

In consultation with my advisors, the key feedback from examiners has been identified. The requests for changes have been addressed, and will be discussed below. The discussion of revisions below also includes the enhancements to the publications included in the thesis that were made as part of the review process for the papers under review for journal publications.

Below very briefly summarises changes from the originally submitted thesis.

Incorporated revised work on color, chapter 5.

Based on feedback from journal reviewers. It is now under second round of reviews.

This includes additional experiments with LSTMs, and additional discussion of training, and fitting.

Appendix B, C, D, JOSS papers replaced with accepted versions. The changes to these are primarily minor copy-copy-editing, but do also include some additional references and comparisons to related projects for the DataDepsGenerators.jl paper.

Re: Powers page 2: and page 3

List of abbreviations has been added to the start.

An extended background section with citation to original works has been added to introduction.

The limitations of existing approaches particularly recurrent neural networks and recursive neural networks has been highlighted.

This has been done to ensure that the contributions of thesis can be well understood without the chapters 2,3,4 that will not be present in the publicly available version of the thesis.

Combine with the existing background section of each of the main body chapters, this has been achieved.

In the public version of the thesis, those chapters will be replaced with just the abstract, and a link for where to purchase the book, and instructions to otherwise contact the author to acquire a copy.

Re: Powers page 3

The dictums are now typeset ragged right, and so do not contain hyphenation.

Re: Powers page 4.

The part of Chapter 2 on the neural probabilistic language model were revised inline with the recommendations.

Re: Powers page 5,

References to the excluded chapters of “Neural Representations of Natural Language”, appearing in Chapters 2 and 4 have been adjusted (no such reference occur in Chapter 3).

The references have variously been: replaced with citation to primary source, or had the information moved into the included chapter and the references removed as redundant, or cited as an external source for more information.

Re: Powers page 5: Spelling corrections to chapter 3 have been made.

Re: Powers page 6,

Corrections and clarifications as per the errata have been made to Chapter 5.

The mangled references have been fixed, and were as suggested the results of switching bibtex styles between the original paper and the copy in the thesis.

Similar changes have been made to chapter 7 (Stenthorpe page 2)

Re: Stenthorp page 1: 2.1. Several sentences have been added to abstract to explain word embeddings

Re: Powers page 8-9: Corrected MSF to MFS

Re: Zhang page 2

Diagram added to conclusion, and two short paragraphs of additional explanation of future work and why a shared representation would be expected to help. With some additional reference.

Also re: Zhang page 2, and Powers page 8 and 9.

A additional section has been added to the conclusion titled final words, to bring all the conclusions together and highlight take aways for future research.