



Looking back to launch forward: a self-reflexive approach to decolonising science education and communication in Africa

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Abstract

The imbalance in the global scientific landscape resulting from the enduring legacy of colonialism in the south and the hegemony of scientific paradigms originating in the north is immense. Our paper makes a case for employing traditional knowledge systems and paradigms as tools for redressing this imbalance in African societies. To achieve this goal, the paper argues, scholars and science communicators must actively pursue a radical, “power-literate” agenda of scientific decolonisation on the continent. Central to this mission is the need for scholars to be equipped with a keen sense of the past — including an understanding of what worked for knowledge production and perpetuation in pre-colonial African societies — without which science education and communication in those societies will remain untethered from the realities of the present and their visions for the future. Concurrently, attention must be given to nurturing home-grown paradigms and platforms for research in higher education that are rigorous yet unencumbered by the age-long tendency to refract African experiences through northern lenses.

Keywords

Scholarly communication; Science communication in the developing world; Science education

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Introduction: science, coloniality and power in Africa

“An Igbo proverb tells us that a man who does not know where the rain began to beat him cannot say where he dried his body. The rain that beat Africa began four to five hundred years ago, from the ‘discovery’ of Africa by Europe, through the transatlantic slave trade, to the Berlin Conference of 1885.” [Achebe, 2012, p. 1]

The legacy of colonialism and imperialism in Africa is evocative of the experiences of other colonised peoples elsewhere in the global south.¹ While there are other historical forces, such as inter-tribal and religious conflicts in the case of Nigeria [Fagbule & Fawehinmi, 2020], that contributed to the shaping of modern-day governance and administrative structures, it is the European colonial project that has made the most indelible and lasting mark on the mental and material conditions of African nation-states. As Maldonado-Torres [2007] puts it, coloniality — the continuing world order set in motion through the historical fact of colonialism — is “maintained alive” [p. 243] in many aspects of everyday life in postcolonial societies, including in the deeply self-affirming spheres of education, culture and knowledge production.

Not surprisingly, the systems of education and knowledge production that have crystallised in postcolonial societies over time are an amalgam of sorts in which traditional knowledge and communication systems feature little, if at all [Calvente, Calafell & Chávez, 2020; Okere, 2011]. According to Okere, Njoku and Devisch [2011], what we are left with are “inherited” and “alien” systems that are not efficacious by virtue of their being disconnected from the pre-colonial histories and postcolonial realities of African societies. The political schisms engendered by forced unions between historically disparate peoples have further weakened any ties that traditional societies might have been able to make between their axiological and epistemological foundations and the colonial push toward “modernity” through science and education [Gunaratne, 2009; Okere et al., 2011].

In particular, higher education systems in Africa almost unilaterally promote northern scientific and educational paradigms and consequently facilitate the erasure of traditional ways of knowing. As Ogundele [2007, p. 49] notes, African universities “started as — and to a large extent, remain — the purveyor of European modernity to Africa, rather than the creator, or even facilitator, of any form of indigenous modernity or modernization process”. Beyond its beginnings in the colonial era, higher education in much of Africa has become ensnared in postcolonial politics and realities, with the consequences continuing to reverberate in academia several decades post-independence.

Scholars in African universities have a long history of resisting the policies of repressive governments, and even those of powerful international institutions, such as the neoliberal policies of the International Monetary Fund in the 1980s that were widely viewed as threatening survival and solidarity in the academe [Lebeau, 2008]. These struggles continue to the present day in many African states, with university unions and activists organising to denounce the declining state of higher education resulting from low levels of public investment in the sector [Burdick, 2007; IseOlorunkanmi et al., 2021]. The resistance of the Kenyan government to the unionisation of university lecturers in the 1990s [Mazrui & Mutunga, 1995] and the frequent, protracted strike actions of the umbrella union representing the academic staff of public universities in Nigeria [Beckman & Jega, 1995; Chidume, Oko-Otu & Aro, 2021] are potent examples of these struggles.

