

Postcolonial Open Access

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Is open access the solution to many of the problems faced in the Global South by postcolonial universities, lacking the resources and capacity to subscribe to expensive scientific journals? In this chapter, drawing on an action-research project in Haiti and in Francophone Africa, I argue that this is not the case. On the contrary, open access can become a tool of neocolonialism if it only gives students and academics better access to science from the North. I conclude with recommendations to make open access an instrument of emancipation and cognitive justice in Africa and Haiti.

Introduction

To promote open access, researchers often argue that it leads to an improved and quicker circulation of research results, thus avoiding unnecessary repetition of scientific work as well as generating new ideas, hypotheses and research projects (8)(35). This argument of increased scientific productivity through open access is perfectly compatible with the "imperative of innovation" at the heart of cognitive capitalism. A more general argument in favor of open access is that it contributes to creating a "knowledge society" by giving different audiences direct access to scientific publications. Non-academics and graduates can continue to train and learn, for instance members of public administrations, teachers, professionals, journalists and civil society organizations' members.

The latter argument is directly relevant for the Global South, in particular Francophone sub-Saharan Africa, where universities lack the resources and capacity to subscribe to the expensive scientific journals that are the focus of the attention of researchers in the North. Is open access the solution to many of the problems of science in the Global South? I would first like to show that this is not the case: on the contrary, open access can become a tool of neocolonialism. In the second part of the chapter, I reflect on how to make open access an instrument of emancipation and cognitive justice.

This analysis is based on numerous readings and reflections as well as on a recent action-research project on the barriers to open science and cognitive justice in the universities of Haiti and Francophone sub-Saharan Africa (26). Without my innumerable conversations, virtual and in person, with young scientists from these countries with whom I have published several papers and a book (24) (25) (26) (27), my thinking would not be what it now is. I thank them very much.

Open access: a catch-up tool or a neocolonialism tool?

Open access to scientific publications is an opportunity to accelerate and reinforce the circulation of scientific knowledge in the scientific world and beyond. Could it then allow African and Haitian universities to catch up on scientific documentation and strengthen their research mission which is at present almost non-existent?

Indeed, as shown by Alperin's map of scientific publications by country (2), Francophone Africa produces less than 1% of the scientific articles in the Web of Science database. Having seemingly failed to mobilize the means to develop the scientific knowledge it needs to support and guide its sustainable development, Francophone Africa continues to depend on research done in the North or

funded by the North. Mve-Ondo describes the shock suffered by African universities during structural adjustments and the reduction of public budgets in the 1980s: reduction of teaching positions, lack of science policies, obsolescence of research infrastructures and educational programs, "bogging down" of lecturers who must seek additional income, continual brain drain to the countries of the North, massive increase in student numbers and lack of resources in university libraries (22). Our survey of the academic experience in Africa and Haiti (forthcoming) confirms this sad situation by showing many cognitive injustices that prevent the development of scientific research activities within these countries. We define a cognitive injustice as anything that can prevent researchers from deploying the full potential of their research capacities in the service of sustainable local development (25). Open access can then easily be seen as a means of catching up, filling the gaps in libraries and helping professors and lecturers to be up to date.

However, this reasoning can only evoke another well-known one, concerning not the scientific development of Africa, but its development in general: "Africa is lagging behind the modern world, which explains its underdevelopment", to brutally summarize this hegemonic conception of North-South relations. Out of charity, the countries of the North feel obliged to "help Africa develop", giving rise to the industry of international development.

This vision has been strongly criticized by thinkers especially from the Global South (6)(7) who consider that this model of development is derived from European modernity and is not universal despite its pretensions (1)(19). It was violently imposed by the West on the rest of the world through colonization, which used the argument of lagging to justify the economic and cognitive exploitation of the colonized continents without which modernity could not have prospered (4). Postcolonial criticism of development considers that this exploitation continued even after independence, hampering the real rise in autonomy of Africa, which remains perpetually assisted and dependent on the North (21). According to this critique, the current economic and social divide between the North and the Global South reflects the impossibility of many countries or communities in the Global South to develop in their own way, that is to say, according to their own norms and values, anchored in their territory and their history.

