these issues disappear, rather they take an important part in their reformulation.

Keywords Digital development · Global South · Datafication · eHealth · mHealth

Devices of Development in a Datafied Society

As soon as it emerged after the Second World War, development aid was conceptualized in terms of technical assistance and modernization of the least developed countries (Cherlet 2014). Electrification networks, hydraulic systems, agricultural equipment, vehicles and roads have been and still are means of technical assistance for development. In that regard, information and communication technologies (ICTs) only represent one of the most recent sets of technologies in an already long history of innovations, tools and strategies for development. The assumptions and underlying projects of such technologies have been scrutinized in various domains from colonial history (Headrick 1981) to Science and Technology Studies (Redfield 2016). As with many other technologies, ICT-led development mobilizes classical discourses on technological neutrality, its obvious benefit to humanity, and its separation from politics that have been questioned by many researchers (Bijker et al. 2012). In the same vein, ICTs incorporate new ideas, standards

and designs in development policies coming from industry, developers, regulators and users alike (Oudshoorn and Pinch 2003). They are not neutral; they embody particular ideologies, policies and decisions. However, one has to take this critique of technological positivism further. Not only has ICT development continued age-old ideologies and technical fantasies, it has also brought new layers of complexity to social problems—instead of solving them as promised. For that reason, the particularity of the current status of ICTs in the development field must be acknowledged and carefully monitored.

ICTs, and the mobile phone as their flagship, tend to take so much importance in development policies that one could frame the last decade as the period during which a ‘digital turn’ took place in development. In particular, the increasing use of new digital technologies has accelerated and intensified the production, circulation, and use of data. Several academic works show that the digitization of personal data is creating new forms of quantification, control and monitoring of life (Lyon 2011; Raley 2013). Others underline that the uses of these sensitive data meet commercial, managerial or governmental imperatives that are often unknown to users of the devices that provided them (Gitelman 2013). Many scholars resort to the term ‘platform’ to describe these modes of organization and valorization of data (Srnicke 2018).

✉ Marine Al Dahdah
marine.aldahdah@ehess.fr

¹ CEMS, CNRS, Paris, France

² Ceped, IRD, Paris, France



The means and methods used to convert the world into data have evolved considerably with digitization and the increase in the computational capabilities of machines. Some tools have spread massively. Mobile phones for example play an important role in the datafication of the developing world; as it often appears, they are the one and only digital quantification tool in many given development contexts. From this perspective, the creation, possession and control of gigantic databases and of the tools of the collection has become a crucial power issue. We contend that this techno-political turn to the digital has been accompanied by crucial changes in the development strategies put in place in the Global South. They concern the emerging economic strategies mobilized by technological firms (1), the relations between public and private sectors (2), and the consequences for users and citizens in terms of social control and exclusion (3).

The Revamping of Market Strategies Through Digital Development

Digital development policies are supported—through donations or services—by the actors of the digital economy, sometimes directly by firms in the sector such as Intel, Samsung or Orange or through their philanthropic foundations, such as the Bill and Melinda Gates (Microsoft), Omidyar (Ebay) or Vodafone foundations. There is an urgent need to analyze the convergence between stated development goals and economic interests of the digital industry in such development policies. It is also urgent to address the strategic brokering function played by philanthro-capitalism to advance and accelerate the commercial agenda in ‘developmental’ markets. Bishop and Green identify the peculiarities of this two-tier philanthropic movement. At the micro level, philanthrocapitalists want to change the way philanthropy is done by applying Big Business rules to the charitable sector (by monitoring scholarship recipients, imposing profitability indicators and accounting targets). At the macro level, philanthrocapitalism refers to how capitalism itself can be naturally philanthropic, bringing social innovations through new products that benefit everyone (Bishop and Green 2008).