¹We refer to the ‘global south’ here as a distinct category from the global north, which, while loosely bounded, is widely understood in decolonisation and broader global political discourses as encompassing economically marginalised countries in Africa, Latin America, Asia and the Caribbean [Haug, Braveboy-Wagner & Maihold, 2021]. We focus our analysis on Africa, where the knowledge production and dissemination systems of the constituent countries converge considerably notwithstanding cultural differences among them [Mutua, Musa & Okigbo, 2022; Ssentongo, 2020].

The result is a lingering atmosphere of hostility between the intellectual class and the political class on the continent, with the two seldom overlapping. This hostility is paradoxical in light of the perceived role of universities in training citizens to be effective public stewards of the developmental state, especially following the lacklustre performance of the aforementioned neoliberal policies in African countries [Kwaku Ohemeng, 2014]. More pointedly, as Arowosegbe [2021] notes, the reluctance of many African governments to engage with progressive notions of self-governance and broad-based development weakens the foundations of decolonisation discourses advanced by the latter.

The colonial legacies and postcolonial realities highlighted above have converged to establish a Eurocentric system of knowledge production, validation and communication in which former imperial powers, particularly the United Kingdom, France and the United States, dominate global performances and discourses around science [Alatas, 2006; Asante, 2010]. The hegemony of these global northern powers can be seen in the development and application of the dominant scientific theories and methods, as well as in the dissemination of results through teaching and publication [Gunaratne, 2009; Nabudere, 1997; Shome & Hegde, 2002]. Several scholars, including some writing in the postcolonial tradition, have offered vibrant critiques of this one-sided view of science development and communication [see, for example, Aman, 2018; Crossley & Tikly, 2004; R'boul, 2021]. Nonetheless, the prevailing global scientific hierarchy, besides remaining largely unchanged, has been abetted by broader processes of globalisation that also privilege northern perspectives and narratives [Sklair, 2006].

Commentators like Ray [2012] who insist that the dominance of the northern scientific paradigm is not problematic as long as it does not prevent the flourishing of other forms of knowledge miss a fundamental point, which is that the very fact of the dominance of those paradigms limits the psychological and cultural space available for the expression of other, equally valid models. Importantly, the debate hinges less on technicalities and more on the unequal power structures — including the exercise of “soft” power as demonstrated through, for instance, northern-centric cultural and educational exchange programmes — that legitimise and perpetuate prevailing modes of knowledge production and communication. What we are collectively faced with, therefore, is an explicitly political project of reimagining and reshaping the global scientific landscape through radical thought and action.

The following sections outline a vision for pursuing this radical goal in Africa. We begin by tracing the history of knowledge production and education in pre-colonial African societies, highlighting the use of native languages in instruction as a critical component of the epistemological traditions of those societies. We then identify insights that are relevant for the development of self-determined education and communication agendas in modern African societies and propose ways in which they can transcend prevailing Eurocentric norms in “global” science.

“Go back to the past — it is not a crime.” — Ewe proverb

To advance the state of science education and communication in Africa, it is important to trace the roots of the present-day malaise and see what we can take forward from there. Here, it is possible to distinguish between scientific paradigms that underpinned traditional knowledge production and communication paradigms that promoted traditional knowledge dissemination, though there are points of overlap between the two. African societies usually codified their knowledge in proverbs, myths and folktales [see, for example, Yankah, 1995] which, in turn, acted as veritable vehicles of dissemination and education among the people [Majasan, 1969]. African knowledge paradigms were deeply rooted in rich cultural practices and norms, of which language was — and still is — an integral part [Fab-Ukozor & Etumnu, 2022]. These cultural practices perpetuated traditional knowledge, and this knowledge was disseminated in the course of daily activities like farming, hunting and cleaning, as well as through social activities like age-group meetings and moonlight storytelling sessions.

