From ‘making up’ professionals to epistemic colonialism: digital health platforms in the global South

Petrakaki, Dimitra, Chamakiotis, Petros and Curto-Millet, Daniel (2023) From ‘making up’ professionals to epistemic colonialism: digital health platforms in the global South. Social Science &amp; Medicine, 321. a115787 1-9. ISSN 0277-9536

This version is available from Sussex Research Online: http://sro.sussex.ac.uk/id/eprint/111131/

This document is made available in accordance with publisher policies and may differ from the published version or from the version of record. If you wish to cite this item you are advised to consult the publisher’s version. Please see the URL above for details on accessing the published version.

Copyright and reuse:
Sussex Research Online is a digital repository of the research output of the University.

Copyright and all moral rights to the version of the paper presented here belong to the individual author(s) and/or other copyright owners. To the extent reasonable and practicable, the material made available in SRO has been checked for eligibility before being made available.

Copies of full text items generally can be reproduced, displayed or performed and given to third parties in any format or medium for personal research or study, educational, or not-for-profit purposes without prior permission or charge, provided that the authors, title and full bibliographic details are credited, a hyperlink and/or URL is given for the original metadata page and the content is not changed in any way.

http://sro.sussex.ac.uk
From ‘making up’ professionals to epistemic colonialism: Digital health platforms in the Global South

Dimitra Petrakaki, Petros Chamakiotis, Daniel Curto-Millet

ABSTRACT
Platforms have been studied in terms of their impact on knowledge production and generation of social value. Little however is known about the significance of the knowledge they transfer to the recipient communities—often in faraway countries of the Global South—or its potential perceived colonizing effects. Our study explores the question around digital epistemic colonialism in the context of health platforms involved in knowledge transfer. Using a Foucauldian lens, we study digital colonialism as a phenomenon that emerges from platforms’ underpinning power/knowledge relations. Drawing upon a longitudinal study of MedicineAfrica—a nonprofit platform intended to offer clinical education to healthcare workers and medical students in Somaliland—we discuss interview findings from two phases: (a) with Somaliland-based medical students who studied MedicineAfrica as part of their medical studies, and (b) with medical professionals who attended a MedicineAfrica Continuing Professional Development (CPD) course on Covid-19 treatment/prevention. Our study shows how the platform ‘makes up’ healthcare professionals by offering opportunities for learning and skill development whilst instilling work values and ethos resembling Western medical identities. The platform was studied MedicineAfrica as part of their medical studies, and (b) with medical professionals who attended a MedicineAfrica Continuing Professional Development (CPD) course on Covid-19 treatment/prevention. Our study shows how the platform ‘makes up’ healthcare professionals by offering opportunities for learning and skill development whilst instilling work values and ethos resembling Western medical identities. The platform was also perceived to produce subtle colonizing effects as its content embodies knowledge that (a) presupposes medical infrastructures that are absent in the recipient country; (b) is presented in English instead of participants’ mother tongue; and (c) neglects the idiosyncrasies of the local context. The platform sets its tutees in a colonial condition in which they cannot fully practice what they learn; they cannot entirely engage with the subject they learn, taught as it is in a different language, and they do not necessarily learn about the medical conditions and the patients they encounter. This alienation from their local context, embraced by the platform’s underpinning power/knowledge relations, is at the heart of digital epistemic colonialism and comes together with the social value the platform generates.

1. Introduction

Although digital platforms can integrate marginalized populations economically, socially and politically (AbuJarour and Krasnova, 2017; Agarwal and Sen, 2022; Díaz Andrade and Doolin, 2016), at the same time, they reproduce and strengthen injustice and exclusion (Calzati, 2020; Chan et al., 2016; Ozduzen et al., 2021; Siapera and Viejo-Otero, 2021). This paper discusses the perceived colonial implications of digital platforms that transfer knowledge in the Global South. Existing scholarly research has indicated that platforms produce social value, including professional value, especially in countries of the Global South (Barrett et al., 2016; Chamakiotis et al., 2021; Goh et al., 2016). Little however is known about how the knowledge they transfer (a product of the West) may undermine local identities and practices, engendering a form of epistemic colonialism (Adam and Myers, 2003; Bonina et al., 2021; Young, 2019). We define epistemic colonialism as the process by which Anglo/Euro-Centric knowledge gets transferred, introduced, and adopted as scientific legitimate knowledge in the Global South (Ibarra-Colado, 2006). In this process, local knowledge gets questioned, undermined and subsequently altered (to a degree) in favor of the ‘superior’ expertise of the Global North delivered through digital platforms (Jammulamadaka et al., 2021; Spivak, 1994; Taskeen, 2019; Young, 2019). Taking a Foucauldian approach, we move away from past colonial administrations and look into how ‘colonial’ power is reproduced in...
2. Digital epistemic colonialism: types and conditions

Historically, colonialism has been defined as a practice of domination of one person or population over another, beginning with the European invasion of Americas in the 15th century (Kohn and Reddy, 2017). This practice typically also involved the transfer and temporal settlement of population into a new territory. Digital colonialism refers to the involvement of digital technology (e.g., platforms, applications, social media) in the exertion of power and control of a nation or a corporation/institution over another that is perceived as being underdeveloped or marginalized (Karegaard and MacDonald, 2020; Kwet, 2019; Mann and Daly, 2019). The role of technology in colonialism, although pivotal, is not deterministic. Technology can bring visibility to indigenous knowledge and foster dialogue and interaction or, alternatively, it could become a Western product that embeds and reproduces the values and interests of the Global North (Meda, 2020).

