

Foreign subtitles improve speech perception

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Do you speak English as a second language well, but still have trouble understanding movies with unfamiliar accents, such as Brad Pitt's southern accent in Quentin Tarantino's *Inglourious Basterds*? In a new study, published in the open-access journal *PLoS ONE*, Holger Mitterer (Max Planck Institute for Psycholinguistics) and James McQueen (MPI and Radboud University Nijmegen) show how you can improve your second-language listening ability by watching the movie with subtitles—as long as these subtitles are in the same language as the film. Subtitles in one's native language, the default in some European countries, may actually be counter-productive to learning to understand foreign speech.

Mitterer and McQueen show that listeners can tune in to an unfamiliar regional accent in a foreign language. Dutch [students](#) showed improvements in their ability to recognise Scottish or Australian [English](#) after only 25 minutes of exposure to video material. English subtitling during exposure enhanced this learning effect; Dutch subtitling reduced it.

In the study, Dutch students who were unfamiliar with Scottish and Australian English watched either an episode of the Australian sitcom *Kath & Kim* or a shortened version of *Trainspotting*, which depicts a Scottish drug addict, Renton, and his friends—with English subtitles, Dutch subtitles or no subtitles. After this exposure, participants were asked to repeat back as many words as they could from 80 audio excerpts taken from each source spoken by the main characters (Kath from *Kath & Kim*; Renton from *Trainspotting*), half of which had

already been heard by the participants in the extracts and half were new to the participants (from a different Kath & Kim episode or from a part of Trainspotting that was edited out).

The researchers found that English subtitles were associated with the best performance on both previously heard and new material but although Dutch subtitles also enhanced performance on the old items, they led to a worse performance on the new materials. The participants seemed to be using the semantic (meaning-based) information in the Dutch subtitles when listening to the English speech and so the Dutch subtitles appear to have helped the participants to decipher which English words had been uttered, as seen in the improved recognition of previously heard materials. This did not, however, allow participants to retune their phonetic categories so as to improve their understanding of new utterances from the same speaker.

Listeners can use their knowledge about how words normally sound to adjust the way they perceive speech that is spoken in an unfamiliar way. This seems to happen with subtitles too. If an English word was spoken with a Scottish accent, English subtitles usually told the perceiver what that word was, and hence what its sounds were. This made it easier for the students to tune in to the accent. In contrast, the Dutch subtitles did not provide this teaching function, and, because they told the viewer what the characters in the film meant to say, the Dutch subtitles may have drawn the students' attention away from the unfamiliar speech.

These findings also have educational implications. Since foreign subtitles seem to help with adaptation to foreign speech in adults, they should perhaps be used whenever available (e.g. on a DVD) to boost listening skills during [second-language](#) learning. Moreover, since native-language subtitles interfere with this kind of learning, such subtitles in television programmes should be made optional for the viewer.

More information: Mitterer H, McQueen JM (2009) Foreign Subtitles Help but [Native-Language](#) Subtitles Harm Foreign Speech Perception. [PLoS ONE](#) 4(11): e7785. [doi:10.1371/journal.pone.0007785](#)

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