Fafunwa [1974] notes that functionalism was the main guiding principle of education in “Old Africa”. All knowledge produced was for specific functional purposes. Every society had its own praxis that was influenced by its history, geography and culture. Fafunwa [1974] further notes that: “In Old Africa, the warrior, the hunter, the nobleman, the man of character or anyone who combined the latter feature with a specific skill was adjudged to be a well educated and well-integrated citizen of his community” [p. 9].

Importantly, the production and dissemination of knowledge was done through practice, yet it was structured and systematic. Again, according to Fafunwa [1974]: “Children learnt by doing, that is to say, children and adolescents were engaged in participatory education through ceremonies, rituals, imitation, recitation and demonstration” [p. 9]. Those activities were an integral part of daily life — quite unlike the current reality where many Africans who are educated in the modern sense have little connection to the needs of the societies in which they live. In Old Africa, no special or esoteric skills were needed to be an educated person, as every individual participated in the activities that constituted an education.

Further, unlike in the positivist paradigm of northern scientific thought, many African societies do not classify science as a field distinct from the humanities, as both are often intertwined in practice. What constitutes science in African thought is a pragmatic process of studying the world that has been tested by use over many centuries [Green, 2023; Masaka, 2018]. While this process may not fit neatly into the standards prescribed for “modern” scientific inquiry, it is no less a valid method of observing the world and understanding its workings. This realisation paves the way for the recognition that there exists a uniquely African scientific paradigm, one that intersects with the values, cultures, religious beliefs and, indeed, the native languages of the people it is meant to serve.

Kaya [2016], for example, describes how the science of observing natural phenomena has been used by generations of so-called rainmakers to acquire and accumulate knowledge about meteorological patterns in parts of East and southern Africa. This knowledge has translated into the provision of weather forecasting and advisory services and the establishment of early response mechanisms in

many local communities [Kaya, 2016]. In a case of indigenous knowledge belatedly being recognised by mainstream actors as having inherent value and utility, these rainmakers have begun to be feted and sought after by northern scientists and science journalists in recent times [Moore, 2010]. This illustrates the point made by Olaopa and Ayodele [2022] about African indigenous knowledge and innovation systems being a critical source of inputs in the search for sustainable solutions to the climate-change and related development challenges facing the continent.

In another example of previously localised indigenous knowledge gaining mainstream recognition, Aluko [2016] describes how rural women in Mali and Burkina Faso have used native plants to make effective medicines and cures for generations; uses that have only recently begun to be understood and appreciated by the global scientific community.² Accompanying these shifts in the valuation of indigenous knowledge is a growing turn towards reflexivity in African communication scholarship, where long-held Eurocentric narratives in the field are gradually being challenged and corrected by a new generation of postcolonial scholars who are sharply critical of the premise of modernisation underlying the northern scientific and capitalist enterprise [Mutua et al., 2022].

These northern paradigms, rooted as they are in the notion of rational thought, are quite distinct from African knowledge paradigms which, as Mutua et al. [2022] put it, stem from world views “grounded in authentic metaphysics, knowledge, and values” [p. 76]. The multidimensional nature of the latter, with discoveries about the natural world inextricably linked to social, cultural and even spiritual practices [Mutua et al., 2022], necessarily embraces a broader range of ontological expressions in its pursuit and codification of knowledge.

Understanding and advancing this idea of a humanistic scientific paradigm will be essential to a renaissance of traditional knowledge production and dissemination in Africa. Central to this renaissance will be the basic and higher education systems that, consciously and otherwise, shape the forms of knowledge and culture that African societies believe they should aspire to. As Watson [1992] notes, the elites produced by these educational systems have been complicit in fostering and maintaining the dependency of African societies on countries of the global north; a deliberate, concerted effort will be required to reverse the situation.

In the next section, we outline practical strategies for doing this, drawing on relevant elements of functionalism (notably language) in pre-colonial African education and applying a decolonisation lens to reimagine the conduct of science education and communication in modern African societies.