This postcolonial critique can be applied to the idea of "scientific catching-up" for Africa. Is there only one model of scientific development, that of Western science inherited from colonial modernity, or can one imagine a different African science, oriented towards the concerns of the continent?

Mvé-Ondo recalls the colonial origin of African science (22), its continual subjection to Northern research projects and theoretical frameworks (5), and its tendency to imitate Western science without contextualization efforts. This is particularly the case with regards to how universities are structured and function (11), maintaining the use of a colonial language in university education. If we remain in the positivist perspective, according to which "science" is universal, then effectively African science, defined as science done in Africa, lags behind and must be helped to develop so that it increasingly resembles the science of the North. However, if one adopts the critical perspective, then African science should be African knowledge anchored in African contexts and using African epistemologies to answer African questions, while also using other knowledge from the rest of the world, including Western science if relevant. For this African science to develop, Mvé-Ondo suggests to "move from a westernization of science to a truly shared science" (22 p.49) and calls for an "epistemological mutation", a "modernizing renaissance" of African science at the crossroads of local knowledge and science from the North - perhaps in echo to Fanon's appeal to a "new thinking" for Third World countries (10)(29)(30). However, as long as this mutation does not happen and African science mostly tries to emulate Northern science, it will suffer from an "epistemic alienation" (25) hampering its flourishing.

This critical perspective also leads us to "locate" the science of the North in a specific historical and geographical context. From this perspective, science is far from universal; it is globalized. Inspired by the theory of Wallerstein (34), such as Keim (13), Polanco (28) and others, I consider that science has become a world system whose main merchandise is scientific publication circulating among many institutions of high economic value including universities, research centers, governments' scientific policies, journals and an oligopoly of for-profit scientific publishers (16).

What constitutes this world system? At its center are the countries where the vast majority of scientific publications are produced, especially the United States, Great Britain and Australia. The semi-periphery consists of all the other countries, whether from the North or from the "advanced" South (China, Brazil, South Africa), which gravitate around this center, seeking to penetrate or imitate it by increasingly adopting the English language as the language of publication and the article as the unit of scientific knowledge.

The periphery ultimately refers to all the countries that are excluded from this system; those that produce little or no scientific publications identified within the Web of Science or Scopus databases or whose research is invisible, notably in Francophone Africa. Recall that Alperin's map (2), far from being a photograph of the general state of science in the world, is an image of the world system that the Web of Science is trying to build and govern through its standards and the 33,000 journals it indexes.

In this context, open access appears as a neocolonial tool because it facilitates and accelerates the access of scientists from the Global South to the science of the North. It thus contributes to intensifying the epistemic alienation of these scientists and the extraversion of science from the South to the North. Indeed, by making the work produced at the center of the world system more accessible, open access maximizes its impact on the periphery and reinforces its use as a theoretical reference or as a normative model, to the detriment of local epistemologies: "The consequences are lecturers in the Global South who quote and read only authors from the North and impose them on their students and university libraries who strive to subscribe to Western scholarly journals that do not deal with our problems " (18). Let us examine two examples, Research4life and Article-processing charges.

Research4life

Research4life, whose slogan is "Access to Research in the Developing World", is the collective name of four programs in place since 2002: Health Access to Research (HINARI), Research in Agriculture (AGORA), Research in the Environment (OARE) and Research for Development and Innovation (ARDI). Their mission is to "provide developing countries with free or low-cost access to academic and professional peer-reviewed content online" in order "to reduce the knowledge gap between high-income countries and low- and middle-income countries by providing affordable access to critical scientific research." These programs have provided free or low-cost access to more than 77,000 scientific journals in 8,200 institutions in more than 115 developing countries. The beneficiary countries are divided into two categories: countries A (72 countries) and countries B (45 countries). For the category A countries, the program is totally free whereas those in category B must pay a lump sum. There are other "charitable" programs of this type, such as the Low Cost Journals Scheme, also known as Protecting the African Library Scheme within Africa, the JSTOR African Access Initiative and The Developing Nations Access Initiative.

