

Victimisation is colonial thinking as well

Regarding: DLF Wissenschaft im Brennpunkt, 27.12.2020: "Colonial thinking in science: ethical dumping"

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In DLF's programme on 27/12/2020 "Colonial thinking in science: ethical dumping" you report on an issue that is of great importance to us as researchers working in and on the Global South. We are, however, concerned about factual errors in two of the projects covered in the contribution from our several years of research, namely the Mosquirix malaria vaccine (Kwaku Poku Asante, Uli Beisel, Samuel Chatio, John Kuumuori Ganle) and the Banana21 project in Uganda (Stephen Buah, Sandra Calkins). From this expertise, we would like to comment on some of the statements made in the podcast, and nuance the argument of the podcast as a whole. When analysing and critiquing colonial thought and action in research, it is particularly important to look closely. Furthermore, it is crucial to involve project participants from the Global South in the reporting - because victimisation and a lack of inclusion of voices from the Global South also corresponds to colonial thinking and action. In the present contribution, we miss such an in-depth perspective. Were local project participants really asked to comment as stated in the podcast? The project leaders we spoke to were not aware of any request. Only external project critics have their say in the podcast regarding Mosquirix and Banana21, no project participants from Uganda, Kenya, Malawi or Ghana. We consider this a questionable journalistic practice for such an important topic. In the following,

we present our perspective on the two projects, which differs fundamentally from the argumentation of the podcast.

The implementation study of the malaria vaccine Mosquirix is seen in the podcast as a violation of international ethical rules. This is a strong and consequential criticism. The bioethicist Charles Weijer quoted by you questions whether the vaccinations in Ghana, Malawi and Kenya should be categorised as a pilot implementation with evaluation or as a randomised control trial. The question of how patients can be protected in the early use of new vaccines and drugs is no doubt of crucial importance. It is also true that there are great power imbalances in global health that leave many countries in the Global South disadvantaged. There is a long history of colonial abuse, which in some cases continues today. The violence thus perpetrated often casts its shadow on biomedicine and humanitarian interventions, which deserves our full attention and consistent decolonisation in thought and action. But this requires close scrutiny and nuanced analysis by all voices including that of the Global South.

Kwaku P. Asante has been leading phase II and III clinical trials of the Mosquirix vaccine in Ghana since 2006 and is currently the lead for the Ghana Malaria Vaccine Pilot Evaluation. Uli Beisel, John Ganle and Samuel Chatio have been following the clinical trials of the Mosquirix vaccination in Ghana from a social science perspective since 2007. For his PhD research at the University of Ghana Samuel Chatio has been studying trust in clinical trial procedures in Ghana. We are aware of the malaria vaccine's relatively lower efficacy compared with other childhood vaccines (e.g. Beisel, 2017). However, Ghana, just like Kenya and Malawi, approved the vaccination exercising their rights as a sovereign state, as did the European Medicines Agency in 2015 recognising the huge burden of malaria and the need for additional intervention tools.

The podcast does not mention that the vaccination was tested in phase II and III clinical trials in various countries on the African continent for nine years prior to its approval. Incidentally, much longer than the recently approved COVID-19 vaccines. By not mentioning this fact the podcast tacitly suggests that the implementation and its evaluation are the first contact between the vaccine and the African continent. This undercuts nine years of commitment and work. Indeed, any ethical assessment of the pilot implementation must be made in this broader context of vaccine development and testing. And it has to be said that far from everything went wrong in the trials. This is especially true with regard to the involvement of local biomedical experts and their training and promotion. In Ghana, the vaccine (which at the time was still known by its scientific acronym RTS,S) has been in phase II and later phase III clinical trials in Ghana since 2006. Kenya and Malawi have also been actively involved in the clinical trials since that time. In phase III clinical trials, RTS,S/Mosquirix has been tested on 15,459 African children in compliance with informed consent rules adhering to the

highest international ethical standards. Thus, the three African countries where the pilot implementation is taking place are not newcomers to the vaccine, but have been actively involved and engaged in the development and scientific testing for more than 10 years. The results have been published in leading biomedical journals under multiple authorship with project leaders from all countries involved (RTS,S Clinical Partnership 2014 & 2015).

