Silent pauses and disfluencies in consecutively interpreted Hungarian speech

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Abstract

Research into fluency in interpreted target language texts has received considerable research attention in Interpreting Studies for two reasons: first, fluency plays a key role in the evaluation of interpreter performance in training and by the target audience; and, second, it contributes to a better understanding of the covert processes of speech planning during interpreting.

The aim of this paper is to map the frequency of occurrence of silent pauses, filled pauses and lengthenings in the consecutively interpreted Hungarian target language output of interpreter trainees. As part of a longitudinal study, recordings were made of the students’ consecutive interpreting performance at the end of the second, third and fourth semesters of a 4-semester master’s program in translation and interpreting.

Our results indicate that there were no significant changes in the frequency of occurrence of disfluencies in the target language output of students in the recordings made at different stages of interpreter training. However, the average duration of filled pauses in the interpreted target language texts decreased significantly as students progressed in their training.

Index Terms: consecutive interpreting, longitudinal study, silent pauses, filled pauses, lengthenings

1. Introduction

Fluency is considered to be a multidimensional construct; speech research distinguishes planning, surface and perceived fluency [1]. Research in Interpreting Studies into fluency during interpreting has focused on perceived deviations from norms [2], for example on hesitations and disfluencies. There are two reasons why fluency is of key importance: first, fluency plays a key role in the evaluation of interpreter performance in training and by the target audience; and, second, it contributes to a better understanding of the covert processes of speech planning during interpreting.

Speech production during interpreting differs from spontaneous monolingual speech production in many respects: interpreters express the ideas of the source language speaker, and have to keep both the source and the target language systems active during target language speech production.

During consecutive interpreting (CI), interpreters produce an oral rendering of the source language (SL) text in the target language (TL). The SL speech can range in length from one word to a whole speech [3]. In CI, one section of the SL text is produced by the SL Speaker, and after the SL speaker finishes the section, the consecutive interpreter provides a TL rendering of the SL message. Thus, speech production during CI is interpreter paced, whereas comprehension of the SL text is paced by the SL Speaker. Gile, in his Effort Models for CI, details efforts or mental energy needed in the two stages of CI [4]. During the first stage, interpreters divide their attention between listening and analysis, note-taking, short-term memory operations and co-ordination. During the second stage, attention is divided between remembering, note-taking and production. A more recent approach to attention and the division of attention in CI is related to the construct of cognitive load: Seeber defines it as “the amount of capacity the performance of cognitive task occupies in an inherently capacity-limited system” [5, pp.19].

The complexity of speech production in CI is reflected in the specific disfluency pattern of consecutively interpreted TL texts. Mead investigated pauses in the consecutively interpreted TL output of trainee and professional interpreters in their A (L1) and B (L2) languages [6,7], and found that the proportion of pauses was higher in the output of trainee interpreters when they were interpreting into their B language. In his second investigation, Mead found that with the increase in interpreting experience, the proportion of hesitations related to grammar and lexical problems decreased.

Bóna and Bakti [8] analyzed speech samples in four speech tasks: spontaneous speech, extemporaneous speech CI and sight translation. They found that filled pauses were the most frequent across all speech tasks, and that CI generated higher cognitive load than spontaneous or extemporaneous speech.

To map the development of consecutive interpreting skills, a longitudinal study was conducted at the University of Szeged. In the consecutively interpreted Hungarian target language output of interpreter trainees, the frequency of occurrence of speech errors (error-type disfluencies [ETDs], like grammar errors, blends, false word errors) [9] were examined. Results showed that the average frequency of speech errors does not change considerably as students progress in their interpreter training, however, considerable individual differences exist.

In addition, interpreter trainers and a target audience were invited to give comments related to the fluency and delivery of the interpreter trainee [10]. 14 randomly selected sections (2 / interpreter trainee, one from an earlier semester 2 or 3) and one from a later semester 3 or 4) stage in their MA program) from the Hungarian target language output of the students of interpreting were evaluated by interpreter trainers and a target audience of university students. Results show that as students of interpreting progressed in their training, the quantitative evaluation from the target audience improved [10]. In the qualitative evaluation form the target audience, the proportion of positive comments related to fluency increased for segments recorded at a later stage of the training of the interpreter trainees. Negative evaluative comments included the presence...
of filled pauses and disfluencies in the target language texts of the student interpreters, however, the proportion of the negative comments related to fluency decreased for the recordings made at a later stage of the training of the interpreter trainees.