Digital colonialism could take various forms: it could imply technological dependence on digitally advanced countries (Coleman, 2018; Kwet, 2019) or on imperialist platforms, such as those based in the US (Facebook, Google, Amazon) or China (Alibaba). This form of colonialism implies having control over online experiences and lives, exercising constant surveillance, and compromising privacy.

Digital colonialism could also refer to data colonialism whereby data are extracted, often without consent, and appropriated for purposes that serve hegemonic powers, including expanding imperial power and economy (Kwet, 2019; Singh, 2021). Data gathering has constituted a key activity of colonizers, intended to categorize and control the population (Mann and Daly, 2019). Digital technology makes this practice constant, discreet and pervasive, giving colonizers more intrusive ways to control the population through Big Data. Finally, digital colonialism could also refer to the way in which ‘digital knowledge politics unfold’ in local communities, e.g., how it might affect the way in which people socialize, communicate and experience the world around them (Young, 2019, p. 1427). Situated in this last perspective, our study critically examines how the much-vaulted capacity for knowledge transfer put forward by platforms (Piccoli et al., 2001) is not devoid of power relations but actively shapes professional subjects.

Existing academic work has looked into two conditions of epistemic colonialism: language, a result of English dominance, and a focus on developed contexts, the Global North, that is distinguished from the Global South, which is in need of correction, intervention and improvement (Davison and Díaz Andrade, 2018; Taskeen, 2019). Language does not only constitute a medium of communication but a modality of perceiving things in particular ways instead of other ways (Davison and Díaz Andrade, 2018). It embodies culture and heritage and influences how and what gets perceived. It also unavoidably gets involved with hegemonic powers (Taskeen, 2019). It transfers, for example, ideologies, beliefs and norms and forms identities (Tietze and Dick, 2013). Bhabha (2004) argues that the colonized subject is a hybrid subject across a range of levels including race, language, culture and religion. It is an amalgamation of what it already is and what it could become (Taskeen, 2019). In fact, success in colonial terms is evidenced by the construction of subjects that are located in the regions that are suppressed but think like those in more dominant positions (Taskeen, 2019). Ibarra-Colado (2006) names this hybrid subject as ‘native elites’ and Haraway (1991) as fragmented identities that cannot become a unified one.

The second condition of epistemic colonialism is a unidirectional focus on the Global North and on the knowledge it produces (Davison and Martinsons, 2016). Knowledge gets colonized when it incorporates ideologies, culture and traditions that reflect the context where knowledge is produced whilst missing out on the context where knowledge is or will be used (Meda, 2020). The knowledge that gets transferred also reflects the values of the context of its origin, as it demonstrates what should be known and maintained and what can be forgotten and lost. This does not only have cognitive implications—primarily in terms of the knowledge being produced—but also ethical consequences (Smith, 2008). It is significant that people learn about matters that relate to their experiences, have a meaningful influence on their lives, and reflect on situations they are familiar with. This requires local and not imported knowledge. Aside of the origin of knowledge, the process of knowledge that gets transferred also constitutes a criterion of epistemic colonialism. In Apartheid South Africa, colonial education offered partial/limited knowledge to black people with the intention of subsequently limiting their life opportunities (Taskeen, 2019).

Having discussed the types and conditions of digital epistemic colonialism, we now turn to the co-constitutive relationship between power and knowledge that will help us analyze how digital colonialism plays out on platforms.
3. Colonialism through the power/knowledge interplay

Michel Foucault has been placed at the heart of colonial/post-colonial scholarly research primarily for his work on power and the ways in which it operates in post-colonial regimes (Ahluwalia, 2010). For Foucault, power and knowledge are in a co-constitutive relationship. Power needs knowledge to operate and—as it operates—it also produces further knowledge. Knowledge involves bodies of knowledge (such as professional expertise), products of humans’ knowledge (including a wide range of technologies and techniques) and discourses that are periodically accepted as truth claims. Platforms constitute an exemplar of a field within which power/knowledge relations operate. The essence of platforms lies in the knowledge they produce (Bonina et al., 2021), whilst their use produces further data about users and ‘makes up’ their identities in specific ways.

Foucault has attributed, throughout his work, specific characteristics to power, including its relational aspect (Foucault, 1991). This is an outright rejection of the sovereignty of power and the subsequent division of people between the powerful and the powerless or, in our case, between ‘colonizers’ and the ‘colonized’. Foucault believed that power exists within all institutions and is exercised within and through relationships in both bottom-up and top-down ways (Foucault, 2000).

