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Peer review history for:

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HOW TO CITE:

Unpacking the 'explorer' narrative and its impacts on African palaeoanthropology [peer review history]. *S Afr J Sci*. 2025;121(1/2), Art. #18572. <https://doi.org/10.17159/sajs.2025/18572/peerreview>

Reviewer 1: Round 1

Date completed: 19 June 2024

Recommendation: Accept / **Revisions required** / Resubmit for review / Resubmit elsewhere / Decline / See comments

Conflicts of interest: None

Does the review fall within the scope of SAJS?

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Yes/No

Do the Title and Abstract clearly and accurately reflect the content of the review?

Yes/No

Does the review provide a significantly novel perspective or significant recent advances in the field?

Yes/No

Is the objective of the review concisely stated?

Yes/No

Is appropriate and adequate reference made to other work in the field?

Yes/No

Do current debates and points of contention receive appropriate coverage?

Yes/No/Not applicable

Are gaps in the literature adequately identified?

Yes/No/Not applicable

Does the review provide direction for future research?*

Yes/No/Not applicable

Are the methodology and statistical treatment appropriate?

Not applicable/Yes/No/**Partly**/Not qualified to judge

Are the interpretations and recommendations aligned with the objective?

Yes/**Partly**/No

Please rate the manuscript on overall contribution to the field

Excellent/**Good**/Average/Below average/Poor

Please rate the manuscript on language, grammar and tone

Excellent/**Good**/Average/Below average/Poor

Is the manuscript concise and free of repetition and redundancies?

Yes/No

Is the supplementary material relevant and separated appropriately from the main document?

Yes/No/**Not applicable**

Please rate the manuscript on overall quality

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Yes/No

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Yes/No

Comments to the Author:

The paper has an interesting and timely topic with a historical approach towards the notion of the Explorer as emergent out of late 19th-century developments. The key is a historical analysis of the development of different phases of colonial involvement and the intersections with research practices. These different aspects have impacted the idea of the Explorer in relation to ideas about masculinity, historical imagination, and nature. The authors develop a largely convincing framework within which both the Explorer myth emerged and how it intersects with palaeoanthropological practices. This framework would allow an effective analysis of historical and current research practices in South Africa and beyond. However, while there are several very good points developed, I find the analysis itself not entirely convincing. First, the paper is missing a good overview of the intersection between the political development of South Africa and palaeoanthropological research. This would have strengthened the argument that there is a relationship between these two different areas, and it would have allowed demonstrating how the explorer myth affects research and its perception through time. Second, I am not convinced that the Raymond Dart example works very well with the analytical framework presented here. I make some further comments on this below, but I think that some other

Again, a broad assessment of the research history of palaeoanthropology in Africa would be useful to assess general patterns, before delving into the particular case study.

In the discussion of the emergence of the explorer myth, one figure is missing, who might have been the inspiration for many explorers during the 19th century. Alexander von Humboldt was incredibly important in popularising the idea of the scientifically inspired explorer. In this case, there is a more indirect relationship with the colonial system and the outcomes for the acquisition and exploitation of land are also a bit fuzzy. It should be noted that Humboldt was travelling in the late 18th and early 19th centuries. Hence, the links between colonial developments during the 19th century and the emergence of the explorer myth need to be assessed a bit more critically. This aspect can be brought into articulation with the interesting outline of the different phases of European colonial involvement in Africa and its impact on intellectual and research developments.

Overall, I think that the paper is very valuable, but (1) it needs to be more focused on the South African situation and historical development and (2) it should consider a different focus that either puts the analysis of Raymond Dart at the centre or analyses the impact of the explorer myth on current palaeoanthropological research practices. In terms of the latter, there are much more powerful examples available to demonstrate the persistent and damaging impact of this myth.

The text is mostly well written and presented but also contains some minor errors in grammatical expression and some language bumpiness that need to be addressed and corrected. There is some inconsistency in the use of in-text references and in some cases, a full in-text reference is used and in others just the number of the source in the list. In some cases, the year in the text is misquoted as 2025.

Specific comments

p. 3: I think that the authors might want to explain why maritime exploration does not also count as exploration in their review of the intellectual history of the explorer myth.

p. 3-4: Would it make sense here to draw attention to the colonial imagination of global geography in which spatial distance was often imagined as reflecting temporal distance? This understanding certainly informs the understanding of the explorer as outlined in the text. It might also be useful to include here a short reflection on the role and imagination of nature in these processes.

p. 5: The authors need to explain and reference here the use of the terms polygenism and monogenism.

I wonder if it would be necessary to be a bit more balanced here in the description of the explorer and distinguish a bit between a popular myth, the political and imperial interests, and the motivations of individual so-called explorers. It should be stressed that there was a lot of variability and that these different aspects cannot necessarily be brought into agreement with each other.

On page 5, there is also a strange contradiction between the date that is mentioned here in the context of the Royal Geographic Society that “produced the unique combination of (the) Explorer that we still see today” by the 1850s while it was previously stressed that the explorer is a product of the late (!) 19th century and the expansion into the heart of the African continent.

p. 5: Would it make sense to draw attention here to the work by Misia Landau on narratives and how these general narrative structures of hero myths become part of anthropological and scientific interpretations?

p. 5-7: I am not completely convinced that the Raymond Dart example is the most useful case study for this paper. There are quite a few elements that do not fit the description of the explorer myth as outlined above. Most importantly, Dart did not travel into the unknown inland parts of Africa, and he also did not do challenging fieldwork himself and did not find the famous Taung Child himself. These differences seem to contradict key elements of the explorer myth as developed in this paper. He seems more representative of an early phase of African colonialism with a focus on ‘coastal settlement’ and strong connections to the European centres of power. His relationship with these latter centres was also ambivalent in that in some respects, he supported prevalent ideologies (racism) and in others, he questioned them (origins of humanity). It seems that the other palaeoanthropologists mentioned here, Johanson, and the Leakey Family, would work better as examples, especially in light of how they presented themselves to the public. Maybe these differences and similarities need a bit more critical attention and exploration.

