

## **External Examiner's Report on the Dissertation of Lucie Jiránková**

### **The development of L2 inflectional morphology and cross-language interference effects**

**Submitted in 2021 at the Filozofická fakulta, Doctoral programme Philology, subject English Language and Linguistics**

#### **I I. Brief summary of the dissertation**

The dissertation deals with the acquisition of morphological aspects of English by L2 learners with Czech as L1. It presents three experimental studies, one focused on the perception of morphologically inflected novel words at the sublexical level, one on the production of tense with novel verbs, and the third on transfer effects from Czech (a morphologically rich language) to English (a morphologically poor language) in the realm of morphology.

#### **I II. Brief overall evaluation of the dissertation**

The dissertation is well-organized, easy to follow and clear. The three experimental studies are methodologically sound; the statistical analyses are generally appropriate, the introductions that lead to them and the discussion meet the standard of scientific publication. The dissertation has theoretical new proposals and offers an applied proposal for teaching English. In sum, my evaluation is very positive.

#### **I III. Detailed evaluation of the dissertation and its individual aspects**

##### *1. Structure of the argument*

Using a cross-sectional method, with learners of English at different proficiency levels (A0-C1), the dissertation aims at finding out how morphology is acquired at various stages of acquisition and how transfer operates in the different stages. Beyond L2 learners, native speakers may have been involved for comparison. The dissertation is organized into 6 chapters, the introduction, the literature review, three chapters, each devoted to one experimental study, internally structured, and the discussion and conclusion. The organization of the thesis is excellent, and the readability as well. The logic is very clear, and the introduction to each experimental study leads to the prediction in a very clear

way. The discussion of the three studies is precise and detailed. The predictions are discussed, and the limits of the studies are discussed, when it is needed.

### *2. Formal aspects of the dissertation*

The dissertation is very easy to follow, as it is written and presented in a friendly readable format. The visual presentation of the results is excellent and show the outcome of a given experiment immediately. The tables are also very useful to understand the results. The candidate provides a lot of information concerning the results, which allows the reader to evaluate the predictions and appreciate the soundness of the results. The dissertation is well presented, and the language is correct. The presentation of statistical analyses is a bit redundant.

### *3. Use of sources and/or material*

The candidate has an excellent mastery of the literature and previous work in the area. The general introduction and the introduction to each study denote a mature use of material and sources. The dissertation is based on three experimental studies, which use appropriate methods of data collection. The statistical analyses are generally appropriate, but a bit redundant. As I will explain in the detailed comments, the treatment of reaction times in experiments 2 and 3 needs some clarifications. More details about each study follow.

The first experiment is a perception experiment and measures reaction time and accuracy. In the task, participants must decide if two items (novel words) are the same or different. Learners are from A0, A1, A2, B1, B2, C1 levels of English. The results show that participants make a morphological decomposition, and in this respect, they are like monolingual. Level of proficiency matters; in particular lower levels are different from the higher ones. An effect of positional frequency of phoneme (PFS) also matters at all levels of performance. Instead, the frequency of biphones did not. An interaction level by condition shows that performance differs at all levels, but A0. It is worth noticing that the PFS effect holds for all performance levels, while the morphological analysis (level by condition interaction) does not hold for A0. This discrepancy is a hint that the two processes are different. The fact that the frequency of biphones did not matter while PFS did is also interesting because it suggests that we are not blind statistical machines that compute any type of frequency (see Question 1, Q1, and Q2 below)

The candidate suggests that Czech may have a potentially positive effect on processing English morphology compared with other research. I think that an avenue for further investigation is similar to this one, with different levels of proficiency involving participants with an isolating L1. One prediction is that for a participant of an L1 isolating language to perform a morphological analysis, a more advanced level of proficiency is required than that required by Czech speakers.

The second experiment is a production experiment of inflected novel verbs in which the past tense is elicited. Accuracy and reaction time are measured. The results show progress toward using the rule across levels of English proficiency and the use of an

analogical mechanism from B2 level on. It is interesting to see that L2 learners differ from native speakers in that the native speakers are more prone to similarity effects when processing regular. It is possible that native children also behave as L2 and that the similarity effect shows up due to the use of the language. Thus, it is not surprising that it tends to be evident in native speakers. Reaction times were also analyzed. This analysis shows an effect of the dataset (novel words phonotactically legal in Czech) at the initial level of proficiency, suggesting that L1 may boost L2 acquisition at the beginning. There is also an inhibitory effect on native speakers due to the first data set. I am not sure I understand this effect, as the novel words are also phonotactically legal in English if I understood correctly.

I have some concerns about the reaction times (page 100). The reaction times in table 22 go from a min of 0.06 to max 1.64 (all participants), and the standard deviation (SD) is 0.32. It seems to me that the SD is small for such a difference between min and max. Second, the min is 0.06 s (i.e. 60 ms). Generally, a reaction time is about 200 ms. The candidate states that outliers are removed following the procedure described in chapter 3. In chapter 3, the table (table 2) reports reaction times that are plausible (min 0.69 s, i.e., 690 ms) (see Q3, Q4, Q5, Q6, and Q7).

The third experiment taps on transfer. Participants took a lexical decision task on real and novel words. Novel words were divided into phonotactically legal in English (see the previous comment) and Czech and phonotactically legal only in English. Reaction time and accuracy measures were collected. Results showed that RT to real words were shorter than to novel words, an expected result. An effect of Czech on English was detected, but only in the t-test analysis and not in the Anova (Page 138). I would suggest using the Bonferroni, rather than the t-test, which is stricter. I think it is fair to say that the reaction times did not lead to the expected results but just a tendency. Concerning reaction time, I have the same question I raised for experiment 2. The results on accuracy also show the effect only with the t-test. All in all, the results of this experiment did not align with the prediction, and the candidate is aware of that and discusses the limits of this experiment in a detailed way.

#### *4. Personal contribution to the subject*

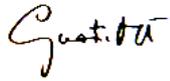
The dissertation is an original contribution from the candidates. It contains three novel experimental studies, which can contribute to the field and are very well presented. The introductions and discussions are clearly written.

## **I V. Conclusion**

My overall evaluation of the dissertation is very positive. The literature review, the introduction, the three studies and the final discussion are very well organized. The experiments are correctly designed, and the statistical analyses are appropriate. I have offered some comments that may be useful for publishing.

I recommend the submitted dissertation with the tentative grade of pass.

Professor Maria Teresa Guasti



31/08/2021

Question 1: Does the candidate have some speculation about this different pattern of frequency effects? Could it be that we track something that is linguistically interesting? It may be suggested that position is relevant for co-articulation processes, while biphone frequency does not have any linguistic role.

Question 2: By looking at table 2, it is apparent that there is no difference between condition 1 and 3, at A0 and also A1 (but this lack of difference does not show up in table 6, likely because all the three conditions are analyzed). At the same time, condition 2 is always different from condition 1. Can the candidate offer some discussion about this?

Question 3: Can the candidate clarify this aspect concerning the inhibitory effect?

Question 4: I have some concerns with Figure 21. The candidate found an interaction between less/more similar and regular vs irregular depicting in Figure 21. However, by inspecting the figure, it does not seem that in the group less similar, the difference between regular and irregular is significant (although there is a tendency). The same observation carries out to the more similar. Did the candidate do post-hocs?

Question 5: how were reaction time measured? When did the measure start to be taken (at the beginning of pronunciation?), and how was it taken?

Question 7: can the candidate clarify the issue concerning reaction times?