To show how power is exercised, he introduced the concept of the ‘apparatuse’ (Dreyfus and Rabinow, 1983). The ‘apparatuse’ incorporates sociotechnical elements such as modes of observation and investigation, architectures, discourses, laws and regulations (Foucault, 1980), and experts whose ‘pastoral’ role ensures guidance and compliance of the self-governed subjects (Martin and Waring, 2018; Waring and Latif, 2018). Digital technologies constitute a part of this sociotechnical apparatus whose mediation allows power to be mobile and possible to be exercised at a distance and in an online manner (Latour, 2007). Because power is mediated by all these tools, it manages to be exercised in a discreet way (i.e., silently and without the use of coercion), shaping the way people think and act whilst being unnoticed (Deetz, 1998; Foucault, 1991). In this way, by being everywhere and omnipresent, it manages to be nowhere: ‘power in a substantive sense doesn’t exist’ (Foucault, 1980, p. 198).

Power though is not deterministic; it can only be conceptualized as an effect and not as an intention. Crucial therefore is not what power we have and how we exercise it, but what its exercise does i.e., what consequences (intended or unintended) emerge from its exertion. The operation of power presupposes the active involvement of individuals in shaping their identities towards desirable ways of being (McGivern et al., 2017). Identities are therefore crafted by subjects and not automatically produced by the apparatus. Along similar lines, we take in this paper colonization to be an effect of the knowledge a platform transfers, and not an intended strategy, as active subjects internalize and embrace this knowledge. This approach opens the opportunity for power to be questioned, rejected, challenged, negated, and resisted. Assuming individuals’ autonomy to act differently, resistance becomes a possible effect of power as compliance (Foucault, 1980).

Given its polemic nature, power usually gets a negative connotation. Foucault, however, embraces the productive aspects of power by looking into how it transforms or ‘makes up’ individuals in ‘desired’ ways, creating bodies, subjectivities, and identities (Hacking, 2004). He says power is productive because it ‘produces things, induces pleasure, forms knowledge, produces discourses’ (Foucault, 1980, p. 119). It promotes self-awareness and infuses the will for self-transformation (Rose, 1999a, 1999b). Although individuals may be integrated in invisible relations of power, they get the opportunity to construct their identities in terms of who they are, what they do and what they believe in line with predefined notions of what is right and wrong, allowed and forbidden, accepted and unaccepted (McGivern et al., 2017; Rose, 1988). Constraining this may be, it is simultaneously liberating as it creates forms of agency and produces identities. The productive character of power and knowledge is at the heart of the debate around digital epistemic colonialism, as our case study shows.

4. Research methodology

4.1. MedicineAfrica in Somaliland

Our study focuses on Somaliland, a self-declared post-conflict independent state within Somalia, in Eastern Africa. Despite regional differences, African countries display common characteristics including an underdeveloped infrastructure, an unstable political environment, a thriving informal economy, corruption, economic stagnation and a strong collective culture (Anwar and Graham, 2020). Family often becomes a key institution for care and well-being, working as a substitute for the lack of a welfare state (Elbanna and Idowu, 2021).

We focused on MedicineAfrica (2008–present) to study how digital colonialism plays out in the Somaliland context. Established in 2008 to connect UK physicians (i.e., tutors) with medical students and professionals (i.e., tutees) in poorly resourced countries (Woodward et al., 2014), MedicineAfrica aims to deliver medical education with the purpose of creating social value for its participants and their local communities (Chamakiotis et al., 2021). The platform offers a range of courses to medical students of the two largest medical schools in the country and provided a CPD course in 2021 on Covid-19 prevention and treatment. They primarily offer courses on communication skills, clinical reasoning, radiology, research skills and psychiatry to senior medical students (after year 4).

The platform relies on UK-based tutors (some of whom are MedicineAfrica alumni) who offer their medical expertise for free. The medical content of the platform incorporates input offered by local coordinators. The platform’s design is aligned with the local context’s infrastructure and bandwidth. From 2008 to 2014, the platform transferred medical knowledge through images and communication of tutorials was done by text-based Questions and Answers (Q&A) to address problems of disconnection, poor bandwidth and dropouts. The platform was upgraded in 2014 to offer better loading speeds and a faster chat service. Chat transcripts and class materials became archived and downloadable and could be accessed asynchronously by tutees. In 2018, MedicineAfrica introduced synchronous audio for the first time, before moving to a new infrastructure in 2019 with fully embedded audio and video chat. Despite the conscious technological design, unstable and often poor Internet connectivity in Somaliland still affects access to the platform.

4.2. Methods of data collection and analysis

Part of a wider, longitudinal study with MedicineAfrica, this paper draws on 60 interviews conducted in two phases between 2020 and 2021.

Table 1

Presentation of research participants.