p. 8-9: There are a lot of interesting elements mentioned here, but I think that these need better development, especially the intersections between the historical trajectories of South African society over the last few decades, the role of different types of citizenship (which are formal and informal), and research processes in palaeoanthropology. How do these aspects relate to, for example, persisting structures of unequal socio-economic opportunities, which cause the White population to rather study and practice palaeoanthropology? How do these ideas relate to the fact that the government also uses palaeoanthropology and its discoveries for nation-building projects? It seems to me that some of the ideas developed in this paper are more applicable to Lee Berger’s work than to Raymond Dart.

p. 10-11: The suggestions presented here are all commendable and justified. I think that there needs to be some recognition that with the inclusion of African (female) researchers also a change in attitudes needs to happen because otherwise, the myth will simply be perpetuated in different ways and forms.

Author response to Reviewer 1: Round 1

The paper has an interesting and timely topic with a historical approach towards the notion of the Explorer as emergent out of late 19th-century developments. The key is a historical analysis of the development of different phases of colonial involvement and the intersections with research practices. These different aspects have impacted the idea of the Explorer in relation to ideas about masculinity, historical imagination, and nature. The authors develop a largely convincing framework within which both the Explorer myth emerged and how it intersects with palaeoanthropological practices. This framework would allow an effective analysis of historical and current research practices in South Africa and beyond. However,

while there are several very good points developed, I find the analysis itself not entirely convincing. First, the paper is missing a good overview of the intersection between the political development of South Africa and palaeoanthropological research. This would have strengthened the argument that there is a relationship between these two different areas, and it would have allowed demonstrating how the explorer myth affects research and its perception through time. Second, I am not convinced that the Raymond Dart example works very well with the analytical framework presented here. I make some further comments on this below, but I think that some other

Again, a broad assessment of the research history of palaeoanthropology in Africa would be useful to assess general patterns, before delving into the particular case study.

AUTHOR: Thank you for these comments. We have substantially reworked the manuscript to provide a much broader historical context in SA and in Africa more generally, and have also more clearly articulated how Raymond Dart does and does not fit within an explorer framework. We also removed the entire section on Campbell.

In the discussion of the emergence of the explorer myth, one figure is missing, who might have been the inspiration for many explorers during the 19th century. Alexander von Humboldt was incredibly important in popularising the idea of the scientifically inspired explorer. In this case, there is a more indirect relationship with the colonial system and the outcomes for the acquisition and exploitation of land are also a bit fuzzy. It should be noted that Humboldt was travelling in the late 18th and early 19th centuries. Hence, the links between colonial developments during the 19th century and the emergence of the explorer myth need to be assessed a bit more critically. This aspect can be brought into articulation with the interesting outline of the different phases of European colonial involvement in Africa and its impact on intellectual and research developments.

AUTHOR: We considered this suggestion to include Humboldt but took the decision to focus only on exploration in Africa, but the general broadening of the discussion of scientists in exploration should alleviate some of these concerns.

Overall, I think that the paper is very valuable, but (1) it needs to be more focused on the South African situation and historical development and (2) it should consider a different focus that either puts the analysis of Raymond Dart at the centre or analyses the impact of the explorer myth on current palaeoanthropological research practices. In terms of the latter, there are much more powerful examples available to demonstrate the persistent and damaging impact of this myth.

AUTHOR: Again, we strengthened the SA history and also reworked how Dart was contextualised in this history and in the history of Africa more generally.

The text is mostly well written and presented but also contains some minor errors in grammatical expression and some language bumpiness that need to be addressed and corrected. There is some inconsistency in the use of in-text references and in some cases, a full in-text reference is used and in others just the number of the source in the list. In some cases, the year in the text is misquoted as 2025.

Specific comments

p. 3: I think that the authors might want to explain why maritime exploration does not also count as exploration in their review of the intellectual history of the explorer myth.

AUTHOR: We made it clear that our focus is on inland exploration.

p. 3-4: Would it make sense here to draw attention to the colonial imagination of global geography in which spatial distance was often imagined as reflecting temporal distance? This understanding certainly informs the understanding of the explorer as outlined in the text. It might also be useful to include here a short reflection on the role and imagination of nature in these processes.

AUTHOR: We have chosen not to pursue this in order to keep the introductory section concise given the space limitations of the journal.

p. 5: The authors need to explain and reference here the use of the terms polygenism and monogenism.

AUTHOR: Done.

I wonder if it would be necessary to be a bit more balanced here in the description of the explorer and distinguish a bit between a popular myth, the political and imperial interests, and the motivations of individual so-called explorers. It should be stressed that there was a lot of variability and that these different aspects cannot necessarily be brought into agreement with each other.

AUTHOR: We have used the works of Driver in particular to clarify these different interests as well as intersectional explorer identities.

On page 5, there is also a strange contradiction between the date that is mentioned here in the context of the Royal Geographic Society that “produced the unique combination of (the) Explorer that we still see today” by the 1850s while it was previously stressed that the explorer is a product of the late (!) 19th century and the expansion into the heart of the African continent.

AUTHOR: That late reference was an error and has been corrected.

p. 5: Would it make sense to draw attention here to the work by Misa Landau on narratives and how these general narrative structures of hero myths become part of anthropological and scientific interpretations?