Launching forward: towards a decolonised science agenda for Africa

Postcolonial and other scholars have long grappled with the seemingly intractable question of what needs to be done, not only to overturn the long-running pattern of “disqualification” [Okere, 2011, p. 306] of southern knowledge systems, but also to promote their active development, dissemination and application. Many scholars agree that it is not constructive to engage in discourses that implicitly or

²These examples are part of a broader trend of growing awareness and respect for the knowledge systems of indigenous people around the world (see, for example, Onishi & Stuart-Ulin’s [2022] exposition of how the Canadian government is relying on indigenous people’s intimate knowledge of forest management in its conservation efforts).

explicitly cast southern knowledge systems in a superior light, as has happened with northern systems over the centuries. Rather, they assert, multiple, “plural” knowledge systems should be allowed to flourish side by side in a way that reflects the diversity of places and cultures around the globe [Olukoshi & Nyamnjoh, 2011]. In this narrative, it is possible to develop science education and communication systems that are rooted in southern/traditional epistemologies yet lend themselves to wider global application.

Importantly, the narrative is situated within a broader, radical discourse of decolonisation which is notable for its rejection of the tired, performative “politics of inclusion” [Schwartz-DuPre & Morgan Parmett, 2018, p. 2] that ticks multiple boxes but leaves so much unchanged. Proponents cast the decolonisation of southern knowledge systems as a deliberate, reflexive and “power-literate” [R’boul, 2021, p. 153] process that seeks to reclaim southern agency in the teaching, research and scholarship of local content. However, Seehawer [2018] points out that, while the knowledge decolonisation discourse has gone on vigorously in relation to other southern geographies over the past two decades, it has only recently begun to gain traction in the African context — signalling an urgent need for contributions in this regard. In line with this imperative, we offer reflections below on how the decolonisation of basic and higher education systems in Africa can be achieved.

3.1 Decolonising education in Africa

As has been discussed in detail above, there is a pressing need in much of the global south, and in Africa specifically, to produce knowledge that deliberately reworks the existing hierarchy that privileges scientific systems originating in the north. The bulk of the work that needs to be done in this regard is mental, as our collective consciousness needs to be awakened to the inherent value of traditional thought systems. This echoes R’boul [2021, p. 151], who advances the notion of building a “de-westernized consciousness” that would involve “developing morally and politically responsible education that challenges current power hierarchies and propels mutually satisfying intercultural communicative experience”.

Connected to this idea of a de-westernized consciousness are the means of communicating it. At this point, colonial languages are quite firmly rooted in the consciousness of many former colonies in Africa, and they have all but edged out the use of native languages in science and education. Meanwhile, the functionality of science dictates that, for its outputs to be meaningful in a particular context, it needs to be embedded in key aspects of the host culture. As Olukoshi and Nyamnjoh [2011, p. 19] state, “It is of utmost importance to understand that science is not free of culture. It is, rather, not only full of culture but also does not function independently of its culturally-rooted and specific language-bearing practitioners and their vested interests, whatever their claims to a lay status and neutral stance”.

It is worth expanding on the role of language in the education systems of African countries. As Watson [1992] has pointed out, language is a critical building block in the development of both individual cognition and social cohesion in any society. The colonial project left Africa with a patchwork of nation states that were too

culturally and linguistically diverse in many cases to agree on any one language to adopt at independence [Watson, 1992]. Within this context, the languages of the respective colonial masters became the default “official” languages (for education, business and civic engagement) post-independence as much for practical reasons as for political expediency [Mwelwa & Spencer, 2013; Watson, 1992]. This transpired despite the reality that only a small fraction of the population in many African countries — as low as 10 percent in some cases — speak the designated official language in the course of their daily lives [Lavoie, 2008]. The damage to economic, social and political advancement has been significant: with the exception of an educated, mostly urban elite, the majority of Africans have become excluded from processes of governance and development in their own countries [Mwelwa & Spencer, 2013]. Perhaps more detrimentally, this majority is regarded by the elite as inferior on account of their colonial language-deficiency, further cementing their exclusion from national life [Skutnabb-Kangas & Phillipson, 1996].