Similar results were received from the analysis of the evaluation of the selected segments of the Hungarian target language texts by interpreter trainers. In their quantitative analysis, segments recorded at a later stage in training received a better ranking (one scale of 1 to 5). The proportion of positive comments related to fluency increased for segments recorded at a later stage of the training of the interpreter trainees. Negative evaluative comments included the presence of filled pauses and disfluencies in the target language texts of the student interpreters, however, the proportion of the negative comments related to fluency decreased for the recordings recorded at a later stage of the training of the interpreter trainees [10].

In this paper we present the results of analysis of silent pauses, filled pauses and lengthenings in the consecutively interpreted target language output of interpreter trainees. These disfluencies can shed a light on speech planning difficulties interpreter trainees might face during consecutive interpreting.

We worked with the following hypotheses:

1. the frequency of silent pauses will not change as interpreter trainees progress in their training, as they have other functions as well, such as functioning as signals to the listener or they can be breathing spaces [11],

2. the frequency of filled pauses and lengthenings will decrease as interpreter trainees progress in their training.

3. Differences are expected in the duration of pauses as interpreter trainees progress in their training: the more experienced interpreter trainees are, the shorter silent pauses and filled pauses they will need for speech planning during consecutive interpreting.

2. Procedure

There were seven master’s students of interpreting from the University of Szeged who took part in a longitudinal study aimed at mapping the development of consecutive interpreting competence. Students volunteered to participate. As part of the longitudinal study, recordings were made at the end of the second, third, and fourth semesters of the training of the students’ consecutive interpreting from English into Hungarian, sight translation from English into Hungarian, and spontaneous and extemporaneous speech production in Hungarian (at the end of the second semester). Of these, only consecutive interpreting was analyzed in the present study, but we consider this information important because participants were already accustomed to the speech situation during the CI task.

Five female and two male students participated in the longitudinal study, their average age was 23.28 years at the end of the second semester of their studies, when the first recordings were made. The A language or L1 of the students is Hungarian, their B language or active language is English (for 3 students) and Spanish (4 students). The C or passive language of the students were English (4 students), Italian (1 student), German (1), and French (1).

The students’ interpreting performance from English into Hungarian was investigated; for some students, English is their B, and for others, English is their C language. Still, their English background knowledge can be considered similar; students with English as their B language had been learning English for 14.3 years when the first recordings were made, and students English as their C language had been learning English for 16 years at the time when the first recordings were made.

Students interpreted English source language texts of comparable length and lexical and syntactical complexity into Hungarian at the end of the second, third and fourth semester of their MA training. The English source texts introduced British or American universities and colleges, with the aim of recruiting students to these universities. All of the English source language (SL) texts contained 10 sections, which were consecutively interpreted into Hungarian. The SL text at the end of the second semester introduces Williams College (USA), the SL text used at the end of the third semester introduced Oxford University (UK), and the SL used at the end of the fourth semester of the program introduced Swansea University (UK).

Some deviations from standard interpreting practice have to be noted. The recordings were made in a language laboratory without any audience present. These limitations undermine to some extent the ecological validity of the investigation.

In the course of the present analysis, we investigated silent pauses, filled pauses and lengthenings in the consecutively interpreted Hungarian target language texts. Silent pauses were considered gaps without vocalizations in speech (independently whether they were breathing pauses or not, because it is not always possible to know with certainty when the speaker has taken a breath, or the same pause may have other functions besides taking a breath - there may be a disfluency, as well). The inter-lexical pauses related to speech planning processes were distinguished from articulatory pauses (closure phase of a voiceless stop) [12]. Filled pauses were considered pauses that were filled with sounds (not words) [12]. Lengthenings were any sounds considered longer than normal [13], and which occurred as disfluency and not as articulation specificity (like phrase final lengthening). Lengthening and filled pauses were checked by two annotators. The transcript of one of the annotators was double-checked by the second one (who is one of the authors), and if one phenomenon was classified differently, then it was re-checked.

For these three phenomena, their frequency of occurrence was calculated for 100 words. Duration was also measured for silent and filled pauses by Praat [14] (Figure 1), then averages were calculated for individuals and for semesters 2, 3 and 4 of the interpreter training program. For these data, statistical analyses were carried out using SPSS 20 (repeated measures GLM).
3. Results

In our analysis, 2422 silent pauses, 1626 filled pauses, and 507 lengthenings were analyzed. Filled pauses appeared in three main forms: ö, m, öm [ø, m, øm]. In addition, other types of filled pauses also appeared in the target texts. There were no considerable differences in the appearance of hesitations in the recordings made at the end of semesters 2, 3 and 4. (Figure 2).