Birn offers a historical perspective on this form of contribution and highlights an entrepreneurial vision already present with early twentieth century philanthropists like Carnegie or Rockefeller (Birn 2014). But she explains that today’s philanthrocapitalists carry the commercial dimension of gift and the valuation of commercial interests further than their predecessors. She emphasizes that beyond commercial interests, the idea is now to move essential services—like health or education—from the public domain to the private commercial sector. Indeed, many digital development programmes have been launched thanks to donations

or free services provided by digital entrepreneurs, but they are embedded from the outset in commercial logic and aim at financial profitability and quick return on investment (Al Dahdah 2019b). Beyond its numerous philanthropic activities, the digital industry increasingly considers its business to be social—as stated by this mobile operator agent: ‘if you solve a social problem, the money will follow’.¹ Because digital technology is nowadays advertized as a systematic response to social issues, tech companies can be heavily involved in development projects far from their core business, such as agriculture, health or education. For instance, the Bill and Melinda Gates Foundation, the largest contributor to the World Health Organization (WHO) since Trump’s financial withdrawal from the Geneva based UN agency, finances and pilots the maternal health policy of the state of Bihar in India (110 million inhabitants), as well as the digitalization of Ghana’s national primary health programme. One of its recurrent grantees, the Grameen foundation, has expanded its portfolio from microfinance services to health services in Africa and Asia through mHealth programmes²; being a newcomer to the health field, it used mobile technology to enter this new market of mobile health services which now constitute its core business.

The emergence of profitable digital markets is more and more evident in the Global South. The virtualization of payments in Africa via mobile platforms such as MPesa epitomizes these profound changes. If mobile money services are available in 90 countries, three-quarters of them are in low- and middle-income countries, so these digital services are seen as ‘the main payment platform’ for the unbanked, and a lucrative untapped market (Guérin 2017). Through digital development projects, digital companies are applying a new business model to development: platformization. The digital platform is at the heart of this process, which is changing structures and frameworks of thought. The mechanisms for creating value from data collected through these platforms, the investments required, and the profits generated through this process are still poorly documented (Isaac 2018). But the rapid and profound transformations brought in certain sectors (banking, transport, hotels, crafts) have been studied through the recomposition of forms of work in Europe or the US where ‘platforms’ gig work’ is trying to eclipse sustainable employment (Cardon and Casilli 2015; Stiegler 2015). In the Global North, ‘uberization’ is massively affecting the transport and hotel sectors. In developing countries, it also affects essential services such as health

¹ As the head of Vodafone-Safaricom’s ‘technology for development’ department in Kenya explained to us.

² Grameen Foundation’s mHealth programmes funded by the Gates Foundation. MOTECH Lessons Learned, September 2012. <https://grameenfoundation.org/resource/motech-lessons-learned>.



and education. Since 2019, the mobile operator Safaricom, Vodafone's Kenyan subsidiary, offers much more than just financial services, by granting through MPesa access to electricity or to Kenya's national health coverage programme. This uberization of essential services is, amongst others, massively transforming access to healthcare in Kenya and pushing Kenyans to embrace mHealth solutions and private services to finance and take care of their health (Al Dahdah 2019a; Prince 2020).

Since the digital industry is investing money in development projects, it influences and transforms the development sector. Far from the initial imagination of the free internet, most digital objects today are products that (even in the absence of a price) have a market value and (even in the absence of a patent) refer to property rights. The current expansion of the digital economy in the Global South is based on the creation of monopolies, the closure of technical objects, and the control of the physical infrastructures, flows and standards of the sector by a limited number of actors, mainly from developed countries. This concentration of knowledge, norms and know-how generates exclusion and paths of dependency of certain 'territories', social groups and individuals on others (Pieterse 2010). In the Global South, digital entrepreneurs are central partners with governments to implement nationwide social programmes. How are these public-private partnerships transforming public policy? What division of powers and ownership issues are at stake in these collaborations? What role does digital technology play in access to social goods and services? Few scholars studied the way in which digital technology makes possible forms of government steered by digital industrialists in partnership with public authorities, and how digital data becomes the unit of definition of citizens and conditions their rights.