Against this background, following an initial unquestioning embrace of colonial languages in the immediate post-independence period [Lavoie, 2008], many African countries are now reflexively attempting to integrate native languages into their basic (and even higher) education systems [Akinnsaso, 1993; Chiuwe & Moyo, 2008; Pillay & Yu, 2015]. These efforts have met with varying degrees of success. While some countries still default to colonial languages as their language of instruction despite official policies that give primacy to native languages in the early years of education, others have made some progress in delivering bilingual education (i.e., phased instruction in both native and colonial languages) in the first six to twelve years of school [Adegbija, 2004; Magocha, Mutasa & Rammala, 2019].

An instance of the latter can be found in Burkina Faso, where the government has implemented an “Africanised” primary education system in which children start off learning in their native languages and then shift gradually to French, the colonial language, in later years [Lavoie, 2008]. This iteration of bilingual education not only teaches academic content, but also integrates activities such as storytelling and farming that children already carry out in their everyday work and play [Lavoie, 2008], thus harking back to the functional forms of education that prevailed in Old Africa. In the Burkina Faso example, the approach, steeped as it is in native language and culture, has increased agency and participation among the students and teachers involved, enabling superior learning outcomes. A 2005 study of the initiative found that students in the bilingual system outperformed those educated only in French in national qualifying exams as well as in general literacy skills [Lavoie, 2008]. By contrast, Mwelwa and Spencer [2013] cite how, in Zambia, learning and cognition were shown to be impaired for children who had only received instruction in English, the colonial language.

Even brief forays into bilingual education have shown promising results. In their report titled “Education in Mother Tongue: The Ife Primary Education Project (1970–1978)”, Fafunwa, Macauley and Sokoya [1989] described the implementation and outcomes of a programme designed to test the efficacy of native-language instruction among primary school students in the southwest region of Nigeria. Researchers on the project grouped students in rural Ile-Ife into two and assigned them to English-taught and Yoruba-taught classes respectively for the six-year duration of their primary education.³ Findings from the project showed that the

³Yoruba is the primary native language spoken across southwest Nigeria.

students taught in their native language were not disadvantaged in any way; indeed, they performed better than their peers who had been instructed in English. While there was initial enthusiasm for this model of education among Yoruba-speaking states in the country, it soon petered out and gave way to mainstream English education, perhaps signalling the uphill nature of the task of dismantling colonial-language instruction across Africa.

Yet the task of embedding native languages into African education systems not only follows logically from the outcomes, as has been noted by Lavoie [2008]; it is one that is central to the premise of decolonising knowledge production and dissemination on the continent. If the imperative seems glaring at the level of primary education, it is perhaps even more so at the secondary and university levels, where far less success has been recorded in integrating native languages into instruction [Mwelwa & Spencer, 2013]. This is the case even though it has been shown that introducing elements of native-language instruction significantly aids students' grasp of higher scientific and mathematical concepts in countries as diverse as Ghana, Botswana, Zambia, Tanzania and South Africa [Kaya, Kamwendo & Rushubirwa, 2016; Prophet & Dow, 1994; Setati, Adler, Reed & Bapoo, 2002].

Even in South Africa, where some of the most expansive language-in-education policies have been fashioned out of the country's unique legacy of apartheid, progress in integrating the nine native languages that have been designated as official alongside colonial languages into higher education has been painfully slow and uncertain [Pillay & Yu, 2015]. Given that universities are, in the main, nations' gateway to the broader realms of global scientific discovery and commercial enterprise [Mutasa, 2014], this is a missed opportunity to contribute uniquely African perspectives to international discourses. Commentators have noted the enduring power and popularity of colonial languages (particularly English) and the double bind that African countries seeking to scale back this linguistic dependency find themselves in, since the practicalities of international trade and development may preclude substantial progress in this regard [Pillay & Yu, 2015; Watson, 1992].

