

Song complexity in relation to repertoire size and phonological syntax in the breeding song of Purple Sunbird

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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.

Why use a Sentence Audit to proofread your manuscript?

- **Accelerated Proofreading:** Examine long technical texts in a fraction of the usual time.
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Manuscript Source: <https://www.biorxiv.org/content/10.1101/2021.03.20.436261v1>

Manuscript Authors: Sonam Chorol & Manjari Jain

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.

[illegible]

Title **Song complexity in relation to repertoire size and phonological syntax in the breeding song of Purple Sunbird**

S1 [001] Abstract

S1 [002] There are multiple measures for bird song complexity such as repertoire size, phonological or compositional syntax and complex vocal mechanism (CVM).

There are multiple measures ...
... for bird song complexity ...
... such as repertoire size, ...
... phonological ...
... or compositional syntax ...
... and complex vocal mechanism ...
... (CVM).

S1 [003] We examined these in an old-world passerine, Purple Sunbird.

We examined these ...
... in an old-world passerine, ...
... Purple Sunbird.

S1 [004] First, we identified and acoustically characterised the repertoire size (of notes and phrases).

First, ...
... we identified ...
... and acoustically characterised the repertoire size ...
... (of notes ...
... and phrases).

S1 [005] We then assessed positional fidelity and ordering of notes within phrases.

We then assessed positional fidelity ...
... and ordering ...
... of notes ...
... within phrases.

S1 [006] We found 23 distinct notes by aural-visual inspection of spectrograms which was validated using a Classification and Regression Tree based on 5 acoustic parameters.

We found 23 distinct notes ...
... by aural-visual inspection ...
... of spectrograms ...
... which was validated ...
... using a Classification ...
... and Regression Tree based ...
... on 5 acoustic parameters.

S1 [007] These notes combined in different iterations to form 30 different phrases.

These notes combined ...
... in different iterations ...
... to form 30 different phrases.

S1 [008] Phrases comprised of an overall structure with an introductory note (prefix) at the onset, followed by notes occurring at specific positions within the phrase body, and terminated with a trill (suffix syllable(s)).

Phrases comprised ...
... of an overall structure ...
... with an introductory note ...
... (prefix) ...
... at the onset, ...
... followed by notes occurring ...
... at specific positions ...
... within the phrase body, ...
... and terminated ...
... with a trill ...
... (suffix syllable(s)).

S1 [009] Prefix was present in 93% of phrases whereas suffix syllable(s) occurred in 27% of phrases only.

Prefix was present ...
... in 93% ...
... of phrases whereas suffix syllable(s) ...
... occurred ...
... in 27% ...
... of phrases only.

S1 [010] We found that notes exhibited positional fidelity and combined in specific order to form a phrase.

We found ...
... that notes exhibited positional fidelity ...
... and combined ...
... in specific order ...
... to form a phrase.

S1 [011] This is indicative of underlying phonological syntax that limits the ways in which notes combine to form phrase and offers insights to song complexity.

This is indicative ...
... of underlying phonological syntax ...
... that limits the ways ...
... in which notes combine ...
... to form phrase ...
... and offers insights ...
... to song complexity.

S1 [012] Finally, we found that suffix syllables exhibit the presence of mini-breath (very short inter-note interval) which are known to be produced by CVM.

Finally, ...
... we found ...
... that suffix syllables exhibit the presence ...
... of mini-breath ...
... (very short inter-note interval) ...
... which are known ...
... to be produced ...
... by CVM.

S2 [013] Introduction

S2 [014] The total set of vocalizations that a species possesses and uses in different behavioural contexts is regarded as the vocal repertoire of a species (Searcy 1992).

The total set ...
... of vocalizations ...
... that a species possesses ...
... and uses ...
... in different behavioural contexts is regarded ...
... as the vocal repertoire ...
... of a species ...
... (Searcy 1992).

S2 [015] A large vocal repertoire depicts higher complexity in communication (Blumstein and Armitage 1997; McComb and Semple 2005).

A large vocal repertoire depicts higher complexity ...
... in communication ...
... (Blumstein ...
... and Armitage 1997; ...
... McComb ...
... and Semple 2005).

S2 [016] This phenomenon has been studied extensively in primates as well as in avian species (Range and Fischer 2004; Gustison et al. 2012).

This phenomenon has been studied extensively ...
... in primates ...
... as well ...
... as in avian species ...
... (Range ...
... and Fischer 2004; ...
... Gustison et al. 2012).

S2 [017] Structural complexity of acoustic signals exists not only in the variety of vocalizations but also in the manner in which vocalizations are organised and composed (Hailman and Ficken 1986).

Structural complexity ...
... of acoustic signals exists not ...
... only in the variety ...
... of vocalizations ...
... but also ...
... in the manner ...
... in which vocalizations are organised ...
... and composed ...
... (Hailman ...
... and Ficken 1986).

S2 [018] In avian vocalizations the smallest acoustic unit is referred to as a 'note' or 'element' which can combine, sometimes following different ordering rules, to form higher order vocal units called 'phrase'.

In avian vocalizations the smallest acoustic unit is referred ...
... to as a 'note' ...
... or 'element' ...
... which can combine, ...
... sometimes following different ordering rules, ...
... to form higher order vocal units called 'phrase'.

S2 [019] Finally, songs can be composed of repetition of a single element (note) or phrases (the same or different kind).

Finally, ...
... songs can be composed ...
... of repetition ...
... of a single element ...
... (note) ...
... or phrases ...
... (the same ...
... or different kind).

S2 [020] A phrase may be composed of a single note repeated multiple times or different notes occurring in a defined sequence.

A phrase ...
... may be composed ...
... of a single note repeated multiple times ...
... or different notes occurring ...
... in a defined sequence.

S2 [021] Moreover, notes may be shared between two or more phrases (Kroodsma 1977) and construction of phrases may follow certain patterns.

Moreover, ...
... notes ...
... may be shared ...
... between two ...
... or more phrases ...
... (Kroodsma 1977) ...
... and construction ...
... of phrases ...

End of Sample Audit

This is a truncated Manuscript Microscope Sample Audit.

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John.James@OxfordResearchServices.com
