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Prof Genevieve McArthur
Associate Editor
PeerJ

Dear Prof McArthur,

Thank you for your response regarding our manuscript and we are very pleased to hear that both you and Reviewer 2 were satisfied with the last revision.

We have addressed your suggestions as described point by point below. We're very grateful for your feedback and have found the review process very helpful and constructive, thank you!

Yours sincerely,

Dr. Kate Stone
Dr. Titus von der Malsburg
Prof. Shravan Vasishth

Responses to comments

- **There are a few sentences that require some minor adjustments in wording to fix the grammar. I have highlighted these sentences in the attached PDF.**

  These have been amended, thank you for the suggestions. Two exceptions were:

  - In the conclusions, it was suggested to change "...evidence against an effect" to "no evidence for an effect". This wording relates to the type of statistical inference criterion we have used (the Bayes factor), which actually allows us to make statements about evidence against the null because it directly quantifies evidence for/against the null and alternative hypotheses.
  - The use of "processing "at" a word", rather than "of": Here we would prefer to retain the use of "at" to reflect that processing difficulty is measured at a specific word, but does not necessarily entail that the effect seen is processing "of" that specific word (e.g. it could be a processing spillover from a previous word, even though we're basing inference on effects seen at a target word).

- **Throughout the manuscript, there is inconsistent use of hyphen between particle and verb (e.g., particle verb and particle-verb and vice versa). Choose one convention and use consistently.**

  We have made this as consistent as possible, however there are some occasions when it is more appropriate to talk about the name of the construction (particle verb), and others where it is more appropriate to talk about the dependency between the verb and particle (verb-particle dependency). We have therefore revised the text to be consistent between these two cases.

- **I am pretty sure PeerJ will want references in parentheses in alphabetical order. Please go through and amend throughout the manuscript. Also, please double-check the formatting for references in the text, and make sure you use PeerJ conventions in terms of the use of "and" or "&" etc.**

  [** PeerJ Staff Note - as long as the references are complete, the formatting will be done during typesetting **]

Since the referencing and citations are auto-formatted by the PeerJ Latex style template, we are hesitant to edit this template file. In line with the PeerJ staff note, we will provide a full bibtex file so that the references can be typeset according to PeerJ policy.

- **The use of the term "surprisal" is grammatically incorrect in English. Surprisal account is perfectly OK. I suggest you identify all sentences that include the word "surprisal" on its own, and revise them to accommodate "surprisal account" in a grammatically appropriate way.**

We have now revised the text to explicitly state "surprisal theory" or "surprisal account" where relevant. In some specific contexts, there is a technical difference between "surprisal theory" and a word's surprisal value. In the latter case, it is necessary to use the word "surprisal" alone in order to be consistent with the literature on surprisal theory. However, this distinction should be clear now that all other cases use "surprisal theory".

- **Your manuscript is very "dense" in terms of terminology. Please avoid the use of acronyms in the text (e.g., NP, BF) because it makes it just that much harder for the reader to follow your meaning.**

We have now spelled out all acronyms or, in one case, provided definitions in the figure caption where this was not possible (see below).

- **I am not sure why the distributions throughout the manuscript are called "posteriors". I suggest you just called them distributions (google posteriors and you will see why - actually, don't!! do that - just look up the meaning of posteriors).**

The term "posterior distribution" is a technical term from Bayesian statistics. The term "posterior distribution" refers to its temporal relationship with the "prior distribution", both of which are involved in a Bayesian analysis. The prior is a distribution that must be specified before seeing the data and the posterior is what results after seeing the data. For that reason, it's unfortunately not possible to call the posterior anything else - but now that I have the association with the other meaning of posterior, I will certainly giggle every time I have to use it!

- **Table 8 and similar. Please provide full version of acronyms**

either in table (you may have room in column 1) or in the title or the notes.

Acronyms for the eye tracking measures have now been spelled out fully everywhere except Figure 8, which had space limitations. For this figure, we now spell out the acronyms in the figure caption.

- **When putting things in lists, make sure you used the PeerJ formatting for numbers (e.g., i, ii, iii OR (1), (2), (3) etc).**

The in-text lists have now been made consistent as (i), (ii), etc. Brackets were used to distinguish the list items from the text. The linguistic examples use the numbering common in linguistics, e.g. in line with the gb4e Latex package (Kolb & Thiersch, 2010).

- **If a number is less than 10, then write in full (e.g., nine).**

This has been amended throughout.

Additional changes

- **One substantive change to the text:**

We have deleted the following sentence that began on line 118 of the previous manuscript version:

"Lexical constraints are often not explicitly modelled in surprisal (Levy, 2008; Hale, 2001), but lexicalised PCFGs have demonstrated that the contribution of lexical information to processing difficulty follows a similar pattern to the canonical syntactic model (Collins, 2003; Charniak, 2001)."

The reason for deleting this sentence was that, in a previous manuscript version, we had begun by talking about syntactic surprisal and so it was necessary to state that lexical surprisal functions in a similar way. However, the preceding sentence has now been simplified such that it covers both syntactic and lexical surprisal, and so the above sentence is no longer necessary (and perhaps even adds confusion).