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Peer review history for:

Khosa R, Mbele V, Kirsten K, Pickering R. The ground beneath our feet: A critical reflection on 135 years of landscape evolution models for southern Africa. S Afr J Sci. 2025;121(1/2), Art. #18532. https://doi.org/10.17159/sajs.2025/18532

HOW TO CITE:

The ground beneath our feet: A critical reflection on 135 years of landscape evolution models for southern Africa [peer review history]. S Afr J Sci. 2025;121(1/2), Art. #18532.

https://doi.org/10.17159/sajs.2025/18532/peerreview

Reviewers 1 and 2: Round 1

Not openly accessible under our <u>Publishing peer review reports</u> policy.

Reviewer 3: Round 1 Date completed: 28 September 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
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

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

Select a recommendation:

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With regard to our policy on '<u>Publishing peer review reports</u>', 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:

I enjoyed reviewing the paper 'The ground beneath our feet: a critical reflection on 135 years of landscape evolution models for southern Africa' submitted for consideration to the South African Journal of Science, and herewith provide some broad and specific suggestions. The theme of the paper is topical – that landscape evolution studies have been relatively lacking in recent times, but this is also complex to review for the whole country. The content is novel, as I am not aware of another review of this nature.

The topic and language are mostly appropriate for the scope and readership of the SAJS, but I felt that there was a little too much emphasis based on criticising the language and style of research done in the past. Progress surely means that the past is acknowledged, and provides a valuable base from which to work, and this can include doing things differently and in a way that is proved acceptable in present times.

The suggestions put forward in the paper are, in my opinion, fairly generic as they call for more geochronological investigations of landscape surfaces. But where specifically are there gaps (either spatially, or temporally, or both?). There is definitely not enough differentiation between the areas discussed as case studies, and to be honest I did not know even by the end of the manuscript which targeted case studies were used, or why. These need to be much more clearly laid out and also justified. I felt a little lost at times, as sweeping comments were made in a context of South African landscapes, but considering the highly complex nature of the geological record and the numerous climatic zones which characterise our country, I thought that several of these comments were unfounded. Research in the last two decades has taken this forward.

Therefore very importantly (in my opinion) this paper is to be much more specific about regions referred to. In the Cape, for example, there have been numerous cosmogenic isotope studies done in the last two decades and although there is always room for new data, this area has not been neglected. The Cape Mountains are also unique compared to many other South African landscape surfaces, so findings from there on landscape stability certainly do not apply overall in our country. I have cautioned against such comments in the specific suggestions below.

If the review is focused on Taung Child and the work of Dart and his contemporaries carrying out research in and around the area now referred to the Cradle of Humankind, then I suggest reorganising the focus to be more specifically centred on that.

Please include a map showing this spatially to orient a reader, and on this map to summarise zones laid out in past studies. This may be beyond the scope of this review, but on the same map, or on a separate map, to show the rates and dates published on Cenozoic landscapes (quantitative data) would be valuable to

help show those gaps.

My suggestion is that the author(s) do a thorough review of this paper, to maintain a clear focus that is obvious to any reader. There was drift in several different directions which was not always easy to follow.

Specific notes:

Line 16 (first mention) but there are several other places this is used too: I am not sure about the use of the term 'colonial thinking' here. This has become a fairly loaded expression of late, and although it was a way of the past, we acknowledge a need for progress. In a review paper to be published in a scientific journal, I would suggest considering avoiding the word 'colonial' and perhaps replace with something like 'former western thinking' or 'outdated ways of thinking'?

Lines 39-40: was this the first publication on this in South Africa, or anywhere globally? Please specify.

In the paragraph starting with line 84 I became confused about the scope of this review. Southern African (and South African) landscape evolution is complex and differs from area to area, as you point out here how it relates to changing geologies. I got the impression at the beginning of this article, that you refer to the area in the north? e.g. not discussing the cape which has been extensively worked on and published on in the last twenty or so years, since cosmogenic isotope dating of landscape exposure became more common. In line 90 you mention the Kalahari region, but our modern and also palaeo records of different parts of South Africa point towards remarkable complexity. In the interest of keeping focus in this review I am not proposing that you delve into the climate and palaeo climate literature, but citing a few recent reviews that discuss different areas you may demonstrate that the link between climate and landscapes is acknowledged.