Research4life seems to me a perfect example of scientific neo-colonialism, hidden under the guise of a charitable and generous gesture inspired by the ideal of open access. Indeed, there is a great resemblance between Research4life's mission and the colonial and postcolonial conception of

development as "catching up", as if the only way to combat cognitive injustice and the scientific divide were to distribute science from the North to the South in a charitable way, free or low-cost. Several aspects of the program's operation show this very clearly.

First, the Research4life research consortium is far from being non-profit or disinterested since it includes the International Association of Scientific, Technical & Medical Publishers and more than 185 scientific publishers looking for markets. Second, the universal libraries of the Global South which participate in the program cannot choose the journals they receive, as the "bouquets of journals" on offer are predefined by publishers in the North. Having no control over the journals they offer their readers, those libraries cannot select them according to their relevance to local issues. Third, this program encourages the continuing dependence of these libraries on an external program designed in the North and highlighting products from the North, which may disappear as soon as its philanthropic vein gets exhausted. Not only does this state of dependence hinder the deep understanding of genuine open access by Global South university librarians (such as the Base-search.net search engine and its harvesting of open institutional archives), but it also leads to absurd situations as I found out during a visit in June 2015 to an African university library participating in Research4life. In a library room, the program had installed two computers providing access to its journals. However, to prevent unauthorized access, these computers were protected by passwords that changed every month! At the time of my visit, the librarians had lost track of these changes and, as a result, Research4life's computers were unusable.

This program, therefore, produces a situation opposite to what it seeks, namely "Access to Scientific Literature is Improving the Livelihoods of Communities Around the World", a sentence alas meaningless. This program primarily improves the opportunities of publishers in the North without contributing to the sustainable empowerment of university libraries in the Global South.

Article-processing charges (APCs) and the Global South

In the North, for many scientists, especially in STEM (Science, technology, engineering, medicine) (3), open access now means, rightly or wrongly, "publication costs requested of authors" (14)(32). Indeed, since the early 2000s (17), several scientific journals have begun to charge authors who provide their articles for free, indicating that this is the price to pay to join open access. If readers no longer have to pay, then the authors, the scientists, could pay, especially given that their career or their desire for prestige require they publish more and more: a new captive clientele is born! Even if, according to two recent accounts, only 28% (14) to 36% (20) journals charge these fees, this bold business innovation seems to bear fruit, since these costs now appear as "inevitable, normal" in the eyes of scientists. For example, in a 2014 survey at Laval University in Canada, half of the consulted scientists seemed to think that all open access journals automatically charged authors.

For African or Haitian academics who have to work in very difficult conditions, none of this makes any sense. Admittedly, most scientific publishers practicing APC charitably offer exemptions to authors from the poorest countries who wish to publish with them. However, given the numerous obstacles to such publications, there are so few such authors that this charity seems hypocritical. It can also disappear at any moment. This kind of open access emerges as a new commercial practice within a flourishing cognitive capitalism. It is based on a lucrative business model that focuses on captive authors functioning in a "publish or perish" mode, and is indifferent to material conditions of intellectual work in African or Haitian universities, the invisible periphery.

Open access as utopia

Throughout our action-research project in Haiti and Africa, those discovering the potential benefits of open access made the following complaint on a regular basis about free access to scientific

documentation not otherwise accessible: "how to benefit from it while our access to the web, computer and even electricity is not guaranteed?". The difficult conditions of Internet connexion in most African and Haitian universities make open access a distant utopia. What is the point of making millions of open access articles visible on the web if they are not also materially accessible? In addition, few people in these universities have the digital skills to find these open-access articles on the web (for many African students this comes down to Facebook, through its Freebasics program). It should be remembered that it is often upon starting at university that Haitian and Francophone Africa students first come across a computer. They catch-up quickly, but they need to acquire many of the habits northern countries students develop while at school before they can envisage that open scientific texts on the web can compensate for the lack of documents in their libraries. In the words of a Haitian student, Anderson Pierre, "a great deal of people do not know the existence of these resources or do not have the digital skills to access and exploit them in order to advance their research project."