Nonetheless, this is arguably more reason to be proactive in building the capacity of African universities to explicitly promote locally relevant and inclusive knowledge production and dissemination, which is the primary duty that science owes to citizens. As Mutasa [2014] points out, one way to do this is for African universities to enact policies that incentivise scholars to teach, research and publish in native languages.⁴ This would require the development of processes and platforms that are suited to such distinctive scholarship, an issue that we explore in detail in the next section.

3.2 Decolonising research in Africa

Several authors [see, for example, Kessi, Marks & Ramugondo, 2020; Nolte, 2019] have highlighted the detrimental effects to African scholarship of privileging

⁴It is instructive that many of the articles cited here challenging colonial-language hegemony were published in regional (African) journals. It is perhaps a testament to the need for more publication outlets that explicitly encourage scholarly reflections on issues that are central to African identities.

northern platforms for publishing academic research on the continent. Ssentongo's [2020] incisive study of promotion practices in two Ugandan universities reveals that there are two complementary levels on which change is required: first, there is a need to dispel what the author terms the "Afro-pessimistic biases" [p. 283] that unquestioningly bestow legitimacy on northern publication outlets while penalising publication in local/regional journals; and, second, it is important to establish necessary conditions for African publication outlets to flourish. The author describes how real challenges experienced by African publishers — including gaps in resourcing and capacity — have fed into a vicious cycle where the quality of their outputs suffers, and this, in turn, exacerbates those challenges and significantly damages the publishers' reputation in the long term [Ssentongo, 2020].

The effect is a dearth of "substantive" platforms for academic publishing on the continent [Ssentongo, 2020], with some of the most notable ones, such as the Council for the Development of Social Science Research in Africa (CODESRIA) and the Organisation for Social Science Research in Eastern and Southern Africa (OSSREA), assuming a regional mandate. The current situation is very much a case of declining fortunes. University presses, for instance, proliferated in the late colonial and immediate post-independence period. However, they have since dwindled in output and relevance [Zell, 2022], so that there are only about 50 of them scattered across the continent at present [van Schalkwyk, Rasoanampoizina & Warren, 2016], with only 15 of these still active [le Roux, 2022].^{5,6} This is compared with hundreds of functioning university presses in Europe and North America, many of which have organised into vibrant collectives to further their joint publishing imperative (prominent examples of these are the US-based Association of University Presses and the Association of European University Presses).

This is an unfortunate state of affairs, as it is a major contributor to the marginalisation of African scholarly voices in regional and global discourses [le Roux, 2022]. The importance of building and strengthening regional platforms to confront this problem cannot be overstated. Eichhorn, Baker and Griffiths [2020] show how, even in "international" journals that claim to have a global remit, authorship (as well as research leadership) is overwhelmingly skewed towards researchers based in northern institutions. The outcome of this trend over time is an overarching narrative that purports to be inclusive of southern voices but is told almost exclusively from a northern perspective, with any deviations from this dominant worldview deemed anomalous [Eichhorn et al., 2020]. As a matter of practicality, therefore, there is an urgent need to not only grow the quantity and quality of African publishing platforms, but also, importantly, to advance the publication of research that valorises African scientific paradigms. To this end, we discuss three key areas in which it is crucial to decolonise research in Africa, namely: theory; methods; and funding.

Decolonising theory. At the heart of scientific inquiry is the question of the theories and assumptions that frame what is knowable, or what is important to

⁵University presses are important because they aim to publish high-quality research reflective of local scholarship at below-market rates owing to their non-profit status [le Roux, 2013, cited in Universities South Africa, 2019].