Line 86: say Cenozoic rather than just the Quaternary

Line 91: you could also cite the recent work of Abi Stone et al. here on the Namib ()

Line 161: The term Tertiary is no longer valid. Please use Neogene instead.

Line 219: You may want to consider referring to the geomorphic provinces proposed by Greg Botha in a Special Issue of the South African Journal of Geology in 2021 ()

Section starting on line 221: (Post 2000s): this section is misleading as it suggests that not much has been done, and this is not the case if this paper deals with the entire South African record. A lot has been published on the Cape area and this is not reflected here. It does feature later, but I feel that it needs to be brought forward. On the Cape records too, there have been several papers on denudation and uplift published by Baby et al. that would be appropriate to include.

Lines 234 and 236: 'African Surface'

Line 258: Rather than saying 'have been developed into a long-held ... ' I suggest phrasing it as 'these became the basis for a long-held...'. The reason is that since Partridge and Maud, many other publications on landscape evolution have shown complexity in this regard and it is no longer thought to be as straightforward as stated here.

Line 259 and 261: say predicted rather than predicts. As per above, a lot has been done since 1987.

Lines 286 and 287: is this necessary to include?

Half way through line 284, to the first half of 290, I recommend leaving this out. I feel that it detracts from the scientific merit in your review.

You need to consider too, that with time, came a deeper understanding of natural sciences and at that time these were acceptable thoughts. It's part of history and new names or methods can be proposed, but I

don't think it is constructive to criticise the past too harshly here. This is progress, not so, to move beyond what is now outdated? New terms can be introduced, but to keep raising the way things were done previously seems a little nonconstructive to me.

Line 313: Can you show this as a graph with proportions? How big was the sample size, etc?

Lines 315-316: I do not understand this sentence. Please rephrase for clarity.

Line 331: note that this does not help with ground-truthing though.

Lines 332-333: I don't think you need to state in a scientific paper what geochronology is. I suggest leaving this out.

Line 339: That study focused only on the Cape Supergroup rocks, which form a small subset of the South African stratigraphy.

Line 349: Note though that there was merit in the 'analogue' methods used in the past by researchers such as Partridge and Maud, to develop hypotheses.

Line 353: models

Line 357: But the older models - again for example Partridge and Maud did not necessarily say that our landscapes are stable. The Eastern margin was suggested to have experienced uplift from the Pliocene through to the Holocene.

369: The start of the Cenozoic rather? We are still in it.

Lines 380 and 389: Don't bring new citations and therefore, ideas, into the conclusions. These need to be discussed beforehand and your findings are only confirmed in the conclusions.

In conclusion, I see merit in this sort of narrative being published and feel that the SAJS is an appropriate journal to do so. However, I recommend major revisions to address the following:

- Less emphasis on the colonial ways of the past, with only a short section to address the language and way of working in that regard.
- To be specific about which geological and geographic areas this review considers most strongly.
- More constructive and more specific suggestions on what you are proposing can be done e.g., in which areas do you identify gaps, and within what time periods?
- Include a map showing this spatially to orient a reader, and on this map to summarise zones laid out in past studies.

Author response to Reviewer 3: Round 1

I enjoyed reviewing the paper 'The ground beneath our feet: a critical reflection on 135 years of landscape evolution models for southern Africa' submitted for consideration to the South African Journal of Science, and herewith provide some broad and specific suggestions.

AUTHOR: Thank you, Reviewer 3, we appreciate that you enjoyed our piece and are grateful for your suggestions.

The theme of the paper is topical – that landscape evolution studies have been relatively lacking in recent times, but this is also complex to review for the whole country.

AUTHOR: We thank the reviewer for recognising the need for this manuscript, and we agree with the complexity issue. Our goal here was to present an overview on the main themes and approaches used in landscape evolution, and to offer the community something on which to base future work on.

The content is novel, as I am not aware of another review of this nature.

AUTHOR: We thank the reviewer for supporting our observation in recognising that this paper is novel; this is particularly pertinent given the instance by Reviewer B that our piece lacks novelty.