AUTHOR: Done.

p. 5-7: I am not completely convinced that the Raymond Dart example is the most useful case study for this paper. There are quite a few elements that do not fit the description of the explorer myth as outlined above. Most importantly, Dart did not travel into the unknown inland parts of Africa, and he also did not do challenging fieldwork himself and did not find the famous Taung Child himself. These differences seem to contradict key elements of the explorer myth as developed in this paper. He seems more representative of an early phase of African colonialism with a focus on ‘coastal settlement’ and strong connections to the European centres of power. His relationship with these latter centres was also ambivalent in that in some respects, he supported prevalent ideologies (racism) and in others, he questioned them (origins of humanity). It seems that the other palaeoanthropologists mentioned here, Johanson, and the Leakey Family, would work better as examples, especially in light of how they presented themselves to the public. Maybe these differences and similarities need a bit more critical attention and exploration.

AUTHOR: Thank you for this comment, which we have used as a jumping off point for revising our consideration of Dart and also other eastern African historical figures.

p. 8-9: There are a lot of interesting elements mentioned here, but I think that these need better development, especially the intersections between the historical trajectories of South African society over the last few decades, the role of different types of citizenship (which are formal and informal), and research processes in palaeoanthropology. How do these aspects relate to, for example, persisting structures of unequal socio-economic opportunities, which cause the White population to rather study and practice palaeoanthropology? How do these ideas relate to the fact that the government also uses palaeoanthropology and its discoveries for nation-building projects? It seems to me that some of the ideas developed in this paper are more applicable to Lee Berger’s work than to Raymond Dart.

AUTHOR: We removed this section.

We also chose not to focus on current researchers like Berger but rather historical figures, although we do talk about current helicopter research practice more generally.

p. 10-11: The suggestions presented here are all commendable and justified. I think that there needs to be some recognition that with the inclusion of African (female) researchers also a change in attitudes needs to happen because otherwise, the myth will simply be perpetuated in different ways and forms.

AUTHOR: We appreciate this comment. We expanded our discussion of what change needs to look like to address the reviewer’s concerns.

Author response: Other additions

We have substantially re-written this manuscript in line with the excellent suggestions we received from the reviewers. In particular, we removed the sections on Campbell and on settler colonialism in SA completely, and significantly expanded all the other sections. We positioned the manuscript more clearly as an intervention aimed at the goals of the final section, and expanded those goals to be clearer in our intent. We reworked the text to more carefully position the discussion of Raymond Dart historically and within a

broader framework of exploration, considering how he does and does not fit that model. We also more fully considered how the explorer mentality characterised other historical figures in palaeoanthropology and researchers today.

Reviewer 1: Round 2

Date completed: 25 October 2024

Recommendation: Accept / **Revisions required** / Resubmit for review / Resubmit elsewhere / Decline / See comments

Conflicts of interest: None

Does the review fall within the scope of SAJS?

Yes/No

Is the review written in a style suitable for a non-specialist and is it of wider than only specialist interest?

Yes/No

Do the Title and Abstract clearly and accurately reflect the content of the review?

Yes/No

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Yes/No

Is the objective of the review concisely stated?

Yes/No

Is appropriate and adequate reference made to other work in the field?

Yes/No

Do current debates and points of contention receive appropriate coverage?

Yes/No/Not applicable

Are gaps in the literature adequately identified?

Yes/No/Not applicable

Does the review provide direction for future research?*

Yes/No/Not applicable

Are the methodology and statistical treatment appropriate?

Not applicable/Yes/No/Partly/Not qualified to judge

Are the interpretations and recommendations aligned with the objective?

Yes/Partly/No

Please rate the manuscript on overall contribution to the field

Excellent/**Good**/Average/Below average/Poor

Please rate the manuscript on language, grammar and tone

Excellent/**Good**/Average/Below average/Poor

Is the manuscript concise and free of repetition and redundancies?

Yes/No

Is the supplementary material relevant and separated appropriately from the main document?

Yes/No/Not applicable

Please rate the manuscript on overall quality

Excellent/**Good**/Average/Below average/Poor

If accepted, would you recommend that the article receives priority publication?

Yes/No

Are you willing to review a revision of this manuscript?

Yes/No

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Accept / **Revisions required** / Resubmit for review / Decline

With regard to our policy on [‘Publishing peer review reports’](#), do you give us permission to publish your anonymised peer review report alongside the authors’ response, as a supplementary file to the published article? Publication is voluntary and only with permission from both yourself and the author.

Yes/No

Comments to the Author:

The paper has improved considerably from the last version and in large parts it is now much more focused. The paper has an important aim and agenda, which both deserve to be discussed and recognised. The direction of the paper is overall compelling but I still have a few suggestions that hopefully help to make the paper even stronger.

I still think that the first part of the paper is a little bit sloppy and contains too many generalised statements about the history of colonialism and its impact on European intellectual developments. These statements are not necessarily wrong, but they need more context, and they sound a bit declarative and not analytic. In this context, I would prefer a greater focus on Africa from the beginning of the text so that the first two sections of the text are linked better to the last two sections of the paper. In the latter case, the focus is very much on Africa and the respective historical trajectories, and I found these sections the most compelling ones. It just needs to be acknowledged that Africa played a special role in the development of global colonialism, and this had an impact on Africa as a place of so-called discovery and exploration as well as exploitation. These specific circumstances should be emphasized and not confused with other aspects of the global history of European colonialism and its various social, economic, and intellectual effects.

Recommendation.

Accept with minor revisions

Specific comments

Line 59ff.:

I find this overview of the origins of European colonialism a bit simplistic. Without going into a deeper discussion here of the different phases and expressions of European colonialism, I think that the discussion would benefit from a clear focus on Africa here as some of the statements do not apply to European colonialism elsewhere such as North and South America, South and East Asia. Hence, the relationships between the different phases of European colonialism, its impact in different parts of the world, the emergence of 'modern science', the emergence of the figure of the explorer, and intellectual developments in Europe cannot necessarily be brought together without friction. For example, European colonialism was very advanced during the 17th century already. It was rather that during the 17th century, the mercantile forms of colonialism expanded, and these were especially driven by the Dutch and the British with a focus on India (East India Company) and Southeast Asia (VOC). Africa did not play a substantial role in European terrestrial and imperial colonial expansion until the 19th century, which clearly also affected the imagination by European intellectuals and its focus on exploration contexts. These points are emphasised, in fact, by the quote on page two, which refers to exploration in Africa during the 19th century and subsequent explanations. I would, therefore, recommend that the introduction be given a tighter focus that better reflects the rest of the text and its emphasis on the particular role that Africa played in the development of European colonialism.