The Phase II and III vaccination studies in Ghana (as well as the other African countries) were accompanied by measures to increase biomedical capacity and also the training of early-career scientists. This has its problematic aspects, such as creating archipelagos of biomedical excellence at study sites in the context of weaker and underfunded health systems in many sub-Saharan African countries (see the work of Rottenburg 2009, Geissler 2013 and Okeke 2020), but in terms of biomedical research and projects, it definitely qualifies as responsible practice. Much of the medical personnel who have acquired education or training and international expertise in clinical trials are now leading medical trials in Ghana and are also indispensable in the fight against the COVID-19 pandemic in Ghana. This fact was completely disregarded in the podcast. Ghana (as well as Kenya and Malawi) has a large number of internationally renowned and highly qualified biomedical experts who competently lead the phase II and III clinical trials, as well as the pilot implementation, and who contribute to international discourse on this matter.

Furthermore, it is important to emphasize that the evaluation of the Mosquirix vaccine implementation work underwent a thorough process of stakeholder engagement that included scientist, community representatives, media and politicians among others. Furthermore, the Ghana Health Service has an Ethics Review Committee that reviewed and approved the evaluation process that includes informed consenting. Has the DFL consulted the World Health Organisation, the regulatory authorities in Ghana, Kenya or Malawi, or the local project leaders? An inquiry by DLF with some of these experts and authorities from Ghana, Malawi or Kenya would have been important and necessary considering such weighty allegations. *The fact that this is not discussed in the podcast makes the three African countries appear as passive victims who simply play along with the "ethical dumping" without being asked. Furthermore, the scientific leaders from Ghana, Malawi and Kenya are implicitly accused of a lack of scientific diligence.*

It is worth reading how three leading Ghanaian scientists, who have intensively accompanied the vaccine trials since the beginning in Ghana, evaluate the vaccination in the Ghana Medical Journal: "the Ghanaian authorities must be commended for accepting to be part of the pilot implementation of Mosquirix®, a product with the potential to prevent many cases of malaria. It is also heartening to note that Ghanaian scientists have been and continue to be actively

involved in the development of the product. The question of mosquito control and reduction in transmission cannot be wished away on the use of a vaccine. In the phase 3 clinical trials, the efficacy was upon the use of other malaria control interventions, so the vaccine is implemented as an additional tool in the fight against malaria." (Asante et al, 2019, p.91).

Similarly, your reporting on the Ugandan super banana, a project that Stephen Buah and Sandra Calkins have been studying/working with for five years, we find wanting. This example mainly critiques the development and use of biotechnology in Uganda, rather than contributing to the analysis of colonial thinking. First of all, the use of the image and the caption "ecologically sustainable banana farming" creates the impression that GM bananas can be neither ecological nor sustainable. These are issues that have more to do with the method of cultivation than with genetics. Secondly, only one GM opponent has her say here, and her arguments are given a lot of space. The health benefits that these bananas promise, on the other hand, are not mentioned. These bananas are enriched with beta-carotene, a substance that the body can convert into vitamin A as needed. Vitamin A is already part of many overlapping nutritional interventions in Uganda (micronutrient powder, vitamin A supplementation, vitamin A fortification of cooking oil etc.) and many organisations, including the US CDC, have already speculated whether toxic doses of vitamin A are not already being administered here. The beta-carotene-enriched banana avoids this danger and also offers this advantage to banana farmers in rural areas who are excluded from market processes. Ms Ntambirweki also addresses imbalances in the Ugandan health system and calls for better resourcing in the face of persistent malnutrition but also new challenges posed by climate change and environmental degradation. The Ugandan biologists who have been working on these bananas for 10 years would certainly agree with these demands. However, this is not a factual criticism of a specific research project and should rather be an overarching demand on governments and development cooperation.