The topic and language are mostly appropriate for the scope and readership of the SAJS, but I felt that there was a little too much emphasis based on criticising the language and style of research done in the past.

AUTHOR: We thank the reviewer for identifying this and pointing it out. While we recognise the emphasis on criticising the language and style of research done previously, we note this and have made

improvements to some of the wording to still reiterate the points, especially by acknowledging the previous work done and its

significance in the development and basis of the work we do. The criticism, however, of the some of the language we justify as a need to emphasise the need for scientific reconsideration, especially in terminology such as 'the African surface', which continues to be used and propagated.

AUTHOR: As a counterpoint to this, Reviewer 1 identified this part of the manuscript as novel and interesting.

Progress surely means that the past is acknowledged, and provides a valuable base from which to work, and this can include doing things differently and in a way that is proved acceptable in present times.

AUTHOR: We agree with the reviewer and our delivery in the previously submitted manuscript suggested that we did not acknowledge this. In the revised manuscript, we address this by clearly acknowledging previous works that have guided, and continue to do so, the previous works of current researchers.

The suggestions put forward in the paper are, in my opinion, fairly generic as they call for more geochronological investigations of landscape surfaces. But where specifically are there gaps (either spatially, or temporally, or both?).

AUTHOR: This is a good question, given there has been little quantitative work on landscape evolution (echoed by Tinker et al., 2008), there are many gaps, both temporally and spatially. We have added a map (Figure 3: Southern African map showing spatial extent of existing geochronological data on landscape evolution studies), to graphically represent where previous work (using the cosmogenic radionuclide applications in landscape studies) has been done, and to better highlight the areas where work could still be done in future. We have added some text to the end of the discussion giving our impressions on where we would like to see future work, also using the suggestions by Botha, 2021 from King's (1942, 1951, 1967) work on geomorphic provinces.

From a temporal perspective, we are limited by the time spans of the landscape dating techniques themselves. While other techniques may be able to extent applicability to much longer time spans, the use of cosmogenic radionuclides is dependent on the half-life of the isotope in consideration, which in turn is also dependent on the lithology that can be used for the specific isotope. As such, for ¹⁰Be, with a half-life of 1.388

 \pm 0.07 Ma (Korschinek et al., 2010), the time span is limited to a time when the results can be interpreted with confidence. With an even shorter half-life, other isotopes such as ²⁶Al (717000 years) and 14C (5730 years) are even more limiting. Yes, we recognise that cosmogenic radionuclides are not the only technique to determine rates of landscape change (although mostly discussed here) as we have included the works of Tinker et al., 2008 on apatite fission thermochronology as an example, we also accept that others have and will continue to conduct more quantitative research that will fill the gaps. Interesting to note that while our Figure 3 shows mostly data from cosmogenic radionuclide results, existing studies of other quantitative techniques have also focused on the same regions as these.

There is definitely not enough differentiation between the areas discussed as case studies, and to be honest I did not know even by the end of the manuscript which targeted case studies were used, or why. These need to be much more clearly laid out and also justified.

AUTHOR: In revising the manuscript, we concur with Reviewer C. In the revised version, however, we have included case studies that speak to both spatial and temporal studies in order to make clear the point and address the Reviewer's concern. We trust we have adequately done this.

I felt a little lost at times, as sweeping comments were made in a context of South African landscapes, but considering the highly complex nature of the geological record and the numerous climatic zones which characterise our country, I thought that several of these comments were unfounded. Research in the last two decades has taken this forward.

AUTHOR: We recognise that South Africa's geological record and climatic diversity are indeed intricate. We have revised the manuscript to include a more nuanced discussion of these complexities, ensuring that our comments reflect a deeper understanding of the regional context.

We appreciate the reviewer's point about advancements in research over the last two decades. We would like to point out though that while this true, however, most of the research does not consider the review of the existing models.

To avoid any confusion, we have clarified our sweeping statements by providing specific examples from the Great Escarpment, Cradle of Humankind and the Cape region, in an attempt to cover the extent of the work done, that align with the varied geological and geomorphological responses of these regions and landforms contexts of South Africa. This will help ground our discussion in the current state of knowledge.