[Under what conditions can open access become decolonial?](#)

Apart from Hall and Tandon (12), few researchers in decolonial studies have deeply thought about the possibility of "decolonizing" open access to make it an emancipatory tool. These researchers are focused on the political and epistemological dimensions of the colonization of the mind (33) and forget to even consider the conditions of publication and dissemination of their own scientific production and its accessibility in the countries of the Global South (23). Together with my African and Haitian colleagues (27), we have devised several ways to make open access a tool for emancipation and empowerment in Africa and Haiti.

First, we propose to challenge the hegemony of the world system of science centered in the northern Anglophone countries by suggesting that "another science is possible" (24). It should respond to the challenges of sustainable local development in the North and in the Global South, by being plurilingual (available in national languages in addition to colonial languages), open to the ecology of knowledges and the plurality of epistemologies, with an inclusive and non-normative universalism, and, of course, available online in open access under Creative Commons licenses.

Above all, this "other" science explicitly proposes to repatriate the ecosystem of scientific publication within universities, rejecting the mediation of for-profit publishers. By using open source software such as Open Journal Systems, developing support for publishing journals in university presses or libraries or consolidating peer-review management services between several journals, it will be possible to live a scientific life in which the free sharing of articles is "normal", as was the case at the beginning of the 20th century (15).

Next, we propose to give open access the mandate to increase the visibility of science produced in the Global South, in order to create more cognitive justice and greater fairness between the visible and accessible knowledge from the North and from the Global South. In that regard, open access must take into account the knowledge from the Global South which does not appear in the Web of Science (or equivalent), but which is valuable and relevant to many contexts where it should be freely accessible. While traveling to West Africa, I was disappointed to discover that the geographers of Ouagadougou (Burkina Faso) knew the European science on the Sahel better than the work of the Higher Sahel Institute in Maroua (Cameroon) which is not online, even less in open access. Indeed, African science can be found less in scientific articles published in journals from the North than in the dissertations and master theses carried out in the universities of the Global South: "A significant part of the scientific research output from Africa does not find its way into the world's well-established international scientific journals. One part is published in the small number of local journals with often poor distribution and visibility. And the rest is grey literature, i.e. "unpublished

information and knowledge resources such as research reports, theses and dissertations, seminar and conference papers (often) produced in limited numbers, and with limited circulation even within the institutions where they are produced (Chisenga, quoted by 31). Therefore, open access in Africa should adapt to this reality and focus on good-quality institutional archiving, instead of publication in globalized/Northern journals.

In addition, Africa's scientific development aid, if needed, should be directed less towards immediate access to journals from the North and more towards the development of digital tools and skills in African universities. This improved digital literacy would allow lecturers, students and librarians to benefit from existing open access databases and also to create and improve local scientific resources such as open archives, open access journals or publishing houses, or to scan and put online past publications. This requires a number of necessary policy actions: access to electricity, web and computer labs on campuses, financial support to local scientific journals, science 2.0 training (blogs, Twitter, Facebook) for academics and librarians and, of course, local research grants to produce more local knowledge. This is why my colleagues and I have been lobbying in favour of African institutional repositories, showcasing theses and dissertations as well as research reports where most of African research is located (9). There are currently only three institutional repositories in sub-Saharan francophone Africa and none in Haiti, according to OpenDOAR (May 2017).

We constantly advocate that African university libraries, if better funded and their staff better trained in digital open access technologies (such as free software for interoperable scientific archiving such as Dspace, Eprints, Invenio or Omeka), could play a major role in locating, archiving and preserving local scientific documents as well as in managing these archives.

We also remind African and Haitian students that they can have other referents or ideals than the "Harvard model". We invite them to discover the scientific and cognitive heritage of their own countries in order to gain confidence in their ability to create knowledge relevant for their communities. We are extremely proud of the birth in Haiti of REJEBECSS (Network of Young Volunteers of the Classics of Social Sciences) in the wake of our project. REJEBECSS members are young social science students involved in the struggle for cognitive justice. They try and convince Haitian researchers and students to put their theses and papers online in open access and also find old books to be scanned and put online in open access. As a result, they have discovered the richness of Haiti's intellectual history, too long invisible. These empowered young people, passionate about knowledge and increasingly better skilled at manipulating digital open access tools, show that open access can become an instrument of cognitive justice. What is lacking is a collective universal right to the Web...

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