



# The Future of Human Origins and Modern Behavior in Africa

Christian A. Tryon · Veronica Waweru

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## Introduction

Fossil, genetic, archaeological, and biogeographical lines of evidence are consistent for the African origin of modern *Homo sapiens* and associated Middle Stone Age (MSA) technologies around 300,000 years ago. Our consideration of future research stems from conversations between us and colleagues and our experiences working in eastern Africa for decades. Our perspectives are partial ones, given the size of the African continent and the plurality of approaches used by the many active research teams.

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C. A. Tryon (✉)  
Department of Anthropology, University of Connecticut,  
Storrs, CT, USA  
e-mail: christian.tryon@uconn.edu

C. A. Tryon  
Human Origins Program, National Museum of Natural  
History, Smithsonian Institution, Washington, DC, USA

V. Waweru  
Yale MacMillan Center, Council on African Studies,  
New Haven, CT, USA  
e-mail: veronica.waweru@yale.edu

V. Waweru  
Department of Earth Sciences, National Museums  
of Kenya, Nairobi, Kenya

## Theoretical Issues

Recent advances in aDNA have dramatically changed our understanding of hominin diversity in Eurasia, with the recognition of multiple genetically or morphologically distinct hominins (e.g., Neanderthals and Denisovans) that produced viable offspring. Given its size and geographic and ecological diversity, we are excited by scenarios that assume equally complex situations and explore population dynamics *within* Africa, rather than treating the continent as a source of dispersals *out* of Africa. These include continued considerations of deep population substructure resulting from repeated patterns of demic isolation and local and regional admixtures (Scerri et al., 2019) and an emphasis on hybridity rather than strict species boundaries for fossil hominins (Harvati & Ackermann, 2022). Thinking through the connections among behavioral, biological, and ecological variations at a sub-continental scale remains a key direction for future research.

## Empirical Issues

There is the need for increased geographic coverage of sites across the continent. New results from countries long ravaged by civil wars, such as Mozambique and Angola, are encouraging, as are explorations along the western African coast. Much of the Equatorial tropical rainforest zone remains poorly explored,

and evidence for extra-basinal high-elevation adaptations has dramatically expanded our understanding of Pleistocene human behavior (Malit et al., 2023; Ossendorf et al., 2019).

There remain substantial numbers of understudied artifact collections and related personal archives in museums, and even well-documented archaeological or fossil collections merit continued investigations using novel methodologies and dating tools. The need for this is particularly strong for human remains because the social contexts for interpreting them are constantly changing (Ackermann, 2019; Staniforth, 2009).

For looking at variation across the continent, we still need good comparative analyses that can move beyond broad syntheses based on the presence/absence of certain artifact types. This has proven difficult because of different approaches used across the continent, reflecting a complex array of different colonial legacies of training and research. For stone tools, we are encouraged by new regional typologies (Shea, 2020) and efforts to initiate comparative analysis among researchers from across Africa (Pargeter et al., 2023).

### Issues of Practice

We are encouraged by research teams, particularly those outside of Africa, who continue to think through how research is being carried “out on the ground”: how knowledge is being generated, what kinds of interpretive frameworks are being employed, and how the results are shared. Sutton (2017) once distinguished between “universalists” who are more interested in addressing broad questions about human evolution (e.g., “modern human origins”) that happen to use datasets drawn from Africa and “Africanists” who focus on how the archaeological record might tell us something about the deep history of people in Africa. While these two extremes were intentional caricatures, they resonate with our own experiences of how research is often still practiced. Unintentional outcomes of universalist approaches include minimal investment in local (as opposed to international) stakeholders and a tendency to see the African record as a staging ground for later dispersals “out of Africa,” what Scott (2005) calls the “up from Africa” narrative. It

is imperative to find a middle ground that embraces the universal heritage of human origins with efforts to recognize those parts of that heritage that are also uniquely African (see also Esterhuysen, 2018).

Potential pathways include using a knowledge co-production model that emphasizes the social value of heritage (Mire, 2007), working towards what Stahl (2020) calls “effective archaeologies”, and democratizing who has access to and who participates in the work that we do, efforts at the core of the Central Highlands of Kenya Project (Malit et al., 2023) of which one of us (V.W.) is a member. The Maropeng Museum in South Africa, in the Cradle of Humankind World Heritage Site, is another example of thinking in this direction. C.T. has focused on legacy collections for the last decade and has been a bystander in terms of changing field methods. He is informed and inspired by K. Ranhorn’s work with the Kondoa Deep History Partnership in Tanzania (Ranhorn 2022a, b, Ranhorn et al., 2018, 2023), a rare example of community-based approaches for Middle or Late Pleistocene research projects of the kind that are increasingly common for the archaeology of later periods in Africa (e.g., Schmidt & Pikirayi, 2016).