Therefore, very importantly (in my opinion) this paper is to be much more specific about regions referred to. In the Cape, for example, there have been numerous cosmogenic isotope studies done in the last two decades and although there is always room for new data, this area has not been neglected. The Cape Mountains are also unique compared to many other South African landscape surfaces, so findings from there on landscape stability certainly do not apply overall in our country. I have cautioned against such comments in the specific suggestions below.

AUTHOR: When revising the manuscript, we noted the disconnect regarding the regions used as case studies. To cover most regions that show the spatial and temporal variability and extent of the existing data, we have included case studies from various parts of the southern African region with the suggested figure (Figure 3: Southern African map showing spatial extent of existing geochronological data on landscape evolution studies.) showing the spatial extent.

If the review is focused on Taung Child and the work of Dart and his contemporaries carrying out research in and around the area now referred to the Cradle of Humankind, then I suggest reorganising the focus to be more specifically centred on that.

AUTHOR: Our response to this is yes and no. Yes, our starting point is what Dart says about the landscape at Taung in his 1925 paper, and how these statements were part of the general thinking of the time, and how we see these themes carried on and reflected through the decades of thought and work on landscape evolution.

The area now demarcated as the UNESCO World Heritage Site Cradle of Humankind does include Taung in the Northern Cape, as well as Makapanstad and the caves in Gauteng, so there is not a single area represented by the Cradle to focus on. We have included the limited work done in the Gauteng Cradle (Dirks et al., 2010; Dirks et al., 2016) but to only focus on this would not be enough and is not what we set out to do in this piece.

We do take this point on board though and have added some text to the introduction to make the link from the early work by Dart at Taung to the rest of our review.

Please include a map showing this spatially to orient a reader, and on this map to summarise zones laid out in past studies. This may be beyond the scope of this review, but on the same map, or on a separate map, to show the rates and dates published on Cenozoic landscapes (quantitative data) would be valuable to help show those gaps.

AUTHOR: We thank the reviewer for this suggestion. In the revised manuscript, we include a map (Figure 3: Southern African map showing spatial extent of existing geochronological data on landscape evolution studies.) guided by summaries of Decker et al., 2011 and Makhubela et al., 2020 of existing data and results from the southern African landscape studies that shows the spatial and temporal gaps.

My suggestion is that the author(s) do a thorough review of this paper, to maintain a clear focus that is obvious to any reader. There was drift in several different directions which was not always easy to follow.

AUTHOR: This is a helpful suggestion, made by Reviewer 1 too. We have done a hard edit of the whole manuscript to pull the sections together more tightly and give the piece a clearer, single voice.

Line 16 (first mention) but there are several other places this is used too: I am not sure about the use of the term 'colonial thinking' here. This has become a fairly loaded expression of late, and although it was a way of the past, we acknowledge a need for progress. In a review paper to be published in a scientific journal, I would suggest considering avoiding the word 'colonial' and perhaps replace with something like 'former western thinking' or 'outdated ways of thinking'?

AUTHOR: Respectfully, we disagree with the Reviewer 3 on this regard. They do not have the benefit of the overview of the special issue - the theme of colonial approaches to science and research, the need for decolonisation and progress in doing this, is central. So, the term 'colonial' is loaded but it is also specific, and we wish to use it in this specific context. 'Former western thinking' is an alternative but is also vague and somewhat euphemistic in that it does not clearly refer to the colonial period of South Africa. We want to make the link between the colonial period and how the thinking in academia was very much dominated by this mentality, even after the switch to being a Republic. We speak about the use of language in the piece, and again here we wish to stress that the use of language is important, and avoiding the term colonial is not appropriate in this context.

Lines 39-40: was this the first publication on this in South Africa, or anywhere globally? Please specify.

AUTHOR: The Dart, 1925 paper was published in Nature and was the first publication anywhere of the fossil skull from Taung. We have edited this text a little but not very much, as this paper is part of an entire special issue marking the centenary of this publication, so for the readers of this piece, and the rest of the issue, we can take this point as understood.