<table>
<thead>
<tr>
<th>Group of participants</th>
<th>Phase 1: MedicineAfrica’s course as part of degree programs (March–July 2020)</th>
<th>Phase 2: MedicineAfrica’s Coronavirus CPD course (May–July 2021)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Platform</td>
<td>0</td>
<td>1</td>
</tr>
<tr>
<td>Director</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Local coordinators</td>
<td>24</td>
<td>0</td>
</tr>
<tr>
<td>Medical students</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>Nurse students</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Qualified clinicians</td>
<td>3</td>
<td>27</td>
</tr>
<tr>
<td>Total interviews per phase</td>
<td>30</td>
<td>30</td>
</tr>
<tr>
<td>Total project interviews</td>
<td>60</td>
<td>60</td>
</tr>
</tbody>
</table>
2021 (see Table 1 for details). The first half focuses primarily on medical students in Somaliland who studied MedicineAfrica-led courses (Phase 1; P1) as part of their medical degrees. The second half focuses on clinicians who attended a one-off, bilingual (English and Somali), three-week CPD MedicineAfrica course set up to educate participants on Covid-19 prevention and treatment. Although the two research participant groups differ, they provide complementary information and offer rich data in terms of identifying the making up of professional identities both at an early stage, where students are learning to become professionals, and at a senior level, when existing professionals reflect on, and further craft, their own identity.

All interviews were semi-structured in nature, following tailored interview guides for each of the groups involved, and were conducted online. Some of the interview questions prompted participants to: reflect on their learning experience with MedicineAfrica; explain what their involvement with MedicineAfrica meant to them professionally; identify the impact MedicineAfrica has on their expertise and clinical practice; reflect on the differences between traditional training and platform training. While most interviews were conducted in English, those not comfortable with English were interviewed in Somali to ensure English terms did not override local concepts. We analyzed our data thematically (Braun and Clarke, 2021) using NVivo. The theme of colonialism emerged during P1, in which findings pointed us to discrepancies between how medicine is practiced in the Somali context compared to Western contexts and how newly adopted clinical practices may contradict local norms and infrastructures. The analysis process was interpretive and exploratory in nature, given the idiosyncratic characteristics of the context. Data were analyzed iteratively, and themes were identified both inductively and theoretically. Foucauldian ideas such as subjectification, the power of knowledge and the productive aspects of power, guided us towards a deeper understanding of the underlying assumptions of our interview data. Some of our initial themes such as ‘impact on clinical practice’, ‘re-skilling and up-skilling’ and ‘comparisons between local doctors and MedicineAfrica tutees’ contributed to the broader theme of ‘learning to be a medical professional’. We present some of these findings below.

5. Research findings

5.1. Healthcare context in Somaliland

Similar to other countries in the Global South (McGivern et al., 2017), Somaliland’s healthcare context is characterized by idiosyncracies in clinical practice, regional variation in the quality of care, a paternalistic approach to care and the mediation of local religious leaders, who, as pastors, guide the population’s health choices (Waring and Latif, 2018).

Somaliland lacks medical specializations (e.g., oncologists and radiologists), diagnostic technologies and know-how and has limited health infrastructure, including emergency services, and clinical protocols. The clinical protocols that are used have not been developed in line with the national health context but have been imported from Western health services, such as the UK, and from global institutions, such as the World Health Organization (WHO). Consequently, these protocols might work well for Western countries but might be problematic when implemented in other contexts.

‘The majority of the time, we actually follow what the world is. But in the UK, US, they actually do that kind of stuff. The protocols that we follow are not ours. It’s not actually based on the circumstances of the country ...’ (P1P14)

In clinical areas where no protocols or guidelines exist, doctors act in idiosyncratic ways by following their own decisions. Due to poor communication channels between doctors, this would often imply changing patients’ treatment halfway through its course. More importantly, it could also mean teaching malpractice to junior doctors or senior medical students, who typically learn on the ward.

‘The problem is that since there are no guidelines to treat, for example, pneumonia, one doctor might give a drug and another doctor may see that another drug is way better than the other one and will just change the treatment’ (P1P2).

‘So, everyone who is new to the system, gets chaos ... sometimes you might learn some malpractice as well. When I was in the hospital I was thinking, you are learning malpractice, rather than practicing the right thing’ (P2P1).

Our findings reveal a significant difference in terms of healthcare quality and public health attitudes between rural and urban areas. Geographical location and proximity to hospital facilities, typically based in city centers, is an important factor of healthcare quality. Individual patients would often need to travel long distances before they can see a doctor, deterring them from seeking medical attention in a timely manner. Individuals would typically treat illness at home, a phenomenon that has led to increased mortality. This is particularly problematic for women’s health with national maternal mortality reaching the highest in the world.

‘Our healthcare system is not well-distributed in Somaliland. It’s mainly concentrated on main cities and centers. And sometimes it’s hundreds of kilometers before people can find a hospital’ (P1P7).

‘Public health awareness is not that much advanced, here. So, people come to the hospital at a very late time, when they become so sick, and the situation is very serious’ (P1P5).

Following societal norms, the healthcare system in Somaliland is placed in a largely paternalistic context in which health decisions lie with the doctor, the father or the husband and remain largely unquestioned. At the same time, high rates of illiteracy and a religious approach to health constrain the population from being engaged with their health, an expectation now in many countries of the Global North. Interviewees explained that religious leaders had significant respect and power over the population and would often gather individuals for prayer and guidance. Equally important were the tribe leaders for rural communities that were able to guide individuals en masse. Religiousity fosters lack of compliance with medical advice and sustains stigmatization of diseases particularly related to mental health, HIV and more recently Covid-19. Participants, for example, explained that Covid-19 was seen as a disease of the non-believers and, as such, as one that would not affect Muslims.