Line 68f.:

While race-based ideas drove colonial projects, it also needs to be acknowledged that race as the key factor in the understanding of human difference only became prominent during the 19th century and was, therefore, not equally significant for long periods of the whole of the colonial period (ca. 1500 – 1945).

Line 158ff.:

I am not sure if the notions of polygenism and monogenism are effectively explained and integrated here. They refer to the idea of the origins and relationships between the different 'races' of humanity and whether they have one or several points of origin. So, yes, one can interpret this as being human or not, but this is a bit unclear here. Just note that this distinction has nothing to do with Adam and Eve. Finally, even though I suggested it in my review, I am not sure if a reference to Landau's work is relevant or necessary here.

Line 165ff.: I personally find the whole section on Raymond Dart and how his career can be related to the

explorer myth most compelling so far. This section makes an original argument that is also not stretched too far and also considers its own 'weak' points in that Dart was himself not a classic explorer at all.

Line 273ff.:

The sections here are also compelling as they make a good case regarding the ongoing impact of the explorer myth on (South) African palaeoanthropology and strategies to counter the current situation.

General remark

I would prefer if the authors would capitalize the word Indigenous throughout the text as they are using it in a way that would justify this use. It refers to groups of people, who have local ancestry and connection and are often affected by colonial and state-based oppression and violence. I try to distinguish this capitalised spelling from the non-capitalised, which would just mean 'belonging or connected to a place or area'. But this might not fit the journal's editorial guidelines.

Author response to Reviewer 1: Round 2

[See Appendix 1 for Author changes made directly on the manuscript]

Reviewer 2: Round 1

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Unpacking the “explorer” narrative and its impacts on African palaeoanthropology

Abstract

The concepts of explorer, expedition, and the combination of the two into the myth of the explorer have been integral parts of Western mentality for more than 200 years. Here we briefly outline the colonial origins of these ideas, and use this crystallised understanding of the explorer myth to consider how [African](#) palaeoanthropology in the 20th century and up to the present continues to carry many of these biased, outdated overtones— some more overtly than others. We examine how Raymond Dart and the discovery of the Taung Child were situated and storied within this explorer narrative. We also expand on how these outdated concepts persist in determining which scientific approaches and outcomes are valued and which are not, which in turn has perpetuated extractive approaches to palaeoanthropology and the marginalization of [Indigenous](#) scientists. This is especially notable in fieldwork practices which, to this day, embody the explorer myth’s deeply problematic colonial ideals of Western, masculine moral and cultural superiority. By understanding the mindset behind the discovery and reporting of Dart’s work on the Taung child, we can better understand why it still holds such sway in palaeoanthropology today, and propose important practical and cultural disciplinary changes that will allow us to move beyond these colonial and masculine ideas in a manner that creates a more equitable future for all scholars.

Significance of Findings

- This paper shows how palaeoanthropology has remained tied to an outdated view of the role of field exploration in science, since the time of Dart’s discovery.
- This is then linked to the disproportionate number of white males working across Africa who have achieved professional success under this rubric.
- The authors provide suggestions on how and why the discipline should shift away from glorifying “explorer” science, and towards the work of local African scholars, be it in the lab or the field.
- This paper thus contributes to greater awareness of scientific biases, their historical origins, and opportunities for correction.

Introduction

The explorer myth in Western Europe emerged from a complex interaction of literary, political, and economic historical developments in Europe [1, 2]. While Nineteenth19th-century European imperial exploration in Africa can be traced back to smaller seafaring mapping projects of the region that began in the 1400s. It_ it wasn't until 400 years later, that the "exploration of far-off lands" became an integral part of Western Europe's collective cultural identity [3]. The explorer himself (always a man) was a European construct and played an important role in Western European imperial expansion, serving a combination of roles during the height of African colonialism. The explorer was (initially distinct from the early travel writer and the later natural historian) [1], and often served as an ambassador who facilitated the work of missionaries and traders, and even of natural historian collectors. Explorers carried out Their expeditions were— journeys that went beyond just travel and engaged in some form of mapping and documenting a new land [4]. The idea of the intrepid European on an expedition, together with the intentional construction of Africa as a dangerous unknown land, combined to form the myth of the explorer [3].

~~We begin by considering how these concepts emerged and show how Raymond Dart's work, particularly on the Taung Child, played a significant role in the field's development within this mindset. The timeline of the emergence of the explorer as a distinct identity in Western European thought is important to understand in order to grasp why the explorer mindset is still pervasive, particularly in African palaeoanthropology. The explorer myth in Western Europe emerged from a complex interaction of literary, political, and economic historical developments in Europe [2, 4].~~
The timeline of the emergence of the explorer as a distinct identity in Western European thought is important to understand in order to grasp why the explorer mindset is still pervasive, particularly in African palaeoanthropology. We begin by considering how these concepts emerged, and then show how Raymond Dart's work, particularly on the Taung Child, played a significant role in the field's development within this mindset. Three key points are relevant to understanding how these informed, and continue to inform, palaeoanthropology in Africa today. We then consider the continued stronghold of the explorer myth on African palaeoanthropology more generally, and offer suggestions for how to shift this dynamic going forward.