In the paragraph starting with line 84 I became confused about the scope of this review. Southern African (and South African) landscape evolution is complex and differs from area to area, as you point out here how it relates to changing geologies. I got the impression at the beginning of this article, that you refer to the area in the north? e.g. not discussing the cape which has been extensively worked on and published on in the last twenty or so years, since cosmogenic isotope dating of landscape exposure became more common.

AUTHOR: This is a good point, and we did not make the original manuscript clear enough. We have edited this section and added the work done on the Cape to the section of the manuscript which summarises the more recent work.

In line 90 you mention the Kalahari region, but our modern and also palaeo records of different parts of South Africa point towards remarkable complexity. In the interest of keeping focus in this review I am not proposing that you delve into the climate and palaeo climate literature, but citing a few recent reviews that discuss different areas you may demonstrate that the link between climate and landscapes is acknowledged.

AUTHOR: This is also a good point, thank you. We have added some relevant citations under the Landscape evolution in southern Africa in the Introduction.

Line 86: say Cenozoic rather than just the Quaternary.

AUTHOR: We thank the reviewer for this suggestion and have made the change; this is also reflected in our Figure 1; Simplified timeline of the Cenozoic (66 Ma to present), showing the major climatic events to have affected southern Africa and different phases of landscape change in southern Africa (Adapted and modified from Partridge et al., 1995; and geological timescale from the Geological Society of America)

Line 161: The term Tertiary is no longer valid. Please use Neogene instead.

AUTHOR: We thank the reviewer for this suggestion. The term Neogene has been used in the revised manuscript.

Line 219: You may want to consider referring to the geomorphic provinces proposed by Greg Botha in a Special Issue of the South African Journal of Geology in 2021.

AUTHOR: Thank you for the good suggestion. We have incorporated the work by Greg Botha (based on King's geomorphic provinces) at the end of the section the 'African surface' critique as a consideration for a basis for changes in languaging.

Section starting on line 221: (Post 2000s): this section is misleading as it suggests that not much has been done, and this is not the case if this paper deals with the entire South African record. A lot has been published on the Cape area and this is not reflected here. It does feature later, but I feel that it needs to be brought forward. On the Cape records too, there have been several papers on denudation and uplift published by Baby et al. that would be appropriate to include.

AUTHOR: Thank you for pointing this out. We did not do enough of a good job on this section in the original version and have added in a new section addressing this recommendation by including the works of Tinker et al. (2008) and Scharf et al. 2013 to make the same point. While we did not use the recommended

published work of Baby et al. (2018a; 2018b; 2019) on uplift histories, we do make recommendations in the text for further reading by including the reviewer suggested references.

Lines 234 and 236: 'African Surface'

AUTHOR: Done.

Line 258: Rather than saying 'have been developed into a long-held ... ' I suggest phrasing it as 'these became the basis for a long-held...'. The reason is that since Partridge and Maud, many other publications on landscape evolution have shown complexity in this regard and it is no longer thought to be as straightforward as stated here.

AUTHOR: Good point, thank you. We have made the change.

Line 259 and 261: say predicted rather than predicts. As per above, a lot has been done since 1987.

AUTHOR: Done

Lines 286 and 287: is this necessary to include?

AUTHOR: Upon revision, we agree with the Reviewer and the sentence that was previously Lines 286 and 287 has been removed.

Half way through line 284, to the first half of 290, I recommend leaving this out. I feel that it detracts from the scientific merit in your review. You need to consider too, that with time, came a deeper understanding of natural sciences and at that time these were acceptable thoughts. it's part of history and new names or methods can be proposed, but I don't think it is constructive to criticise the past too harshly here. This is progress, not so, to move beyond what is now outdated? New terms can be introduced, but to keep raising the way things were done previously seems a little nonconstructive to me.

AUTHOR: We thank the reviewer for this suggested revision. Without taking away from the point that we aim to make, we have made a revisional change to this section in the manuscript.

Line 313: Can you show this as a graph with proportions? How big was the sample size, etc?

AUTHOR: We thank the reviewer for this suggestion and we have revised the manuscript to include Figure 4, a stacked column chart showing this data to compare and show this.

Lines 315-316: I do not understand this sentence. Please rephrase for clarity.

AUTHOR: Done.