‘They believed that Covid-19 only happened to white people and not Muslims. They would often say “it’s because of God’s anger and it’s only for unbelievers, not Muslims”’ (P2P17).

Doctors have limited CPD opportunities and only those who can travel outside Somaliland can get a specialization. Healthcare professionals lack basic communication skills and skip basic (for the West) clinical practice, such as that of taking medical history. Participants described busy workloads with doctors being asked to see about 60 patients in a day due to shortages of clinical staff. As a result of this, doctors would often need to exercise discretion about which patient to prioritize based on need.

Medical professionalism seems to be immune to professionally related disciplinary procedures thanks to a religious approach that governs the population’s perceptions about death and the absence of working punitive measures to tackle clinical maltreatment or negligence.

‘... nobody is going to punish doctors. No punishments here exist in Somaliland for bad doctors because everything is a decree of Allah, and that the person was going to die or was going to get injured. Nobody could have stopped the decree of Allah’ (P1P12).
5.2. Learning to be a medical professional

An underlying assumption of MedicineAfrica is that platforms, as content providers, could transfer clinical education online on the grounds that medical conditions and their symptoms, and thereby knowledge about them, are the same independently of location.

MedicineAfrica transferred a range of clinical skills and practices to medical doctors and medical students in Somaliland, such as how to communicate diagnosis to patients; clinical reasoning, taking medical history; professional courses about how to prevent and treat Covid-19; and specialized knowledge such as radiology and obstetrics. MedicineAfrica aimed to address gaps in the medical curriculum whilst also teaching clinicians about Western best clinical practices. This learning occurred through the discussion of patient cases and conditions which both medical tutors, doctors and medical students uploaded onto the platform for online discussion, in addition to lectures. Typically, medical students would present a medical case including patient history, physical examinations, the type of investigations conducted, and current management plan, and they would get feedback by both peers and tutors on what decisions were right and what things could have been done differently, drawing upon both African and British perspectives. During the online discussions, tutors and tutees would talk about the different ways in which a condition can manifest, its symptoms, how to assess the severity of the condition, and how to approach the patient. A participant discussed how they treated the case of post-partum hemorrhage, which they later uploaded onto MedicineAfrica as a case for discussion. The participant argued that through the discussion that followed they ‘saw some mistakes that we [made] during the management of this case. Now we can do much better’ (P1P18).

Other medical students identified clinical skills they would learn through the discussion of clinical cases and scenarios that they could use in their practice. A medical student said, for example, that they learned how to treat trauma and to read computed tomography (CT) scans of the head. Developing these skills boosted their confidence and their professional sense of themselves as good doctors.

‘We discussed surgery in depth ... it was really useful, especially how to care for trauma to the head ... from then on, I know how to treat trauma to the head. And also, I can describe a CT scan of the head’ (P1P19).

‘Facing these scenarios prepared us to become better doctors’ (P1P13).

Participants also identified learning coming from an understanding of what clinical protocols to use under specific clinical circumstances. Doctors argued how useful this has been in the case of treating Covid-19.

‘The platform changed a lot of things. I am now someone who has more information on Covid-19 and is able to protect myself and protect the rights of the patient. I know how to deal with those who had serious complications; whether they need intubation and oxygen therapy. I am better equipped to handle the patients and able to give emotional support to help them recover’ (P2P17).

MedicineAfrica helped tutees to develop communication skills and emotional intelligence, including empathy, that is needed during consultations with patients. In the quote below, a medical student describes how a clinician needs to act to demonstrate empathy. Interviewees emphasized the importance of good communication skills when articulating diagnoses but also when they interact with patients and take their medical history. This provides them with the reassurance and confidence they need to develop themselves as clinical professionals. Good communication was a synonym of better clinical decision making and improved health outcomes.

‘I liked the Communication Skills, it gives me the privilege to communicate with my patients ... you have to make eye contact, you have to show your concern, that you care and that you are taking care of this patient ... it was a very incredible moment when I applied that skill, it’s very helpful. Communication skills play a huge part professionally. So, if you have good communication skills, you can take a lot of history, about very sensitive issues and you can do a better diagnosis. if you cannot communicate well, you might miss a lot of disorders’ (P1P28).

MedicineAfrica also enabled learning by allowing participants to get information about diseases and conditions that are more frequently encountered in the UK compared to Eastern Africa. Interviewees said that doctors in Somaliland come across a range of infectious diseases but have less exposure to cases of cancer or brain injuries. They thus saw MedicineAfrica as an opportunity to get access to a more diverse medical knowledge base.

‘The number of cases that we actually see in Somaliland is quite small. And it’s not as diverse as the diseases that’s present in the Europe or in America, and other places. We don’t see rare cases, for example, trauma cases or cancer cases. So sometimes the tutors will bring a special case that I haven’t seen before. And that’s why I like the tutors to bring their own cases better’ (P1P21).