The Reordering of Public Interest Through Private Norms

The 'digital revolution' has been approached by some political scientists as a revolution of powers; more specifically, as a transformation of the balance of power, and counter-powers, in a society where digital actors are becoming powerful (Bayart and de Cornulier 2018). In this new regime, Bill Gates (Microsoft), Eric Schmidt (Google) or Mark Zuckerberg (Facebook) would then be the new rulers of our datacratic era (Brézet and Ferran 2018). Although they are criticized and even severely reprimanded for their autocratic practices in Europe, these digital giants sit on international development governance bodies and are active funders and entrepreneurs of digital development policies in the Global South (Marten and Witte 2008). Through these devices they promote the ability of digital technologies to solve social

problems and the efficacy of business solutions to generate income and economic growth in the Global South.

Many studies highlight the fact that these ventures do not direct their funding towards businesses or players from the Global South. In 2009, McCoy and his colleagues studied Gates' overall investment in 'global health' and showed that out of the 659 grants awarded; only 5% went to organizations in 'low or middle income' countries (McCoy et al. 2009). Moreover, if the majority of technical subcontractors are also private companies from the Global North it means that local small or medium digital companies are not benefiting from this manna either financially or in terms of technical knowledge and know-how. Investments in digital development projects are seen as contributions to help the development of poor countries. The direct involvement of global digital players in fashioning these strategies, due to the immense influence exercised by the richest businesses and individuals on geopolitically weaker governments, has extended implications from a governance and financial point of view, and come at the expenses of a reduction of resources for public services, for example for public health systems. In 2015, the United Nations Conference on Trade and Development showed that developing countries were losing at least \$100 billion in annual revenues from the tax evasion mechanisms of multinational corporations (UNCTAD 2015). In 2020, another report showed that Africa alone is losing close to \$89 billion (UNCTAD 2020), billions that could be invested by these same developing countries in health or development programmes. Like most foreign direct investments in the Global South, most digital development investments risk being neither benefiting local governments nor directed towards businesses of the developing world.

Many digital development programmes have been advertised from the beginning as public-private partnerships (PPPs). What conditions for the participation of public authorities and governments do these partnerships involve? While private stakeholders are large players in digital development PPPs, the participation of public authorities and governments is nevertheless indispensable, first and foremost in terms of legitimization and image. Beyond image issues, the collaboration with the states can be useful for obvious reasons of field knowledge. Indeed, if private foundations and companies from developed countries oversee the digital project, local anchorage is essential to be able to effectively implement the programme on the ground. Governments and local actors act as crucial relays to better understand the local context and issues that can emerge on the intervention sites. This local expertise is a reason to involve public actors in projects. The involvement of public facilities and civil servants can also be helpful in terms of logistics. Local public actors facilitate the deployment of programmes at the grassroots level at practically no cost since the project does not have to pay the state agents.



If the state is included in the PPP both as a logistics partner and as an expert on local issues, it can also be seen as an outlet for the devices and an additional guarantee of their sustainability. The state then becomes a trading partner to which the digital device is to be sold when philanthropic grants have dried up. This commercial dimension and attempts to sell products promoted by PPPs in the Global South have already been denounced for partnerships on access to medicines or vaccines (Birn 2014; McGoev 2015). The involvement of states as future buyers of the product developed by PPPs is also very strong in IT and digital development partnerships. For instance, the digital products developed in Bihar through the Gates foundation partnership on maternal health between 2012 and 2015 were taken over by the government of India in 2016 and extended to other states. The role of the state in PPPs is thus far from being negligible, but this model is not necessarily a balanced alliance, or the real win–win usually showcased. States are helping to deploy the devices, might be ready to take over some of them, but it so happens that these IT devices are not compatible at even completely unsuited to the needs of local infrastructures. Occasionally, governments end up feeling exploited and do not wish to extend collaborations. This was the case for the Ghanaian ministry of health, which refused to maintain its collaboration with the Gates foundation on the digitalization of its primary health system because it hijacked its public workforce for nothing (Al Dahdah 2019c). Critics of PPPs argue that if these partnerships cannot benefit the public partners in the Global South, they surely can benefit philanthropists and private partners who set them up (Biehl and Petryna 2013). Digital health PPPs can indeed be a double win for the private sector and weaken public health infrastructures by diverting public health funds for the benefit of private companies (Al Dahdah and Mishra 2020). This points to the complex entanglement of public good and commercial interests that are more and more evident in ventures like digital development, it shows that States and public services are increasingly influenced and shaped by private stakeholders, through datafication and platformization processes.