Line 331: note that this does not help with ground-truthing though.

AUTHOR: Correct. Considerations for ground-truthing have been included under the heading on New methods to test old ideas.

Lines 332-333: I don't think you need to state in a scientific paper what geochronology is. I suggest leaving this out.

AUTHOR: Good point, we have edited this out.

Line 339: That study focused only on the Cape Supergroup rocks, which form a small subset of the South African stratigraphy.

AUTHOR: We thank the reviewer for pointing this out. We have moved this citation to be a case study for recent works (1980s - 2000s) to show the results the study demonstrates the complexity of the southern African landscape.

Line 349: Note though that there was merit in the 'analogue' methods used in the past by researchers such as Partridge and Maud, to develop hypotheses.

AUTHOR: We thank the reviewer for pointing this out. Credit has been given to the qualitative methods in their contribution to hypotheses development and modern techniques.

Line 353: models

AUTHOR: Done

Line 357: But the older models - again for example Partridge and Maud did not necessarily say that our landscapes are stable. The Eastern margin was suggested to have experienced uplift from the Pliocene through to the Holocene.

AUTHOR: The Reviewer is correct. In the revised version, we have used references of published work, in place of Partridge and Maud, that have expressed the conformity of the southern African landscape.

Line 369: The start of the Cenozoic rather? We are still in it. Lines 380 and 389: Don't bring new citations and therefore, ideas, into the conclusions. These need to be discussed beforehand and your findings are only confirmed in the conclusions.

AUTHOR: We thank the Reviewer for the suggested change. It has been actioned. There are no new citations in the conclusions.

In conclusion, I see merit in this sort of narrative being published and feel that the SAJS is an appropriate journal to do so. However, I recommend major revisions to address the following:

Less emphasis on the colonial ways of the past, with only a short section to address the language and way of working in that regard.

AUTHOR: This is an interesting response from the reviewer, given the aim of the entire special issue to look at the Taung centenary through a lens of decolonisation, we cannot agree that our piece needs less emphasis on the colonial setting in which all this previous work was done. Indeed, to the best of our knowledge, this manuscript is the first and only piece to clearly place the study of landscape evolution in southern African in its colonial setting and explore the influence this had on the science itself. So, with respect, we disagree with the reviewer and are not making any changes in response to this point.

It is also worth noting, that Reviewer 1 really liked the critique on the use of language and the colonial setting and asked for more of this aspect. We use this as support for our decision to not make this change as requested by Reviewer 3.

To be specific about which geological and geographic areas this review considers most strongly.

AUTHOR: Without coming across as implying that some geologic and geographic areas are better than others, we aimed to cover some landforms that are well-known to most readers and to make a point using spatially extensive areas (e.g. the Great Escarpment) and the inclusion of localities where human evolution studies are dominant (going back to recognising this stemmed from the work of Dart) in order to cover a variety of examples that are applicable for both geological and geographic areas of discussion.

More constructive and more specific suggestions on what you are proposing can be done – e.g., in which areas do you identify gaps, and within what time periods?

AUTHOR: This is a good point, thank you. While it may be tricky to consider the time periods to focus on first, owing to the requirements of some geological factors (i.e. lithology) for some techniques and access challenges, we do suggest perhaps an attempt to cover the spatial gaps in the region, in that quantitative research can be used to cover grounds (i.e. in the interior sections of the country, especially outside the Gauteng area towards the Northern Cape region, since the Great Escarpment and coastal areas have been investigated; see Figure 3 in the manuscript).

Heeding the suggestion by the reviewer to consider some languaging options, we strongly believe in the proposed suggestion of considering geomorphic provinces as a base to work towards moving past colonial-inspired terminology.

Include a map showing this spatially to orient a reader, and on this map to summarise zones laid out in past studies.

AUTHOR: Done, please see Figure 3: Southern African map showing spatial extent of existing geochronological data on landscape evolution studies.

Reviewer 3: Round 2 Date completed: 25 November 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 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 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 Select a recommendation: 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:

I have read the response to reviewers, and your revised submission, and am grateful to see the level of effort put in to improve clarity on this manuscript.

I have no further comments and hope to see your paper published soon.