#### COGNITIVE PROBLEMS IN SIMULTANEOUS INTERPRETATION

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#### ABSTRACT:

Synchronous translation, a remarkable linguistic skill enabling real-time interpretation of spoken or signed language, presents a unique set of cognitive challenges for translators. This scientific article delves into the intricacies of cognitive processes involved in synchronous translation, highlighting key challenges and proposing avenues for future research. By examining cognitive load, working memory, attention management, and the impact of expertise, we aim to deepen our understanding of the cognitive dimensions of synchronous translation.

**Keywords.** Simultaneous translation, cognitive problem, conceptual problem, cognitive load, working memory, attention control.

#### **Introduction:**

Simultaneous interpreting is a demanding form of language translation that requires translators to process information quickly and accurately and maintain linguistic fidelity. This article addresses the cognitive challenges inherent in simultaneous interpreting and explores the cognitive processes contributing to successful interpreting.

Simultaneous translation is the most complex of translation methods. This is partly because, in simultaneous translation, the interpreter does not control the flow of communication, but adapts to the speed of each speaker and does not stop the process. If a word is missed, the interpreter usually does not have the opportunity to ask the speaker to repeat or clarify. The interpreter must carefully consider the speech's ideas and the conversation's risks, and be prepared to extrapolate meaning from the context to cover or illuminate areas of ambiguity. A second source of difficulty is, of course, the fact that everything happens very quickly: the translator has to carefully follow the original speech at a rapid pace, while at the same time forming and delivering an equivalent translation version and monitoring his output for errors [1].

### **Cognitive load:**

Simultaneous interpreting imposes a heavy cognitive load on interpreters, which involves the simultaneous processing of incoming information, understanding the

language, and creating an equivalent expression in the target language. This cognitive load can be influenced by factors such as the source language's complexity, the content's nature, and the translator's skill. Understanding and managing cognitive load are important aspects of optimizing performance in simultaneous interpreting.

Almost all existing measures of cognitive load are only indirect measures. In educational psychology [2], where cognitive load theory emerged, as well as in cognitive interpretation and translation studies, it is recognized that cognitive load can only be inferred by observing how people perform tasks. This indirectness of measures provides the motivation and necessity for the triangulation of methods, data, and results which is an integral part of our interdisciplinary approach.

## **Working memory:**

Working memory plays an important role in simultaneous translation and serves as a mental workspace where incoming information is processed and temporarily stored. Limited working memory capacity is a challenge as translators must constantly update and retrieve information while managing translation requirements in real-time. To improve the general cognitive performance of simultaneous interpreters, it is necessary to study strategies for increasing working memory efficiency.

## **Attention Management:**

Effective attention management is important in simultaneous interpreting, as interpreters must divide their attention between listening to the source language, formulating the translation, and checking for accuracy. The ability to sustain attention for long periods is made difficult by factors such as fatigue, distractions, and the need for constant mental engagement. Developing teaching methods to study attentional processes and enhance attentional control is essential to solving cognitive problems in simultaneous interpreting.

# **Experience and Skills:**

The role of experience in mitigating cognitive issues cannot be overstated. Experienced interpreters often demonstrate superior performance in meeting the cognitive demands of simultaneous interpreting. Research should begin to develop expertise, explore cognitive processes that develop with experience, and identify teaching methodologies to accelerate the acquisition of advanced skills.

# **Future directions and implications:**

Understanding cognitive issues in simultaneous interpreting paves the way for targeted interventions and breakthroughs. Future research should explore interdisciplinary approaches that incorporate ideas from cognitive psychology, neuroscience, and linguistics. This knowledge can inform the design of training programs and the development of technological tools to support translators in their cognitive endeavors.

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## **Summary:**

Simultaneous translation poses great cognitive challenges that require a comprehensive understanding of the underlying processes. By highlighting the effects of cognitive load, working memory, attentional control, and experience, this paper contributes to the ongoing discourse on the cognitive dimensions of simultaneous interpreting. Solving these problems not only improves the performance of translators but also develops the field of language translation as a whole.

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