The Reshaping of Inequality and Exclusion Through Technological Tools

The third area that has been deeply transformed by the digital turn concerns the management of poverty, inequality and exclusion. Interestingly, whereas the most important promise of digital development is to fight against these social ills, it does not seem that inequalities at a global level have diminished that much in the last decades (Alvaredo et al. 2018; Piketty 2019). We argue that digital tools are reshaping inequalities and exclusion instead of reducing them. In

addition, they exert huge pressure on individuals by further regulating citizenship and access capacity.

One famous illustration of this would be the citizens and residents' identification projects led in India: *Aadhaar* and the National Register of Citizens (NRC). The aims of both of these identification projects differ largely. *Aadhaar* is supposed to collect data on people residing in India, while the NRC identifies Indian citizens. Their extent also differs: *Aadhaar* is nationwide while the NRC, so far, has only been implemented in Assam. But to some extent they received similar critiques regarding their exclusionary effects. In the case of *Aadhaar*, as the project has known a huge expansion in the last few years after its launch in 2010, several critiques have been formulated concerning multiple stages (Khera 2019). At the enrolment level, there have been cases of people not getting their number, losing it and not being able to recover it, or even getting wrong duplicate numbers. Most importantly, there have been multiple instances of failed authentication by people having a number, but confronting the impossibility of authenticating it through the biometric system used by *Aadhaar*. This problem is particularly important given that today, *Aadhaar* and biometrics are increasingly used as means to access essential goods or schemes, especially for the poorest (healthcare, rice, or money for instance).

During the COVID-19 crisis, the Indian state took a few steps to help the poorest; among them was a cash transfer of 500 INR for 3 months to all the women who opened a bank account in the recent years through the Indian financial inclusion policy. However, as has been shown by economists Jean Drèze and Reetika Khera, among the people who tried to withdraw this money from the bank, 20% could not.³ The bank account could be closed, *Aadhaar* authentication could fail, or there might have been too many people. One can better understand the problems of exclusion from access that are being raised in the face of the digitization of access to government services. Of course, one should not forget that before they went digital, development policies such as money transfer or commodity distribution were also often deemed defective by users. But what we can emphasize here is that even though digitization does not solve problems, it adds layers of complexities to social systems and its errors are not always acknowledged by government officials and system administrators, who tend to celebrate the neutrality and technical efficacy of the machine. This can also go as far as excluding people from their own citizenship, as shown in the case of the NRC: to get registered as citizens through NRC, the people of the Indian state of Assam had to submit

³ <https://scroll.in/latest/961224/covid-19-double-food-rations-and-cash-transfers-yet-to-reach-the-rural-poor-survey-shows>. Accessed 4 June 2020.



multiple documents in order to be acknowledged. This huge operation has been very controversial for its long-stated aim of identifying and ultimately deporting supposedly ‘illegal’ foreigners in this state bordering Bangladesh and Bhutan. It has also widely been touted as a failure when its final results were published in August 2019, excluding almost 2 million people out of 31 million, and among them people who were Indian citizens but who could not prove their nationality through documentation. In that case, inequality and exclusion even take the shape of expulsion—an expulsion from the database, which in turn results in the loss of citizenship.

In order to conclude on this argument, we would like to emphasize the important fact that the digitization of society is unlikely to achieve its promise to reduce inequality and exclusion. Digital tools should rather be thought of as additional elements in a complex equation, that is society. In that regard, a proper critical look at technological projects and innovations should avoid evaluations in terms of ‘what works and what doesn’t’, which most of the time rely on the assumption that it is possible to isolate the specific effects of a technical intervention on a specific social issue. Rather, it should look at the social context in its complexity and try to understand the multiple dynamics of inequality and power at play and in which a technical intervention is going to get entangled.

