

DEEP OR NOT? SPEECH PROCESSING IN SIMULTANEOUS INTERPRETING

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Speech processing is of great significance in simultaneous interpreting (SI). Psychology studies suggest that different SI processes (e.g., speech recognition and production) require access to the same limited resources to efficiently and accurately interpret a speech. These processes may interfere with each other due to a bottleneck in processing capacity. This interference can affect the depth of processing in speech recognition. Here we asked: Can source speech be processed deeply or not in SI? Drawing on existing knowledge (Jongman & Meyer, 2017), we combined a priming paradigm with a picture naming task to address this question. Interpreters and non-interpreters were presented with the spoken name (the prime) of an object, followed by a sequence of two pictures on the screen. The participants' task on each trial was to name the target (second) picture aloud as quickly as possible. We manipulated whether the prime was identical (e.g., spoken word "car" and picture of car) or semantically unrelated to the target picture (e.g., picture of guitar). There were two additional conditions to further test the depth of processing. In the no-production condition, the first picture was not named by participants but had its spoken name presented along with it. In the production condition, participants named both pictures. These conditions allowed us to determine if interference between speech recognition (of the prime) and speech production (naming the first picture) differed between interpreters and non-interpreters. As expected, priming effects were larger in the no-production condition, but did not differ between interpreters and non-interpreters. Interpreters also named target pictures equally quickly across the two conditions whereas non-interpreters named target pictures more slowly in the production condition. We conclude that SI experience increases depth of processing. We also discuss how our findings inform stakeholders in SI and psychology.