A Manuscript Microscope 'Sentence Audit' of:

An Automated Radio-Telemetry System (ARTS) for Monitoring Small Mammals

What is the Manuscript Microscope Sentence Audit?

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.

Why use a Sentence Audit to proofread your manuscript?

- Accelerated Proofreading: Examine long technical texts in a fraction of the usual time.
- Superior Proofreading: Detect subtle errors that are invisible to traditional methods.
- Focused Proofreading: Inspect each individual sentence component in isolation.
- Reliable Proofreading: Ensure every single word of your manuscript is correct.
- Easier Proofreading: Take the hardship out of crafting academic papers.

Bonus 1: Improved Productivity: Rapidly refine rough drafts to polished papers.
Bonus 2: Improved Authorship: Cultivate a clear, concise, consistent, writing style.
Bonus 3: Improved Reputation: Become known for rigorously precise publications.

Manuscript Source: https://www.biorxiv.org/content/10.1101/2021.03.06.434221v1

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Audit Date: 29/03/21 **Audit Identifier:** QO2UJ44LZ5A76D4 **Code Version:** 3.6

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:

To get a Manuscript Microscope Sentence Audit of any other research paper, simply forward any copy of the text to John.James@OxfordResearchServices.com.

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	12
Section: 2	Introduction	15
N/A	--- --- --- --- --- --- ---	0
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The Sentence Audit Of The Research Paper

Title # An Automated Radio-Telemetry System (ARTS) for Monitoring Small Mammals

S1 [001] Abstract

S1 [002] Point 1: The study of animals in nature is essential for developing an ecologically valid understanding of behavior.

Point 1: ...
... The study ...
... of animals ...
... in nature is essential ...
... for developing an ecologically valid understanding ...
... of behavior.

S1 [003] Small mammals, however, are often fossorial and exceedingly difficult to monitor in the wild.

Small mammals, ...
... however, ...
... are often fossorial ...
... and exceedingly difficult ...
... to monitor ...
... in the wild.

S1 [004] This limits both the taxonomic scope of field observation, and excludes species that are powerful models for the study of behavioral mechanisms.

This limits both the taxonomic scope ...
... of field observation, ...
... and excludes species ...
... that are powerful models ...
... for the study ...
... of behavioral mechanisms.

S1 [005] Point 2: Here, we implement an automated radio telemetry system (ARTS) designed to track small fossorial mammals.

Point 2: ...
... Here, ...
... we implement an automated radio telemetry system ...
... (ARTS) ...
... designed ...
... to track small fossorial mammals.

S1 [006] Our ARTS uses an isotropic antenna array coupled with broadband receivers.

Our ARTS uses an isotropic antenna array coupled ...
... with broadband receivers.

S1 [007] We characterized transmission at our study site and tested the ARTS' ability to track 48 prairie voles.

We characterized transmission ...
... at our study site ...
... and tested the ARTS' ability ...
... to track 48 prairie voles.

S1 [008] Point 3: We compared position estimates from nonlinear least squares, nonparameteric, and Bayesian trilateration methods and found Bayesian trilateration to have the smallest error.

Point 3: ...
... We compared position estimates ...
... from nonlinear least squares, ...
... nonparameteric, ...
... and Bayesian trilateration methods ...
... and found Bayesian trilateration ...
... to have the smallest error.

S1 [009] To examine the ability of the system to track biologically significant behavior we used ARTS data to investigate circadian rhythms of freely behaving prairie voles.

To examine the ability ...
... of the system ...
... to track biologically significant behavior we used ARTS data ...
... to investigate circadian rhythms ...
... of freely behaving prairie voles.

S1 [010] We used Lomb-Scargle analysis to estimate periodic patterns from irregularly sampled time series of speed.

We used Lomb-Scargle analysis ...
... to estimate periodic patterns ...
... from irregularly sampled time series ...
... of speed.

S1 [011] Prairie voles demonstrated ultradian movement at periods of approximately 45 and 90 min, observations on a time scale not possible using data from traditional methods.

Prairie voles demonstrated ultradian movement ...
... at periods ...
... of approximately 45 ...
... and 90 min, ...
... observations ...
... on a time scale not possible ...
... using data ...
... from traditional methods.

S1 [012] Point 4: This ARTS offers a new tool to observe rodent field behavior at time scales and in environments which have not been previously possible, such as investigating social and spatial behaviors on the scale of minutes, hours, and days in natural environments.

Point 4: ...

... This ARTS offers a new tool ...

... to observe rodent field behavior ...

... at time scales ...

... and in environments ...

... which have not been previously possible, ...

... such as investigating social ...

... and spatial behaviors ...

... on the scale ...

... of minutes, ...

... hours, ...

... and days ...

... in natural environments.

S2 [013] Introduction

S2 [014] Ethologists and behavioral ecologists have long emphasized the importance of examining behavior in settings relevant to the ecology and evolution of a species (Tinbergen 1951).

Ethologists ...

... and behavioral ecologists have long emphasized the importance ...

... of examining behavior ...

... in settings relevant ...

... to the ecology ...

... and evolution ...

... of a species ...

... (Tinbergen 1951).

S2 [015] Increasingly, researchers in psychology and neuroscience have come to share this perspective; their approaches include examining the statistical properties of real-world sensory stimuli (Burge and Geisler, 2015), examining the mechanisms of memory in nature (Sonnenberg et al., 2019), and exploring the behavioral patterns that emerge among complex social groups (Hein et al., 2018).

Increasingly, ...

... researchers ...

... in psychology ...

... and neuroscience have come ...

... to share this perspective; ...

... their approaches include examining the statistical properties ...

... of real-world sensory stimuli ...

... (Burge ...

... and Geisler, 2015), ...

... examining the mechanisms ...

... of memory ...

... in nature ...

... (Sonnenberg et al., 2019), ...

... and exploring the behavioral patterns ...

... that emerge ...

... among complex social groups ...

... (Hein et al., 2018).

S2 [016] In parallel, researchers have begun analyzing exhaustive sets of behavioral data with the hope of more thoroughly characterizing the behavioral repertoire of a species (Anderson and Perona, 2014; Schaefer and Claridge-Chang, 2012).

In parallel, ...
... researchers have begun analyzing exhaustive sets ...
... of behavioral data ...
... with the hope ...
... of more thoroughly characterizing the behavioral repertoire ...
... of a species ...
... (Anderson ...
... and Perona, 2014; ...
... Schaefer ...
... and Claridge-Chang, 2012).

S2 [017] To support such advances, we describe a new implementation of an Automated Radio-Telemetry System (ARTS) for use with small animals in the field.

To support ...
... such advances, ...
... we describe a new implementation ...
... of an Automated Radio-Telemetry System ...
... (ARTS) ...
... for use ...
... with small animals ...
... in the field.

S2 [018] One challenge of examining behavior in natural settings is that many animal species are relatively small and secretive, making field observation difficult.

One challenge ...
... of examining behavior ...
... in natural settings is ...
... that many animal species are relatively small ...
... and secretive, ...
... making field observation difficult.

S2 [019] Among fossorial muroid rodents, for example, knowledge of natural behavior is severely limited (Taborsky et al., 2015).

Among fossorial muroid rodents, ...
... for example, ...
... knowledge ...
... of natural behavior is severely limited ...
... (Taborsky et al., 2015).

S2 [020] The socially monogamous prairie vole, for example, has become a popular model for understanding the neurobiology of bonding and attachment.

The socially monogamous prairie vole, ...
... for example, ...
... has become a popular model ...

End of Sample Audit

This is a truncated Manuscript Microscope Sample Audit.

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John.James@OxfordResearchServices.com
