A Manuscript Microscope 'Sentence Audit' of:

Naked mole-rats (Heterocephalus glaber) do not specialise on cooperative tasks

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The Manuscript Microscope Sentence Audit is a research paper introspection system that parses the text of your manuscript into minimal sentence components for faster, more accurate, enhanced proofreading.

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Manuscript Source: https://www.biorxiv.org/content/10.1101/2021.03.22.436002v1

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Features of the Sentence Audit:

The Sentence Audit combines two complementary proofreading approaches:

1. Each sentence of your text is parsed and displayed in isolation for focused inspection.
2. Each individual sentence is further parsed into Minimal Sentence Components for a deeper review of the clarity, composition and consistency of the language you used.

The Minimal Sentence Components shown are the smallest coherent elements of each sentence of your text as derived from it's conjunctions, prepositions and selected punctuation symbols (i.e. commas, semicolons, round and square brackets).

The combined approaches ensure easier, faster, more effective proofreading.

Comments and Caveats:

• The sentence parsing is achieved using a prototype natural language processing pipeline written in Python and may include occasional errors in sentence segmentation.

• Depending on the source of the input text, the Sentence Audit may contain occasional html artefacts that are parsed as sentences (E.g. "Download figure. Open in new tab").

• Always consult the original research paper as the true reference source for the text.

Contact Information:

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All queries, feedback or suggestions are also very welcome.

Research Paper Sections:

The sections of the research paper input text parsed in this audit.

Section No.	Headings	Sentences
Section: 1	Abstract	10
Section: 2	Introduction	17
N/A	--- --- --- --- --- --- ---	0
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The Sentence Audit Of The Research Paper

Title # Naked mole-rats (Heterocephalus glaber) do not specialise on cooperative tasks

S1 [001] Abstract

S1 [002] It has been proposed that naked mole-rat (Heterocephalus glaber) societies resemble those of eusocial insects by showing a division of labour among non-breeding individuals.

It has been proposed ...
... that naked mole-rat ...
... (Heterocephalus glaber) ...
... societies resemble those ...
... of eusocial insects ...
... by showing a division ...
... of labour ...
... among non-breeding individuals.

S1 [003] Earlier studies suggested that non-breeders belong to distinct castes that specialise permanently or temporarily on specific cooperative tasks.

Earlier studies suggested ...
... that non-breeders belong ...
... to distinct castes ...
... that specialise permanently ...
... or temporarily ...
... on specific cooperative tasks.

S1 [004] In contrast, recent research on naked mole-rats has shown that behavioural phenotypes are continuously distributed across non-breeders and that mole-rats exhibit considerable behavioural plasticity suggesting that individuals may not specialise permanently on work tasks.

In contrast, ...
... recent research ...
... on naked mole-rats has shown ...
... that behavioural phenotypes are continuously distributed ...
... across non-breeders ...
... and that mole-rats exhibit considerable behavioural plasticity suggesting ...
... that individuals ...
... may not specialise permanently ...
... on work tasks.

S1 [005] However, it is currently unclear whether individuals specialise temporarily and whether there is a sex bias in cooperative behaviour among non-breeders.

However, ...
... it is currently unclear ...
... whether individuals specialise temporarily ...
... and ...

... whether there is a sex bias ...
... in cooperative behaviour ...
... among non-breeders.

S1 [006] Here we show that non-breeding individuals vary in overall cooperative investment, but do not specialise on specific work tasks.

Here we show ...
... that non-breeding individuals vary ...
... in overall cooperative investment, ...
... but do not specialise ...
... on specific work tasks.

S1 [007] Within individuals, investment into specific cooperative tasks such as nest building, food carrying and burrowing are positively correlated, and there is no evidence that individuals show trade-offs between these cooperative behaviours.

Within individuals, ...
... investment ...
... into specific cooperative tasks ...
... such as nest building, ...
... food carrying ...
... and burrowing are positively correlated, ...
... and there is no evidence ...
... that individuals show trade-offs ...
... between these cooperative behaviours.

S1 [008] Non-breeding males and females do not differ in their investment in cooperative behaviours and show broadly similar age and body mass related differences in cooperative behaviours.