~~First, in the 1700s a shift in socio-economic structures in Europe led European kingdoms, which had been operating simple maritime trading posts along the coast of Africa for 250 years, to turn increasingly to other sources of economic revenue. In particular, the breakdown of the serf system and growing industrialization in Europe created a demand for natural resources that lay further inland on the African continent, and thus a need for explorers to pave the way [5, 6]. Related to this was an increased European political demand for control of other lands to colonise or imperially rule [7]. To encourage public support for this costly endeavour, explorers were given official and unofficial support, because their work facilitated the creation of a shared cultural identity in this new socio-political structure of the nation-state. Their intrepidity was billed as personifying their country [1, 8]. This all coincided with the emergence of Western science and a focus on data collection, which for the emergent field of anthropology ultimately provided race science to validate the need for exploration and political control [9, 10]. We briefly expand on each of these in the following section.~~

Exploration, Western Science, and the Expansion of Empire in Africa

Until recently, the history of world exploration has generally been considered one of progress, at least from the perspective of the exploring nations, with images of unknown distant lands becoming replaced by scientific knowledge of the world [1, 5]. In reality there was a considerable amount of myth making about the explorers and about the nations they represented [5]. In his 1994 work *The Myth of the Explorer*, Riffenburgh [3] describes how geographical exploration in the 19th century became an integral part of Western mentality. Africa in particular was central to the creation of the explorer.

In an era of imperialism and extreme nationalism, when the state was extolled as supreme and the individual was subordinated to, yet made to personify, the nation, men who achieved remarkable feats were more than just popular heroes: they were symbols of real and imagined nationalist or imperialist cultural greatness. Explorers [...] were a particularly celebrated genre. They were pictured as journeying into the blank spaces on the globe, where they confronted constant challenges and danger, both natural and human (p. 2).

The explorers' actions were justified ideologically both by Social Darwinism and the Western demand to ultimately conquer the physical/natural world by "defeating 'barbarism', exporting Christianity, mapping and defining the unknown, and establishing trade" (p. 2). As such, the

explorer embodied the collective cultural superiority of the nation they represented (see also [1, 6, 7]).

Prior to the Industrial Revolution, European engagement with sub-Saharan Africa was limited. The first permanent European building in sub-Saharan Africa, Elmina Fort, was built for Portuguese traders in 1482 by African labourers, and initially served as a settlement for European merchants. It quickly became a central port through which Portugal earned revenue by inserting themselves into the African gold trade and sending enslaved Africans across the Atlantic. This in turn provided the funds for the Portuguese to “discover” the route around the Cape of Good Hope (by following Asian and African sailors), which they reached in 1488, opening the sea trade route between Europe, and Southern and Eastern Eurasia. By the 1600s France, the Netherlands and Great Britain followed suit in establishing trading posts and settlements around the African coast. But European economic interests in Africa were well served through these coastal settlements for 250 years, precluding a need to operate or explore inland. So, despite the longstanding presence of Europeans in sub-Saharan Africa, the idea of inland “exploration” did not develop for centuries [6, 8].

When the sociopolitical and technological landscape of Europe began to shift from agrarian serfdom to industrialization, the demand for natural resources increased. No longer was chattel slavery the primary goal of European exploitation of Africa; Europeans sought to acquire the abundant resources in interior portions of the continent such as minerals, ivory, and rubber. This dovetailed with the height of what Europeans call their Age of Discovery, and the seeking of new geographies (such as the source of the Nile), people (e.g., pygmies) and flora and fauna (e.g. gorillas). By the late 1800s, Western European policy shifted to what is sometimes referred to as The New Imperialism, which featured an unprecedented pursuit of overseas territories to annex and rule [9]. In 1870, 10% of Africa was under European control; by 1914, as a result of the Scramble for Africa, this increased to almost 90% [10]. Within this seismic geopolitical shift, historians are in general agreement that the explorer was not a mere outgrowth of the invasion, annexation, division and colonisation of most of the African continent, but a facilitator [3, 8, 11, 12].

One of the key properties of exploration is an exotic setting [13], and Africa was considered remote and *primaeval*. Explorers often storied distant lands as “empty” and thus uninhabited, unclaimed, and free for taking [6, 14], a literary style that distinctly othered [i](#)ndigenous people

[2]. Famously, Africa was mythologised as a Dark Continent in need of discovery and its people in need of enlightenment; Africa and the African were the subject, and the explorer was the intrepid conveyor of said enlightenment [15]. In addition, authority over the natural world began shifting from the church to natural scientists, leading to the data-collection push that dominated the Victorian era, and further creating a desire for exploring lands previously unknown to Europeans [1, 11].

Europeans were also mythologising about themselves, as the process of exploration allowed them to reimagine their heroic efforts as being responsible for “pushing back the frontiers of ignorance and resistance” [5](p. 166).

The business of exploration was thus not merely about overcoming distance; it was about the creation of new worlds and the fashioning of new heroic personae. In this perspective, narratives of exploration can tell us as much about the explorers' views of themselves as about the territories and peoples they encountered.

The actors engaging in this process were both distinct and evolving. Travellers or travel writers—typically upper class gentlemen—took the mantle from maritime explorers, heralding the unique challenges that came with exploring inland [1]. The development of a transnational classification system by Linneaus led to a new agenda among Europeans, that of documenting and classifying the flora and fauna, as natural historians [1]. Essentially, explorers could have multiple intersecting identities, with scientific explorers sometimes also acting as missionaries, traders, pioneers or in other roles [7]. Of course, these explorers were not working alone, and historians now recognise the large numbers of people who accompanied these individuals or facilitated their access, including local porters, guides, leaders, etc, but have not been written into history or glorified as heroes in the same manner [16].