Conclusion

We have shown that the datafication of society has brought different changes in the development field. It has been associated with the emergence of new market strategies, the reconfiguration of power relations between public and private actors and to the reshaping of inequality, exclusion and control for the people supposed to benefit from development aid. It appears that this imbroglio of market strategies, power relations and exclusionary effects calls strongly for regulatory practices that have been exceptionally absent thus far. In a field where technological ideas and innovation partnerships are frequently pushed forward, we are not really short of entrepreneurs, inventors and technological game changers. But this ecosystem might be more profitable to the developing world, and society as a whole, if a few rules were to be respected. We only trace here two lines, that seem of particular importance.

In the field of health, the defence of intellectual property rights was particularly highlighted for its deleterious role in access to essential medicines in developing countries (Kapczynski and Krikorian 2010). It is interesting to note that in the mid-1990s at the time of the negotiations on the *Agreement on Trade-Related Aspects of Intellectual Property Rights* (TRIPS), Microsoft and other IT companies played an important role in pushing

for a strengthening of intellectual property laws (Drahos and Braithwaite 2002). But ownership in the digital world does not always translate into traditional patents or evident intellectual property rights; it can also rely on seemingly open-source solutions that are locked in reality. In a world where the global digital divide still needs to be seriously addressed, many digital solutions are presented as open-source software that is freely accessible, yet they require particular skills that people in low income countries simply do not have. Moreover, even in the case of open source, specific technical knowledge is essential to be able to use the resulting code and the various components of the software, which is different from acquiring property rights. While open-source software is often put forward as a tool to compensate for unequal access to software, it remains a technical artefact that is difficult to transfer (Sim and Philip 2008). There might therefore be no ‘owner’ of the device with an established copyright, but in fact only the tech companies involved can use the platform. A ‘technical skills deficit’ to manage digital devices is often put forward by tech companies in order to maintain control of the devices. It is in fact a form of protectionism from these firms which have an expertise to sell and wish to remain in this particular line of ‘business’. Therefore, open-source code is neither a guarantee of accessibility nor a guarantee of technological transfer. Without transfer of knowledge and know-how associated with the software, it remains as impenetrable as a proprietary version and constitutes, in that way, a commercial asset. Notions of public or common good should be promoted against property rules that prevent knowledge, discourse or ideas from circulating. It is urgent to improve access conditions for the people, without restraining them through intellectual property.

The expansion of the world’s datafication and the multiplication of digital measuring instruments are associated with strengthened and expanded monitoring and surveillance practices. Data-based surveillance did not originate with computer technologies: paper registers or censuses are also older biopolitical administration techniques. David Lyon argues that it is the degree and not the nature of surveillance that differs with the emergence of computer technologies that make previously existing control processes more effective, more widespread and less visible (Lyon 2011). Any reflection on the mechanisms of ‘dataveillance’ by digital technologies implies, as a corollary, a necessary attention to the protection of personal data thus collected. Because of its personal and omnipresent nature, the mobile phone raises new issues of privacy protection that become even more acute when its use is collective or shared, as in many countries of the Global South. In terms of personal data protection, the complex problems raised by mobile technologies are not specific to the field of development but are amplified by the content of the data involved.



Most of these data are so-called ‘sensitive’ and as such, they need to be the subject of stringent regulation. Even though in most countries of the world, laws on confidentiality and access to personal data are very strict, the lack of legislation on data collected on mobile devices seems all the more problematic as data transfer and storage are facilitated by this terminal. Greenleaf has studied all past legislation on the subject over the past 40 years, starting with Sweden’s Data Act in 1973, considered to be the first law on data privacy (Greenleaf 2014). He shows that in 2014, 101 countries had such laws, mostly in the richest countries, while only eight states out of 55 in sub-Saharan Africa had such a law. Moreover, several researchers show that under these legislations, anonymised data can be easily re-identified and attributed to particular individuals; they also denounce consent forms which, when implemented by application developers, do not allow the nature of the risks and possible uses of personal data to be understood and prevent the user from exiting the device at a later date (Neff 2013). All these studies converge to warn about the risks of drifting from an increasing surveillance of individuals through the digitization of personal data without increased protection of privacy. Today, the regulation of personal data confidentiality via mobile phones, is non-existent or not applied in most countries of the Global South. These are some of the multiple answers that could be given to the major changes brought by the digital turn.

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