Further, participants developed knowledge by comparing how their nation treats medical conditions compared to the UK. Out of these comparisons they would identify differences in terms of attitudes towards life and death and recognize what needs improvement.

‘In Hargeisa, you see patients dying and you don’t really think of much that’s a big deal, but when you see what other countries are doing, you really understand that something must be addressed, isn’t it?’ (P1P27).

An unexpected learning effect was instilling the value of reciprocity into tutees, whereby medical students would aspire to transfer the skills they learned onto others in their community to bring about improvements in healthcare.

‘These doctors and nurses from Medicine Africa team are giving you lessons for free. So, this tells you that when you have the knowledge, and skill, you also need to do some volunteering. You need to convey, or transmit, or transform, or do your best to teach others, to help others’ (P1P18).

The findings above illustrate the different ways in which learning was achieved through the platform. When looking into the type, relevance and meaning of the knowledge that was transferred, our interviewees pointed to the colonial effects of the platform.

5.3. Manifestations of epistemic colonialism

Undeniably, participants were exposed to new knowledge about certain medical conditions and their treatment, including knowledge about treatments that require medical equipment or medicines, not currently available in Somaliland, such as nasal oxygen cannulas and oxygen masks. While specialized knowledge often requires learning about equipment and objects that are not at hand, participants felt they were unable to fully comprehend how they could put their learning into medical practice, and thus questioned its value. Although certain medical conditions are manifest in the same way and might produce similar symptoms (like for example Covid-19 infections), they might have to be handled differently in different regions, depending on local availability of medical equipment. We thus see that the transfer of theoretical knowledge that has limited applicability and relevance to local context, due to unavailability of medical equipment, indicates a manifestation of epistemic colonialism. This is because it directly shows that the knowledge that was being transferred is disconnected from medical students and doctors’ realities (Hooks, 1994).

‘When the lecturers, they are giving you information, this information must be applicable most of the time, because we need information, that is relevant for the clinical scenarios, we are working’ (P1P28).

This comes hand in hand with a realization from the tutees’ side that the conditions they work in are not just different but worse compared to
those of their peers in other contexts. It is a realization that what medical students and doctors in Somaliland have in terms of drugs, medicines or medical equipment is, according to new research and guidelines, obsolete and should not be used. At the same time, this realization is reflective of a questioning, rather than a passive, subject.

‘We, in Africa, sometimes use what we have. We cannot access, many drugs that you guys use, so sometimes you might hear that that drug is no longer used, or this is the new research, or this is how the new approach, or this is the new guideline’ (P2P27)

Participants recognized that even with training on the practical application of those devices, exposure to these types of knowledge may not be of immediate, or any future, relevance to them as they cannot possibly get hands-on experience. They thus responded to this by being selective about the medical practices and skills they could adopt from MedicineAfrica, as not everything they learned was applicable. This again manifests how tutees were selectively constituting their identity.

‘You can’t apply certain skills in Somaliland. Like if you do tracheostomy, no one would be able to do … even inside the ICU. So, there’s certain practices that we do not wish to take. But there are things that we can adopt … like the oxygen cylinders’ (P2P2).

Participants reflected that some of the knowledge they could gain—particularly in medical interventions in which learning occurs by observing and practicing, such as with intubation—was compromised by the online nature of the delivery. As one of the medical students said, ‘we are not learning just for knowledge, we are learning for acting’ (P1P16).

Research participants also argued that the medical courses they were offered on the platform were not of their own choice and did not necessarily address their knowledge gaps and skill needs. In fact, they pointed out that some of the content of the platform overlapped with the courses they took as part of their medical degree. They suggested that they would have liked to have had some input in terms of the medical topics that should be covered on the platform, instead of following topics that others (the platform) assume Somali doctors need.

‘We should select the topics because we know what we need. We should say we need that topic because we have confusion in that, we have weaknesses in that course. For example, we have a weakness in the radiology course, so can you help us out with that? We have weaknesses, in psychiatry so we need help’ (P2P19).

Equipping them with the right skills could in fact improve doctors’ knowledge and confidence and support the profession. A participant argued, for example, that the research skills they get through the platform are limited and do not help doctors collect clinical data systematically. They said they need a medical knowledge base for their country about the most common medical conditions doctors encounter in Somaliland or conditions that lead to high mortality rates. The medical knowledge they currently get relates to countries where clinical research has been performed, but not to Eastern Africa or Somaliland.

‘In Africa and in Somaliland, we don’t have actual data about the patients. The medical knowledge is actually all from research. So, we would like to have a research course, which gives us assignments to do some research, to write some papers, so we can have accessible data in our setting’ (P1P30).

Epistemic colonialism was also manifest through the exclusive use of the English language in the medical content shared on the platform. Exception to this is the CPD course that involved Somali interactive discussions, as MedicineAfrica aimed to tackle the inherent bias in teaching in English. Participants argued how exclusive use of their own mother tongue would have provided them with the required social context within which they would feel confident to truly engage with the content and capitalize on the learning being offered. The quote below illustrates how, according to interviewees, knowledge and understanding is embedded in race.