The article also cites this as an example of "helicopter research", i.e. the idea that researchers from richer countries can be dropped off briefly, collect information, travel back and publish without involving local scientists. This is not the case with the Ugandan beta-carotene-enriched banana. Due to the complicated biology of the banana, this is an unusual long-term project (2005-present). Numerous Ugandan scientists have completed their PhDs at the Queensland University of Technology within this project and are now continuing the research in Uganda. Without glossing over occasional tensions, many Ugandan-Australian joint publications have also been published. While the Australian team leads the research overall, partly because of their better facilities and access to technologies, the research in Uganda is led by a Ugandan team at an institute of the state-run National Agricultural Research Organisation. They are

proud to have produced the first genetically modified organism in sub-Saharan Africa in their own laboratories. And they are proud to contribute to the health of their fellow citizens as a national research institute. Is this not a solution by "Africans for Africans" that could be highlighted? (By the way, the Iowa study mentioned is a side issue. Contrary to what the article mentions, an Australian beta-carotene-enriched banana was to be tested in Iowa, not the Ugandan plantain). The GM banana project has gone through a regulatory process of ethical review and is subject to particularly stringent regulations by the Ugandan Council for Science and Technology because of the biotechnologies used. In this tendentious reporting on biotechnologies in Uganda, we thus recognise not only "helicopter reporting" that occasionally lacks depth and factual accuracy, but also a colonial attitude, because it must be the right of African states to decide for themselves on the research, use and application of biotechnologies.

Of course, we welcome this important focus on colonial patterns of thought and action in the research context, because these are often enough thoughtlessly perpetuated. However, your article shows once again that these ethically and politically complex issues require great care in research and the selection of apt case studies. Unfortunately, your reporting tends to make the contributions of African scholars from at least these two research contexts invisible and to stylise Africans as victims instead of participants on an equal footing. Especially in the interest of a decolonial research practice, it is important to hear the voices of the researchers involved. Researching in collaboration also means talking to each other.

Cited Literature

Asante, K.P., Binka, F.N., Koram, K.A. (2019). „Malaria vaccine deployment in Africa: focus on Ghana“. *Ghana Medical Journal* Vol 53, No 2: 90-91

Beisel, U. (2017). "Resistant bodies, malaria and the question of immunity" In: Herrick, Clare ; Reubi, David(Hrsg.): *Global Health and Geographical Imaginaries* - London: Routledge, S. 114-134

Buah, S., Mlalazi, B., Khanna, H., Dale, J., & Mortimer, C. (2016). "The quest for golden bananas: Investigating carotenoid regulation in a Fe'i group *Musa* cultivar." *Journal of Agricultural and Food Chemistry*, 64(16), pp. 3176-3185.

Geissler, P.W..(2015). *Para-States and Medical Science: Making African Global Health*. Duke University Press.

Okeke, I. N. (2018). "Partnerships for now?" *Medicine Anthropology Theory* <http://journals.ed.ac.uk/index.php/mat/article/download/4868/6797?inline=1>

Okeke, I. N. (2020). "Dreams and dream spaces of West African molecular microbiology." *Africa: The Journal of the International African Institute* 90, no. 1:167-187.

Rottenburg, R. (2009). "Social and Public Experiments and New Figurations of Science and Politics in Postcolonial Africa." *Postcolonial Studies* 12 (4): 423.

RTS,S Clinical Trials Partnership (2014). "Efficacy and Safety of the RTS,S/AS01 Malaria Vaccine during 18 Months after Vaccination: A Phase 3 Randomized, Controlled Trial in Children and Young Infants at 11 African Sites." *PLOS Medicine* 11 (7): e1001685.

RTS,S Clinical Trials Partnership (2015). "Efficacy and Safety of RTS,S/AS01 Malaria Vaccine with or without a Booster Dose in Infants and Children in Africa: Final Results of a Phase 3, Individually Randomised, Controlled Trial." *The Lancet* 386 (9988): 31-45.