# A Review of a Final Thesis

submitted to the Department of English and ELT Methodology,
Faculty of Arts, Charles University

**Name and titles of the reviewer**: Eva Maria Luef, Dr. doc.
**Reviewed as:**  ☒ a supervisor  ☐ an opponent

**Author of the thesis:**  Tomáš Savčenko
**Title of the thesis:**  Effects of Semantic Network Structure of English on Word Processing
**Year of submission:** 2024
**Submitted as:**  ☐ a bachelor's thesis  ☒ a master's thesis

**Level of expertise:**
☒ excellent  ☐ very good  ☐ average  ☐ below average  ☐ inadequate

**Factual errors:**
☒ almost none  ☐ appropriate to the scope of the thesis  ☐ frequent less serious  ☐ serious

**Chosen methodology:**
☒ original and appropriate  ☐ appropriate  ☐ barely adequate  ☐ inadequate

**Results:**
☒ original  ☐ original and derivative  ☐ non-trivial compilation  ☐ cited from sources  ☐ copied

**Scope of the thesis:**
☐ too large  ☒ appropriate to the topic  ☐ adequate  ☐ inadequate

**Bibliography (number and selection of titles):**
☒ above average (scope or rigor) ☐ average  ☐ below average  ☐ inadequate

**Typographical and formal level:**
☒ excellent  ☐ very good  ☐ average  ☐ below average  ☐ inadequate

**Language:**
☒ excellent  ☐ very good  ☐ average  ☐ below average  ☐ inadequate

**Typos:**
☒ almost none  ☐ appropriate to the scope of the thesis  ☐ numerous

**Brief description of the thesis** (by the supervisor, ca. 100-200 words):
The thesis deals with the highly current topic of semantic networks in English, which is becoming increasingly more popular in psycholinguistics. Networks of semantically related words were created using sophisticated research methods and statistical techniques to create semantic models of the mental lexicon of English speakers. Cognitive models are most useful when they pertain to real-life processes, and Mr Savcenko has cleverly linked his theoretical network model to psycholinguistic questions of lexical recognition and word retrieval. Overall, the research work is impressive and clearly displays a high level of computational and linguistic expertise.

**Review, comments and notes** (ca. 100-200 words)

*Strong points of the thesis:*
The thesis is based on advanced theoretical accounts of how to model lexical knowledge. Ms Savcenko has shown a good grasp of the relevant literature (which is scarce in the field) and was able to derive a novel semantic hypothesis from analogous studies in phonology. The introduction is well written and presents a good overview of current literature. The calculations of network statistics and the visualizations are expert and prove Mr Savcenko's mastery of research methods.

*Weak points of the thesis:*
While the lexical recognition task was well planned, its execution lacks some details. As noted by Mr Savcenko, the low R-squared valued in the regression hint that there are other factors influencing recognition latencies. It may have gone beyond the scope of an MA thesis, but certain control variables would have improved the regression analysis to allow for broader generalizations of the findings.

*Questions to answer during the Defence and suggested points of discussion:*

1. If you were to conduct a follow-up lexical recognition study, what control variables make most sense to include in the regression model?
2. The conclusion mentions studying language acquisition and decline in different populations. How could semantic network be useful in this regard, and what would a study like this look like?

*Other comments:*

It is clear that a lot of work went into the network construction, in the work with BERT and the sorting of the data that fed the network. Extracting reaction time data from the MALD database and preparing it for use in the regression is also time-consuming and requires a lot of patience and an eye for detail.

Essentially, Mr Savcenko attempted two different studies in his thesis: 1. semantic network construction, and 2. psycholinguistic experimentation. The fact that the first is excellent and the second is good (with some caveats) reflects the time constraints in undertaking such a complex linguistic task for an MA project.

Mr Savcenko was cautious in heralding his research findings and well aware of certain limitations that apply to his study. The suggestions for future research are interesting and can potentially lead to significant studies in the future.

This thesis is among the best I have ever seen of an MA student. It deserves the prizes it has won.

**Minor comments:**
- Some of the figures could have been improved visually. Figure 1 shows 2 lines on the right side of the graphs. Figure 2 seems to be of low resolution.
- Figure 13 does not need to show the non-significant variables.

**Proposed grade:**
☒ excellent  ☐ very good  ☐ good  ☐ fail

(grade 1)

Place, date and signature of the reviewer:
*Prague,*
*August 26, 2024*