

DIVIDED ATTENTION IN SIMULTANEOUS INTERPRETING¹

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Simultaneous interpreting is one of the most requiring activities. It does not equal listening to speech, translating and producing it. In this study we hypothesize that simultaneous interpreters would have a more profound noise filter system than a control group doing a similar demanding task.

Procedure

Simultaneous interpreters (N=11) were asked to translate a video sequence where a speaker was giving a speech surrounded by 20 different objects. They were later presented with a recall test (20 target stimuli, 40 distractors) and comprehension questions. The control group (N=19) was instructed to shadow the speaker, press a button when he looked into the camera and to press another button when the speaker pronounced proper names, all those creating a situation of significant cognitive load similar to one experienced by simultaneous interpreters. Another group of interpreters (N=9) was asked to do the same task. The experimental condition was compared by a control group performing a simple shadowing task for the same video (N=16). The participants' eye movements were recorded via the eye-tracker EyeLink 1000Plus.

Results

In gaze data, we have found statistically significant difference in average fixation duration between the simultaneous interpreters and the controls (Kruskal–Wallis test, $p=0,0001$; see fig. 1). Simple shadowing (1026,25 ms) and complex shadowing done by the control group (1085,51 ms) seem to have the same pattern indicating significant cognitive load, while within the interpreting task (369,34 ms) and the complex shadowing done by the interpreters (376,66 ms) we can see a dramatic decrease in average fixation duration.

However, we have not discovered significant difference in average saccade amplitude. No difference has been found between groups when it came to identifying areas of interest (background vs. speaker) which indicates the gaze was scattered evenly between them.

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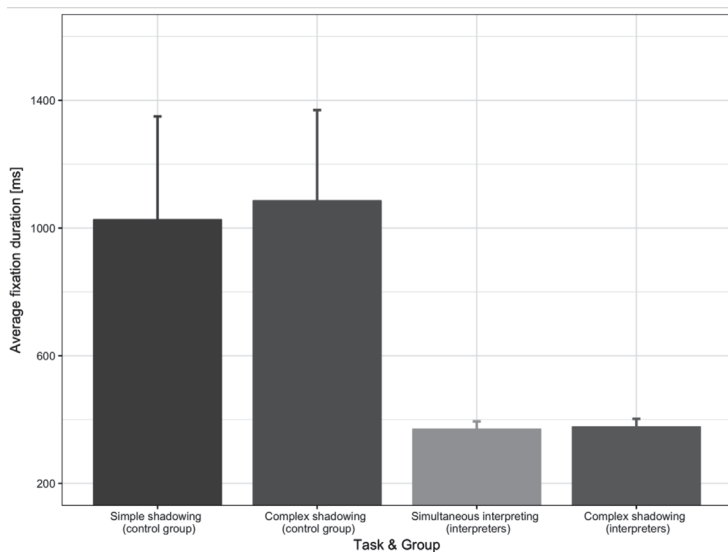


Fig. 1. Average fixation duration for all four participants' groups.

During irrelevant information processing analysis, we did not find any difference in recall test performance between the groups (generalized linear regression, $p > 0,05$). Thus, simultaneous interpreters did not recall more objects from the video than the controls, as we would expect. However, both groups were making more mistakes in target stimuli identification compared to distractors ($p < 0.001$).

Discussion

Thus, divided attention mechanisms of a simultaneous interpreter present as different from that of a person without simultaneous interpreting training during a cognitively demanding task: the gaze data shows that cognitive load, indirectly indicated by prolonged average fixation duration, is significantly greater for both control groups. When it comes to irrelevant information processing, the recall test results reveal that simultaneous interpreters' perception filters are not tilted towards accumulating more incoming information than those of a person without simultaneous interpreting training, as we have previously hypothesized.