During the late 18th and especially the first half of the 19th century, field observation became increasingly standardized through the production of manuals and field guides, an indication of the growing importance of scientific exploration. Ultimately, science itself became a tool of colonialism, and exploration became increasingly undergirded by a practical scientific value along with perceived moral imperatives. By the 1850s, the Royal Geographic Society produced the unique identity of the explorer—embodied in scientific legends such as Stanley, Livingstone, and even Francis Galton—and that we still see today: a kind of scientist but operating in service of wider political and commercial (tourism) interests [6]. Early anthropologists trace their origins to these explorers. Forbears of biological anthropology such as Buffon and Morton justified the

need for finding out more about the people in distant lands and studying them before they 'disappeared completely', ~~if for no other reason than~~ Studies of 'race' as a key factor underlying human differences, their origins, and especially whether or not human 'races' have one or several points of origin (i.e. polygenism versus monogenism) - and therefore whether some 'races' were more or less human than others - became prominent in during the 19th century ~~an-to determine whether or not they descended from Adam and Eve - or were not quite human (i.e. polygenism versus monogenism). Scientific anthropological interpretations even began developing a distinct narrative structure, one that followed the hero myths common among folk tales [20]. Anthropology ultimately provided race-science to validate the need for exploration and political control [12, 17].~~

Raymond Dart and the Study of Taung as “Discovery”

Raymond Dart, especially, helped to promote the study of physical or palaeo-anthropology and to excite a wider public interest in the search for the evolutionary progenitors of modern man. Rather like the Victorian explorers of an earlier era, physical anthropologists uncovered the secrets of the African landscape and paraded their 'discoveries' for the perusal of a curious and receptive audience. In charting the paths of evolutionary development they helped to confirm – by implicit analogy if not outright comparison – the intrinsic superiority of the white races and the inexorable progress of European civilisation.[18] p. 39

Raymond Dart was a self-described pioneer, having descended from a stock of early settlers in Australia [19]. He discovered a passion for human evolution and comparative cranial anatomy while at Cambridge. After a brief period of training, Dart's three mentors Sir Grafton Eliot Smith, Sir Arthur Keith, and J.T. Wilson recommended him for the newly established position of Chair of Anatomy at the University of the Witwatersrand. Southern Africa couldn't have been further from the paleoanthropological action at the time, at least in the view of Dart and his contemporaries in Europe. The centre of human origins was believed to be Asia, and Europe was also yielding a rich fossil record. Dart describes his reaction to being called to this unknown world:

The very idea revolted me; I turned it down flat instantly. I did not have, as he well knew, the slightest interest in holding a professorship anywhere; least of all one newly founded, utterly-unknown, as remote as possible from libraries and literature and devoid of every other facility for which I had yearned from earliest sentient manhood. [20]: 421.

Yet he ultimately took up the post, a position which soon led to a successful career as a palaeoanthropologist due in no small measure to his acumen at identifying the significance of one South African hominin fossil – the Taung Child – in the story of human evolution.

The details of Dart's serendipitous finding of the Taung Child among several crates of fossils that had been brought to him has been well reviewed [19, 21, 22]. Rather than repeat the story, we focus on two points in the context of the explorer mindset in palaeoanthropology. First, although Dart is lauded for the "discovery" of the Taung Child, he made it clear in his biography that he did not actually *discover* the fossil [19]. Indeed, we do not know who did because two crates of specimens from the lime mine at Taung in the Northern Cape were brought to his house by geologist R.B. Young one afternoon in 1924 [22, 23]. Yet when Dart passed away in 1988 at the age of 95, he was hailed around the world as having *discovered* the fossilised skull of the Taung child, a humanoid that provided the "missing link" between apes and humans. This may seem like hair-splitting until we consider how his "discovery" came to be storied. According to his obituary in the New York Times, Dart was "the forerunner of some of the most illustrious fossil hunters on that continent, like Dr. Tobias, the Leakey family and Donald Johanson" [24]. From encyclopaedia entries to biographies on the websites of his alma mater institutions, Dart's contribution transformed from one of his astute neuroanatomical skills to one of storying his process of removing matrix from the specimen to "73 days of gruelling chipping and digging" (<https://www.sahistory.org.za/people/raymond-arthur-dart>). These imply activities that did not happen: Dart did not travel into the "unknown" parts of Africa to discover the Taung Child, or do the challenging fieldwork himself, both points of which should exclude him from the heroic efforts reserved for the explorer. We need to ask: why the re-storying of his life's work?

To be fair, Dart's relationship with field research was dictated in part by the nature of the South African early hominin sites as mines, starting with Taung. Mine labourers in South Africa were black underpaid migrants who worked under harsh and abusive conditions—not white academics. Later Dart's colleague Robert Broom, ~~who vigorously supported Dart's belief that the Taung Child was an early human ancestor,~~ more clearly pursued field exploration in his subsequent work in the Cradle of Humankind—which resulted in the recovery of many hominin fossils, including additional members of *Australopithecus africanus* and the closely related *Paranthropus robustus*. But like explorers of an earlier generation, Broom worked under the colonial model of black labourers and white academics. The black workers have been

disappeared from history, while Dart's efforts have been reframed (by himself and others) as arduous fieldwork. These are not innocent oversights nor are they unique to Dart, or even to South African palaeoanthropology (as we will discuss later). They affirm that the activity of *exploration* is significantly valued over the equally arduous work of detailed neuroanatomical comparative analysis. To this day, palaeoanthropology exhibits a disciplinary bias towards "missing-link" discoveries over slow, steady scientific discernment. By re-framing his work towards this bias, Dart reaped the academic and political benefits of his so-called "discovery" of the (at the time) first australopithecine and earliest human ancestor.