⁶South Africa's Wits University Press, which recently celebrated its 100th year of existence, is an exception on the continent [le Roux, 2022].

know, about the world. Here, as elsewhere, theories of northern origin dominate: much of what is regarded as “standard” theory [Kassem, 2019] in the social sciences, for instance, derives from the work of Enlightenment-era thinkers attempting to make sense of the great upheavals wrought by the Industrial Revolution in Western Europe. Such theories can, and have, been usefully applied to the study of African societies: indeed, according to Kassem [2019], the very insistence on their use by critical southern scholars can be interpreted as an act of subversion, preferable to a passive acceptance of “alternative” theories that serve to further distance southern experiences from universal relevance. Nonetheless, it is important to also theorise the micro and macro processes happening within African societies on their own merit, while avoiding the trap identified by Ergin and Alkan [2019] of subordinating these locally derived insights to the grand narratives favoured by northern theorists.

Decolonising methods. If, as Sarewitz [2016] contends, science — and, by extension, the methods that underpin it — is in constant dialogue with the society within and for which it is produced, then we cannot uncritically transpose methods that were developed in interaction with the norms and values of northern societies and expect them to have the same validity in southern contexts. One aspect of doing scientific research that has been extensively discussed in the decolonisation literature is that of ethics, where standards determined by researchers in northern contexts sometimes conflict with the histories, realities and priorities of southern research participants [Lee, 2009]. Researching in the New Zealand context, Mikahere-Hall [2017] illustrates how using a research method wholly rooted in Indigenous philosophy and symbolism constitutes a uniquely valid way of engaging with participants in that context. In the African context, the case has been made for developing ethical protocols centred around the communal and relational ties that are highly valued by people in those societies [Keikelame & Swartz, 2019; Seehawer, 2018]. As Harvey [2003] notes, these considerations will have relevance beyond their origins, as the problems that they address are experienced by researchers globally.

Decolonising funding. The topic of how to secure funding for southern scientific agendas, Kassem [2019] notes, is “the elephant in every room”. Lawrence and Hirsch [2020, p. 518] outline the outsized contribution of northern institutions to funding “transnational research partnerships”, a long-established state of affairs that has been exacerbated in the last few decades by drastic cuts to government spending in Africa prompted by the northern-led neoliberal turn in development financing. The pattern of dependency that has emerged from this paternalistic arrangement has proved limiting for the African scientific enterprise as a whole, even if it has enabled the development of individual scientific careers. Crucially, northern funding is primarily designed to suit donor agendas, which often do not coincide with local research priorities. It is clear that, irrespective of the availability of external funding, African governments need to invest more in the production and dissemination of scientific knowledge that is fit for purpose. Some countries have made important strides in this regard — Nigeria, with its Tertiary Education Trust Fund aimed at incentivising teaching and research in public universities — is an example. Nonetheless, much greater levels of public investment in science (and, by extension, ownership of local science agendas) will be required if the vision of intellectual decolonisation is to become a reality in Africa.

Conclusion

This article contributes to the debate around constructive ways of dismantling the longstanding hegemony of northern knowledge production systems and cultivating southern agency on the global scientific scene. While considerable progress has been made in this discourse as it pertains to the global south in general, its application to the African context in particular has been limited. This is the case despite the reality that modern African societies exhibit some of the most indelible legacies of the European colonial project, including in the ways that their educational and knowledge production systems have evolved. This article has attempted to redress this imbalance in the global discourse while acknowledging the caveats implied by the heterogeneity of African societies and the uphill nature of the task.

We advocate a radical project of scientific decolonisation that draws inspiration not only from long-running scholarly debates on the subject, but also from the core principle of functionality that guided knowledge production and application in pre-colonial African societies. The notion that science and knowledge are culturally rooted — in other words, that all science is local — is a central point of departure for our argument. Importantly, we propose a return to native-language instruction in education as a tool for attaining the ideal of a “de-westernised consciousness” advocated by other scholars in the literature. Concurrently, we highlight the need to critically reassess the prevailing northern-led theoretical, empirical and funding models in African research systems on the one hand and to nurture homegrown publishing platforms aimed at amplifying African perspectives and paradigms within global scientific discourses on the other. Only then can the vision for self-determination of scientific agendas as well as the means for implementing them become a reality on the continent.

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