Frequency results show that within the group there is no significant difference between the frequency results of the three types of disfluencies examined (filled pauses, silent pauses, lengthenings) for the three semesters, the differences between the averages are negligible (Table 1.). The averages, at the same time, hide considerable individual differences in the frequency values (Figures 3, 4, and 5), and there were no clear individual tendencies for the data obtained for the different stages in training.

Table 1. : Frequency of the examined phenomena (number in 100 words, mean and SD)

<table>
<thead>
<tr>
<th>Time</th>
<th>Silent pauses</th>
<th>Filled pauses</th>
<th>Lengthenings</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2</td>
<td>27.0 (8.3)</td>
<td>18.7 (3.4)</td>
<td>4.7 (2.2)</td>
</tr>
<tr>
<td>S3</td>
<td>25.6 (10.0)</td>
<td>16.7 (5.2)</td>
<td>5.1 (3.2)</td>
</tr>
<tr>
<td>S4</td>
<td>24.5 (8.2)</td>
<td>15.9 (4.2)</td>
<td>6.3 (4.2)</td>
</tr>
</tbody>
</table>

The duration of silent and filled pauses was also examined (Table 2): for each student of interpreting and for each semester the average duration of silent pauses and filled pauses was calculated, and the results were analyzed using repeated measures GLM. For silent pauses, no significant difference was found between the target texts recorded at different stages of
interpreter training. However, there was a significant difference in the duration of filled pauses (\(F(2, 12) = 7.037; p = 0.027; \eta^2 = 0.540\)). In the target texts recorded after semester 4, the average duration of filled pauses was significantly shorter than the average duration of filled pauses in the recordings after semester 2 (\(p = 0.044\)) and the average duration of filled pauses after semester 3 (\(p = 0.009\)).

Table 2: Mean duration of silent and filled pauses (ms) (mean and SD)

<table>
<thead>
<tr>
<th>Time</th>
<th>Silent pauses</th>
<th>Filled pauses</th>
</tr>
</thead>
<tbody>
<tr>
<td>S2</td>
<td>381 (108)</td>
<td>389 (68)</td>
</tr>
<tr>
<td>S3</td>
<td>354 (97)</td>
<td>368 (50)</td>
</tr>
<tr>
<td>S4</td>
<td>447 (197)</td>
<td>329 (54)</td>
</tr>
</tbody>
</table>

4. Conclusions

Our results indicate that the frequency of occurrence of the phenomena examined did not change as students progressed in their training. This confirms our first hypothesis, stating that the frequency of occurrence of silent pauses would not change in the Hungarian target language output of student interpreters as they progress in their training. However, our second hypothesis, according to which the frequency of occurrence of filled pauses and lengthenings would change as students of interpreting progress in their training, was not confirmed by the data.

The average duration of silent pauses in the Hungarian target language output of the interpreter trainees did not change significantly as they progressed in their training. However, the average duration of filled pauses decreased significantly between recordings made after semester 2 and 3 semester 4 of the interpreter training. This confirms our third hypothesis. Gösy [15] found that the duration of filled pauses highly depends on the position of filled pauses, whether they are between two silent pauses or they are attached to a word. We didn’t consider this factor, but a future avenue of research could be to examine whether the phonetic position of filled pauses changed as interpreter trainees progressed in their training.

Earlier studies of the same sample have shown changes related to the evaluation of the consecutively interpreted Hungarian target texts from trainers and target audience [10]. A possible explanation for the fact that the frequency of occurrence of silent pauses, filled pauses and lengthenings did not change as students of interpreting progressed in their training might be that speech type is a stronger factor determining their occurrence than expertise in interpreting. The content analysis of the Hungarian target language texts revealed that recordings made after semester 2 of the interpreter training were less faithful to the original than the target language texts produced after semesters 3 and 4 [10], however, producing more faithful texts after semesters 3 and 4 might have required more mental energy from the students, which might explain why there was no change in the frequency of occurrence of disfluencies signalling speech planning difficulties. In addition, silent pauses can occur as disfluencies but also as punctuation marks for the listener, or as breathing spaces [11], which might explain our finding that their duration did not change as students progressed in their training. The significant decrease in the duration of filled pauses, however, signals that with the development of interpreting competence, the interpreters used time gaining strategies with equal frequency, but students needed less time to cope with planning disharmonies.

5. References