Our second point pertains to Dart's broader research agenda following the Taung discovery, which -involved studying living [I](#)ndigenous South Africans explicitly as models for understanding human ancestors [25]. Most notably, he led the University of the Witwatersrand's Kalahari Bushman Expedition of 1936 where he and his white male colleagues measured, photographed, and casted [I](#)ndigenous living human bodies [25-27]. Earlier, he had participated in the Italian Scientific Expedition from Cape Town to Cairo, where he tracked a gorilla to be shot, formed his problematic racist ideas about the Great Zimbabwe ruins not being constructed by Africans, and was introduced to the process of making face masks (see detailed discussion of Dart's expeditions in Kuljian 2016). These practices were conducted before Dart arrived in South Africa, with researchers such as Louis Peringuey establishing a growing practice of local race-based anthropometry, including recording the physical characteristics of [I](#)ndigenous peoples. This in turn was built on a long international history of racist, sexist dehumanisation of [I](#)ndigenous South Africans, particularly Khoe (e.g. [28-30]). When Dart wrote that the Taung Child skull was representative of "an extinct race of apes *intermediate between living anthropoids and man*" [31](Dart's emphasis), his interpretations would have been informed by such studies of living Africans, and would have included the attendant implications of them being less human. [Robert](#) Broom, a staunch supporter of Dart's ideas following the Taung discovery [32], became a collector of "Bushman" remains in service of this interpretation [21] Until fairly recently (and even now in several popular narratives), Dart's engagement in these dehumanising practices was not part of the conversation around his legacy (but see [18, 25]), despite being central to the search for, and understanding of, human origins. Such a mindset is consistent with the foundational beliefs of European exceptionalism and the need to "civilize" Africans that undergirded early exploration and the explorer identity.

While Dart's "hands-off" approach to collecting fossils, and his strong connection to European centres of Western academic power, are consistent with earlier periods of African colonial exploration described earlier, he also famously stood up to these centres in his decision not to circulate the Taung Child overseas, and to rather keep it for study in South Africa [33]. Moreover, by arguing for the origin of humanity in South Africa, Dart was entering an informal scientific competition for the rights to this title that was decidedly nationalistic [18]. He challenged the narratives of these European centres with their prevailing—and implicitly anti-black—ideas for human origins in Asia or Europe. His argument was widely disregarded by his former mentor and colleagues in Europe and his advocacy came at a price. Dart's subsequent attempts to gain employment back in Britain were unsuccessful, leaving him resigned to remaining in South Africa, and ultimately abandoning engaging in international debates for decades around the relevance of the Taung child to human origins [34]. So while Dart benefitted from the discipline's colonial/explorer mindset that prioritized discovery over other forms of intellectual contribution, he was also a victim of ~~the~~ its emphasis on the exceptionalism of European capabilities/intelligence over any other region.

The Explorer Myth and its Continued Stronghold in Palaeoanthropology

The explorer myth in palaeoanthropology did not begin with Dart: anthropology as a discipline is rooted in the idea of colonial exploration, tracing its origin in part to organisations such as the Royal Geographic Society [6]. Palaeoanthropology developed as a subdiscipline within this a colonial mindset of expedition and discovery [35], and these are still familiar themes today. Yet, the announcement of Taung 100 years ago opened the door for paleoanthropologists to shift their focus to Africa. Treating it as the Dark Continent to be "discovered" by a White man in a pith-helmet is not just a part of Dart's origin story, but of palaeoanthropology's.

While sensibilities around viewing Africa in this way have shifted over the past century, palaeoanthropology continues to elevate the myth of exploration and "discovery" as noble pursuits for Western science. This is manifest in a couple of ways. First, fieldwork in Africa remains focused discovering and establishing new paleontological finds that "rewrite" the story of human evolution. This valorisation of fossil discovery has led to an outsized value being placed on finding of the "first" of something, or of naming a previously unknown entity (e.g. a

new species) whether or not it is good science. This plays out in publication currency, with the high-profile scientific journals *Nature* and *Science* the go-to repository for descriptions (and cover photos) of almost all new hominin species in the last century. In this sense, the outdated explorer myth still determines which (and whose) scientific approaches and outcomes are valued and which are not. The Taung Child story is an early example of how the competition between scientists for “firsts” is central to the human evolution story, but it is far from the only example. The tendency to place outsize value on “firsts” has in turn contributed to a proliferation of new genera and species [36] as well as a minimization of other contributions that are valuable pieces of the bigger puzzle and answer important questions. Together, these practices have done a disservice to the quality of science that is produced in human evolution studies.

Second~~In addition~~, palaeoanthropology remains dominated by males from the Global North, and from the Western Hemisphere. This aligns with the prototypical Explorer both within the discipline and perhaps more importantly within the international press. These values have in turn perpetuated extractive approaches to palaeoanthropology, especially fieldwork practice, with African scholars receiving little to no (or at best, belated) recognition of their talents and contributions, and with African women in particular massively underrepresented in the discipline. Thus, to this day, despite the explorer myth’s embodiment of deeply problematic colonial ideals of Western, masculine moral and cultural superiority, it is perpetuated in the practice of 21st century palaeoanthropology. Many books have been written about the dominance of big, bold Western male personalities – “hero” fossil hunters on their quests to discover “missing links” – so we will not detail this here and instead refer the reader to these accounts (e.g. [37-40]). And several of the historical examples of palaeoanthropological exploration across the rest of the continent more clearly align with the masculine heroic global explorer mentality outlined above than Dart’s story did. But what is important to note is how the masculine values of competition, dominance, confidence and toughness have become internalised in the discipline, impacting the success and well-being of others [41]. The fact that these Western scientists have historically not actually been the people finding the fossils – more often than not they were discovered by hired black field workers who reaped no academic credit nor headlines – further highlights how palaeoanthropology has modelled itself after colonial exploration.

With this in mind, one of the clearest contemporary manifestations of the explorer mindset is helicopter research, where many of the elements of historical colonial explorers still hold today [42, 43]. Helicopter research – also called parachute research or neocolonial science – is

increasingly attracting critical attention as a cause for concern (e.g. [44-47]). The practice involves researchers from wealthy (typically Global North) countries conducting short-term research in less resourced regions of the world (typically Global South) with little to no meaningful involvement from local researchers or communities. These extractive practices have been commonplace in human evolution research in Africa (and beyond) over the last century, and have resulted in a persistent dominance of Europe and North America in research outputs to this day. Critics of helicopter research have pointed out that in order to mitigate this practice, communities or local (often early career) researchers must be given power and voice in the form of actively shaping the conceptualisation, design, development and publication of research [44, 46].