‘When it is in Somali you feel you can ask more questions. If you ask a white person a question the understanding isn’t there. But when Somalis are facilitating the course, you can relate to them in a social context’ (P2P5).

In the early days of MedicineAfrica, two-way verbal interaction between tutors and tutees was not possible; tutees had to communicate in writing using the chat box. This not only limited opportunities for dialogue, but it also silenced tutees, illustrating an unequal relation of power.

Along similar lines, our interviewees suggested that interventions like MedicineAfrica would be much better accepted by participants, if they emerged from their own geographical region, indicating once again how vital race and language are to knowledge.

‘If, for example, a UK guy comes and says we’ve done this for 100 years and this system works, I think my people, to be really honest with you, they would say you are white, we’re black, I don’t think this is going to work … if the person comes from maybe Africa and says I’ve been into a country like yours and my country was like this but now we improved and we’re better and you guys can be better, I think they will listen as well. … The more common ground we have with the person, I think the better chance is they’re going to listen … if a Muslim person comes and he says we Muslims should do this, I think they will listen’ (P2P12).

Our analysis above has elicited a variety of manifestations of digital colonialism. The following section discusses how we think these findings may contribute to theory.

6. Discussion and conclusions

Whereas historically colonization presupposed the transfer and temporary settlement of a population to another place for reasons of economic and political domination, our study shows that platforms produce epistemic colonialism in a subtler way, through their underpinning power/knowledge relations. Drawing upon Foucault’s work (Foucault, 1980, 1991, 2000), our paper has shown that the power of MedicineAfrica lies in its ability to transfer expertise to medical students and doctors and, in doing so, to shape their professional conduct towards ‘desired’ ways of behaving. Our research participants reported the valuable learning they gained through MedicineAfrica including communication skills, capturing medical history and management of medical cases improving quality of care. The study thus confirms the co-constitutive relation between technology and care (Mol, 2008). These skills intended to ‘make up’ (Hacking, 2004) the right medical professionals reflecting clinical protocols, professional norms and the medical curriculum of the UK. We argue that this is the productive power that platforms exercise, as pastors (Waring and Latif, 2018), as they transfer Western knowledge to local contexts and simultaneously produce professional identities in line with Western standards.

The study also identified conditions that made participants perceive MedicineAfrica as a platform that produces colonial effects. Our findings show that perceived colonizing effects emerge when the knowledge that is transferred (a) relies on (and to a large extent presupposes) medical equipment and medicines that do not and may not exist in the foreseeable future in the recipient country; (b) is in a language which is different from participants’ mother language (Davison and Díaz Andrade, 2018; Taskeen, 2019); and (c) neglects the idiosyncratic characteristics of the local context, such as the religiosity that underpins perceptions about health and local leaders’ influence on the population’s behavior.

In relation to the first condition, decisions about the design of the platform’s content relied on assumptions regarding available medical equipment and medicines that reflected the context of knowledge production (in our case, the UK) but ignored the context of knowledge use (Somaliland). This has important implications for medical professionals. Scholars have drawn our attention to the inseparable relation between
being a doctor and having the right equipment that allows one to perform as a doctor (and thus to be a doctor) (Law, 1993; Riemer and Johnston, 2014). Identity is a part of sociotechnical order that sustains everyday practice. Learning about the use of medical tools and drugs that are not available results in professionals being unable to see how the knowledge they learn helps them be doctors. When available local medical equipment gets dismissed from design (either because of ignorance or intention), then so do local medical identities.

Further, the prevalence of English in content and in subsequent discussions on MedicineAfrica got interwoven with power and specifically with restriction of participants’ intellectual autonomy and freedom (Hooks, 1994; Ibarra-Colado, 2006). This was not merely a technical matter that could, for example, be fixed with the design of an online discussion forum, but primarily a socio-linguistic matter that deterred participants from engaging with medical topics and from feeling confident to raise questions and challenge the material presented to them. Finally, MedicineAfrica assumed a commonly shared context between its UK-based tutors and its Somaliland-based tutees, assuming, for example, that diseases manifest in similar ways everywhere. Although participants argued that this was true to a degree and that learning about differences in medical conditions is valuable, at the same time, the medical knowledge transferred missed out on some of the significant idiosyncrasies of the local context, including complex kinship relations in rural areas of Somaliland, communal conceptions of care, and religious authorities with powerful role in guiding public behavior. The content missed out on all these contextual circumstances and key players and was thus seen as being distant and alienating from the reality of healthcare professionals in Somaliland.

In addition, our findings indicate that the platform, as a technology of representation, reflected and made visible (Latour, 2007) the sharp (but until then, hidden) differences in terms of healthcare education and medical infrastructure between the UK and Somaliland. For example, participants talked about new drugs they cannot access or medical procedures that do not take place in Somaliland. Thus, although MedicineAfrica shortened the (epistemic) distance between the two geographical settings, it was less able to bring the two countries in proximity; in fact, it separated them further. The platform made the different situations within which doctors find themselves in the UK and in Somaliland visible and this visibility constituted the basis for comparison and realization of one’s professional—but simultaneously colonial—situation.