Non-breeding males ...
... and females do not differ ...
... in their investment ...
... in cooperative behaviours ...
... and show broadly similar age ...
... and body mass related differences ...
... in cooperative behaviours.

S1 [009] Our results suggest that non-breeding naked mole-rats vary in their overall contribution to cooperative behaviours and that some of this variation may be explained by differences in age and body mass.

Our results suggest ...
... that non-breeding naked mole-rats vary ...
... in their overall contribution ...
... to cooperative behaviours ...
... and that some of this variation ...
... may be explained ...
... by differences ...
... in age ...
... and body mass.

S1 [010] Our data provide no evidence for temporary specialisation, as found among some eusocial insects, and suggests that the behavioural organisation of naked mole-rats resembles that of other cooperatively breeding vertebrates more than that of eusocial insect species.

Our data provide no evidence ...
... for temporary specialisation, ...
... as found ...
... among some eusocial insects, ...
... and suggests ...
... that the behavioural organisation ...
... of naked mole-rats resembles ...
... that of other cooperatively breeding vertebrates more than ...
... that of eusocial insect species.

S2 [011] Introduction

S2 [012] Task specialisation among members of social groups is considered a hallmark of social evolution and can lead to improvements in group efficiency (Chittka and Muller 2009, Bourke 2011).

Task specialisation ...
... among members ...
... of social groups is considered a hallmark ...
... of social evolution ...
... and can lead ...
... to improvements ...
... in group efficiency ...
... (Chittka ...
... and Muller 2009, ...
... Bourke 2011).

S2 [013] The most extreme cases of task specialisation are found among social insects, where individuals show divergent developmental trajectories that lead to functionally different and morphologically specialised castes of workers (Wilson 1971, Bourke 2011).

The most extreme cases ...
... of task specialisation are found ...
... among social insects, ...
... where individuals show divergent developmental trajectories ...
... that lead ...
... to functionally different ...
... and morphologically specialised castes ...
... of workers ...
... (Wilson 1971, ...
... Bourke 2011).

S2 [014] Other social insects show temporary specialisation in the absence of morphological specialisation, and workers pass through successive developmental stages that are characterised by temporary specialisation in specific tasks (Seeley 1982, Biedermann and Taborsky 2011, Mersch et al. 2013).

Other social insects show temporary specialisation ...
... in the absence ...
... of morphological specialisation, ...
... and workers pass ...
... through successive developmental stages ...
... that are characterised ...
... by temporary specialisation ...
... in specific tasks ...
... (Seeley 1982, ...
... Biedermann ...
... and Taborsky 2011, ...
... Mersch et al. 2013).

S2 [015] In contrast to insects, group living vertebrates rarely show evidence of specialisation, and usually, individuals vary in their overall investment in cooperative tasks depending on the individual's characteristics and environmental conditions (Cockburn 1998, Clutton-Brock et al. 2003).

In contrast ...
... to insects, ...
... group living vertebrates rarely show evidence ...
... of specialisation, ...
... and usually, ...
... individuals vary ...
... in their overall investment ...
... in cooperative tasks depending ...
... on the individual's characteristics ...
... and environmental conditions ...
... (Cockburn 1998, ...
... Clutton-Brock et al. 2003).

S2 [016] However, the social mole-rats of the family Bathyergidae may represent an exception among group-living vertebrates, and it has been controversially debated to what extent their social organisation resembles that of social insects groups (Jarvis 1981, Bennett 1990, Burda 1990, Crespi and Yanega 1995, Bennett and Faulkes 2000, Burda et al. 2000, Scantlebury et al. 2006, Boomsma 2013, Boomsma and Gawne 2018).

However, ...
... the social mole-rats ...
... of the family Bathyergidae ...
... may represent an exception ...
... among group-living vertebrates, ...
... and it has been controversially debated ...
... to what extent their social organisation resembles ...
... that of social insects groups ...
... (Jarvis 1981, ...
... Bennett 1990, ...
... Burda 1990, ...
... Crespi ...
... and Yanega 1995, ...
... Bennett ...
... and Faulkes 2000, ...
... Burda et al. 2000, ...
... Scantlebury et al. 2006, ...

End of Sample Audit

This is a truncated Manuscript Microscope Sample Audit.

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