Specific fieldwork practices are also problematic, with high profile projects often controlled by Western researchers whose access to funding leads to them being centred in media coverage, even when the fieldwork teams themselves are comprised largely of Africans. Even the clothing often chosen by Westerners recalls the colonial explorer, such as Indiana Jones-style hats and vests. This continued glorification of the explorer through the media and into the public realm is a symptom of the colonial mindset of our field persisting until the present.

Where Do We Go From Here?

We recognise that palaeoanthropology is by its nature explorative – so how do you keep the good parts of that while eliminating the bad? We argue that palaeoanthropology needs to look closely at how exploration is conducted and by whom, in order to recognise and eliminate its racist and patriarchal colonially-derived explorer elements. The positive aspects of exploration – the excitement of the search for new data, and the thrill of finding it – can still benefit our discipline, attract young scholars, and even secure funders, while purging the deeply problematic elements of the past that diminishes other kinds of contributions, but it will take conscious effort. We believe there are three key interventions that need to happen in order to move us create this culture shift: changing demographics, African research and support networks, and having tough conversations.

It has been a century since the publication of the Taung Child, and yet we still struggle to identify women in palaeoanthropology who have benefitted from networks of private funding (sponsorship) for their research, and easy access to media coverage (including high profile talks, tours, quotes, etc), comparable to their male colleagues. The men who have most

obviously succeeded in this system are valued precisely for demeanours and approaches that fit into the explorer archetype developed during colonial times, because this meets the expectations of the funders and funding bodies, but also the public. It does not, however, serve the science of palaeoanthropology and its need for solid evolutionary theory, diverse African-led teams, and the application of sophisticated analytical methods to existing data. Dart's true contribution as an excellent neuroanatomist who was willing to take on the orthodoxy of defining humans is a more critical piece of his story – and substantially less problematic – than his forays into explorer tropes.

It almost goes without saying that today people engaged in exploration should reflect a diverse demographic of scientists and storytellers from across the globe (two of us, KM and SA, both WOC, are among the National Geographic Society's recently named Explorers). At the local level within the realm of palaeoanthropology, South Africa is renowned for its significant fossil discoveries, particularly in the Cradle of Humankind World Heritage Site which has yielded some of the most important hominin fossils in the world. However, African researchers, particularly women, are nearly invisible in palaeoanthropology. This has been the plight of the discipline for a very long time, and much discussion on the matter has taken place in various workshops at higher education institutions. Until recently, no programs or formal structures had been put in place to address the issue. However, today we see an intentional movement by various institutions, organisations and funding bodies to recruit, support and highlight the research of young Africans in the field. The most notable example in South Africa is the Human Evolution Research Institute at the University of Cape Town whose mission statement elevates diversity and inclusivity to the same level as its scientific goals. We are not naïve in thinking that simply changing demographics will solve our problems, however it now a well established fact that diverse teams produce better outcomes. In the context of the explorer narrative, substantial African representation at senior levels may shift the field's discourse—and value system—away from valorising exploration and discovery, which comes at the expense of other critical advances in understanding human origins. Through this, the mission of palaeoanthropology can be reframed from exploration in the colonial sense to investment in the work and ideas of a diverse, global community of researchers.

Related to this, we need to balance the diverse needs of our science by supporting (and glorifying!) thorough and well-trained scientists and technicians—particularly Africans and women—in addition to explorers and discoverers. This can come about through a shift towards

collaborative networks that centre African scholars in knowledge production, thereby changing the dynamics around who produces knowledge and who is excluded from doing so. Meaningful collaborations between foreign and African researchers are not sufficient. We need African networks that encourage cutting-edge research between African institutions to grow our research strength in Africa. There are specific funding opportunities (local and global) that are targeted at exclusively supporting indigenous/local researchers working on research projects within their home countries, but we would like to see more of these as they play a crucial role in facilitating the changes we propose. Such opportunities financially empower local scientific endeavours and support the movement to limit helicopter/parachute science in support of real collaborative endeavours where Africans have the lead role, and promise to deliver new postcolonial research questions and approaches. In South Africa, the Palaeontological Scientific Trust (PAST) is a funding body established 30 years ago that has made an important impact supporting research and education across the continent, albeit working within a constrained local budget. Internationally, two of the most prominent funding bodies that support palaeoanthropological research and exploration in Africa are the Leakey Foundation and the Wenner-Gren Foundation. In recent years they have supported a growing number of young African researchers and other researchers of colour, however they still overwhelmingly fund students at Western institutions, maintaining colonial dynamics to training. There are exceptions to this such as the Wadsworth African scholarship, which focuses on Africans being trained at African institutions. Another exception is the recent award to one of us (RRA) and colleagues of a Wenner-Gren Foundation Global Initiatives Grant specifically targeted at providing short-term training for African graduate students in laboratories and field sites with African PIs, from African institutions.

Finally, we strongly believe that having tough conversations around issues like the one we have focussed on in this article is key to helping us move forward as a discipline. We recognise that these conversations can be hard, and sometimes feel quite personal, but they are necessary for making the kinds of changes detailed above, and for guiding new practice going forward. In this regard, we want to highlight a Wenner-Gren funded workshop to be held in South Africa in 2025, entitled “Theorising a More Socially Responsive Practice in African Palaeoanthropology” with a goal of co-creating best practice guidelines to help researchers move away from extractive science to a more engaged and ethical research practice that shifts the way palaeoanthropology is done. We are encouraged by this and the other funding developments detailed above and would like to see more such programs. In particular, we encourage

international funding bodies to follow the lead of the Wenner Gren Foundation, by considering their funding schemes and how they can be used positively to facilitate internal growth in the countries from which palaeoanthropological resources derive, to become leaders in breaking down the legacy of colonisation.

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