Lane (2011) and others have highlighted the need to decolonize research praxis in African archaeology. In our experience in eastern Africa, input or participation in human origins research by local community members on whose land cultural remains were found is rarely viewed as critical to the discipline. For some projects, local community members remain an underappreciated resource, yet they have intimate knowledge of their landscapes and the fossil and archaeological remains they contain. Their non-involvement can mean that local communities end up unaware of the heritage found in the areas in which they live, remaining alienated from the products of research which, ironically, are better known outside of Africa through documentaries, museum displays, and publications. Our goal here is less to criticize and more to highlight projects and scholars whose work can model ways to normalize different approaches to fieldwork.

### Shifting Ways of Sharing Knowledge

Getting people to understand the value of our work as archaeologists requires that we do more than publish in

academic venues. There are multiple ways to do this, each targeting different groups of actual or potential stakeholders. One way is to write, present, or produce more public-facing popular science pieces that describe the research we do and why it matters, disseminate this work widely via social media and other outlets, and scale or alter these efforts to reach a wide range of interested parties. Articles in *The Conversation* are good examples of this. While scientific articles are often published in English, French, or other colonial languages, one of us (V.W.) has found that websites, newspapers, radio or television broadcasts, and posts on Facebook and other social media outlets in other national languages (e.g., Swahili) and local languages like Kikuyu are more effective. The point is not that one size fits all, but that engaging different audiences requires different approaches. As discussed below, it represents a substantial investment in time and energy whose value must be recognized from the start by research teams, grant agencies, and external evaluators.

A lack of engagement of local communities and educators leaves room for misinformation about human evolution, particularly because historical misuse of Darwinism by scientists have led to a poor understanding of how ancient hominin populations relate to living ones. The results of genetic studies are particularly open to misinterpretation by the public, as living populations, particularly hunter-gatherers, continue to be used as proxies for the past as if their current mode of subsistence was not the product of colonial entanglements (see Athreya & Ackermann, 2018; Esterhuysen, 2018; Scott, 2005; Sutherland & L'Abbé, 2019).

Too few researchers reflect on the question once posed by Stahl (2005): “for whom is African archeology relevant?” Community engagement fosters a sense of ownership and agency in human origins research, what Ranhorn (2022b) has termed “deep history and community joy.” It also engenders preservation of ancient heritage. In an era of extensive continent-wide infrastructure projects in Africa, ancient sites are constantly impacted but go unreported due to a lack of cultural resource management personnel. Local communities become important in recognizing ancient artifacts and sites and advocating for their preservation. This community-level valuation of the past also feeds into issues of policy. When more community members view those bones and stones that

make up the Paleolithic record as part of their cultural heritage, they are more likely to push for legislation that promotes its study, preservation, and utilization in local tourism, a point stressed by Audax Mabulla (2000) in this journal nearly a quarter century ago.

### Issues of Expectations

Changing how research is done requires a larger shift within academia to recognize the importance of not only doing research, but valuing the efforts that go into developing and maintaining long-term collaborations and in sharing the results widely. Knowledge co-production, community archaeology, and other models that emphasize the social value of heritage take enormous investments of time and effort yet do not always immediately result in those products (e.g., peer-reviewed publications) that are traditionally the currency of academic tenure or promotion. To commodify those years of building a very real sense of trust and community (e.g., by being forced to turn it into a publication) can cheapen and undercut the value of doing it. As emphasized by Driver et al. (2018), in cases of academic promotion or tenure, the time, energy, and care involved in knowledge co-production should be valued as much as the publications from that work, which may well be produced at a different rate than traditional academic timelines allow for.

### Concluding Thoughts

The pace of research on the biological and behavioral contexts of the origin and spread of our species has accelerated throughout the twenty-first century. These topics will almost certainly remain a focal point of research in paleoanthropology broadly and for those interested in the deep history of Africa. There is a lot of good work being done, and we have highlighted ways that scholars are prioritizing how that research is done and who it is done for. Many of the issues that we have raised are not new (e.g., Pikirayi, 2015) and change may be slow, but we look forward to what the coming decade may hold.

## Declarations

**Competing Interests** The authors declare no competing interests.

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