

FEWER PREDICTIONS IN L1 SOURCE LANGUAGE IN CONSECUTIVE INTERPRETING WHEN COGNITIVE LOAD IS HIGH

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Prediction has been regarded as an essential characteristic of language processing by psycholinguistics (1). Simultaneously, it is also recognized as a practical strategy employed by interpreters (2). Given this, it becomes crucial to investigate how interpreters process language in real-time to better understand the predictive characteristic of language processing. Numerous studies have shown that the availability of cognitive resources (e.g., working memory) is one of the most important factors that influence one's ability to predict (3). However, limited studies have explicitly examined the effect of cognitive load on predictive processing in consecutive interpreting, which itself requires high cognitive resources.

To delve into this issue, we recruited 39 native Mandarin (L1) speakers with experience in interpreting between Mandarin and English (L2) to participate in a visual world paradigm eye-tracking experiment. The experiment adopted a design of 2 (verb: unpredictable vs. predictable) x 2 (task: repeat vs. translate) x 2 (load: low vs. high). Participants were instructed to first remember one digit (low load) or five digits (high load), and then listen to a spoken sentence (e.g., “这个男孩想要吃掉/移动蛋糕”, *the boy wants to eat/move the cake*, with the former verb predictive and the latter unpredictable of the following noun). After the offset of the sentence, they were asked to repeat or translate the sentence and then type the digit(s) that they had initially heard.

Results indicated that there were more fixations to the target when the verb was predictive than when it was unpredictable in both task conditions, suggesting that participants can use verb information to predict semantically-related upcoming target words in both regular language comprehension (repetition) and L1-to-L2 consecutive interpreting, which is consistent with previous studies showcasing a prediction effect of verb (4-5). Moreover, the prediction effect was not amplified when interpreting compared to repeating, which is inconsistent with a previous study (6). We attribute this discrepancy to the different translation directions between the two studies; theirs asked participants to interpret from L2 to L1, in which the L1 target language may facilitate L2 source language comprehension. Lastly, when cognitive load is higher, participants were less likely to make predictions when interpreting (but not when repeating), suggesting that predictive machinery in consecutive interpreting requires cognitive resources (7), although this effect was only marginally significant.

In conclusion, our study suggests that participants tend to make predictions in their L1 source language in both repetition and consecutive interpreting tasks. Moreover, when cognitive resources are limited, they are likely to make fewer predictions when translating L1 into L2, which supports the idea that prediction in comprehension requires cognitive resources.

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