We argue that the above parameters set up medical students and doctors in Somaliland in a colonial condition in which they cannot practice fully what they learn; they cannot engage deeply with the subject they learn—taught, as it stands, in a different language—and they do not learn for the medical conditions they encounter and the patients they consult. What they learn about being a ‘good’ doctor is not always applicable, and is thus harder to attain, alienating healthcare professionals from their everyday reality and local expectations. It is this alienation from their local context, which power/knowledge relations embrace, that constitutes the core of digital epistemic colonialism.

Nevertheless, our interview data indicated that medical students and professionals were not just passive recipients of the knowledge that was transferred to them. They rather had the ability to reflect on those differences and to be selective about the learnings they aimed to adopt and those they intended to reject. They questioned the expertise that was presented to them and were active subjects in their professional shaping (Jasanoff, 2015). This is indicative of the non-totalizing effects of power and of individuals’ ability to think and act otherwise (Foucault, 1980; Martin and Waring, 2018).

Our paper challenges the often-assumed neutrality of digital platforms and brings to the fore their underlying tension: to shape clinical professionals by exposing them to medical expertise of the Global North increasing their professional social capital, their career opportunities, and turning them into interlocutors with global clinicians, whilst at the same time being paternalistic about what qualities a good medical professional should display and alienating them. This illustrates how modern power operates between discipline and subjectification (Martin and Waring, 2018) and that professional identities are not unified wholes but incorporate, in an almost polemical way, Western and Eastern ideals of medical professionalism (Haraway, 1991). Studies have pointed to epistemic colonialism as a process of producing ‘native elites’ (Boussebaa et al., 2014; Ibarra-Colado, 2006) with hybrid medical identities (Bhabha, 2004). Our paper adds to these studies by illustrating the alienating implications of identity formation because of power/knowledge relations embedded in platforms.

To some extent, digital epistemic colonialism is inevitable given that such platform initiatives spring from Western contexts and get funded and developed within them. Bias is inherent in the logic under which aid systems operate. For instance, the object and scope of funding is driven by supply, rather than demand, and it is very much orchestrated within national or Westernized curricula. A Return on Investment (ROI) expectation further crystallizes the colonial thinking that underpins some of these programs. Such neo-liberal measures enforce an epistemic hierarchy of knowledge based on tangible and transferable skills that may not be adequate to local contexts and may crowd out more intangible (in Western standards) but useful knowledge. But is there any benefit or an alternative conceptualization?

Platforms are not to be demonized for being producers of colonialism. They can potentially constitute the means to address colonialism by, for instance, rendering those platforms sustainable; an ongoing challenge for health systems in developing countries (Braa et al., 2004). They can become so by being adjusted to the local context (allowing, for example, medical professionals in Somaliland to become tutors and adjusting the curriculum to local needs), whilst cultivating local learning processes. This will enable widespread and customized usage of platforms that could serve meaningful, local, and relevant purposes. At the same time, together with knowledge, MedicineAfrica aimed to instill social values and a work ethos in medical students and professionals in Somaliland, including empathy, volunteerism and citizenship, and in this way to improve quality of health and health outcomes and to alter medical practices that could potentially violate human rights, including the treatment of mental health patients.

In closing, we call for future studies that explore the construction of colonial identities in clinical areas that tend to be loaded with cultural and gender assumptions, such as antenatal care, and in communities where clinicians receive both platform-based and traditional training. Ethnographic studies are also needed to unpack the phenomenon of digital epistemic colonialism in countries of the Global South and to shed light on its manifestations, effects, and its potential paradoxical value.

Author contributions

Dimitra Petrakaki: Conceptualization, Methodology, Formal analysis, Investigation, Writing – original draft– review & editing, Project administration, Funding acquisition. Petros Chamakiotis: Methodology, Validation, Investigation, Data curation, Writing – original draft, Writing – review & editing, Visualization, Project administration, Funding acquisition. Daniel Curto-Millet: Investigation, Writing – original draft, Writing – review & editing, Visualization.

Research funding

The two phases of data collection were funded by two research grants: (a) The British Academy/Leverhulme Trust [grant number SRG19.191207]; and (b) the United Kingdom Research and Innovation (UKRI) Higher Education Innovation Fund (HEIF) ’Covid-19 Recovery Programme’ at the University of Sussex. As part of the Digital Futures at Work Research Centre (Digit), this work was also supported by the UK Economic and Social Research Council [grant number ES/S012532/1] which is gratefully acknowledged.
Declarations of competing interest

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Data availability

The empirical data used in this paper are not publicly available due to confidentiality reasons. The metadata records can be accessed on the following links: https://doi.org/10.5255/UKDA-SN-855562 (Phase 1) https://dx.doi.org/10.5255/UKDA-SN-855881 (Phase 2).

Acknowledgments

We would like to thank our research participants who made the time to speak to us, and MedicineAfrica’s CEO, Mr Stephen Thomas, for his continuous support throughout our study. We also acknowledge the contributions of our funders, mentioned separately.

References

https://doi.org/10.1177/1527467420957267.
