



Media Release

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Adopted babies can remember their birth language

New research has discovered that early language learning in children adopted internationally can be subconsciously retained, even when they can no longer remember the learning experience.

This means that even in the very early months of life, useful language knowledge is laid down and stored in an infant's memory.

In a collaborative study by Dr Jiyoun Choi of Hanyang University (South Korea), Professor Anne Cutler from the MARCS Institute for Brain, Behaviour and Development (Western Sydney University and the Australian Research Council's Centre of Excellence for the Dynamics of Language) and Dr Mirjam Broersma, (language scientist at Radboud University, Netherlands) researchers explored whether children who were adopted internationally were advantaged by birth language memory.

The study investigated the language learning abilities of 29 Korean-born Dutch speakers, and a control group of 29 native Dutch-speakers.

During a 12 day training period, the adoptees were asked to identify three Korean consonants, unknown in the Dutch language, and then try to reproduce them.

All of the spoken productions collected in the experiment were then rated by Korean listeners.

Adoptees pronunciation scores (attempts at articulating the correct sound) improved significantly more across the training period than the scores of control participants.

Professor Cutler said decades after their adoption, Korean adoptees were still better at pronouncing Korean sounds than the control participants, even if they were only a few months old at the moment of adoption.

"We know that significant learning occurs in the womb and in the first six months of life," she said.

"But up until now it wasn't clear what of that learning might be retained, even without any further exposure to that language, and how it could be usefully called upon for language (re-)learning.

"It is now evident that this subconscious knowledge can be tapped into to speed up the learning and pronunciation of sounds of the lost tongue."

Professor Cutler said one of the most interesting findings was that there was no difference in the learning results of Korean-born participants adopted under six months of age and those adopted after the age of seventeen months.

"This tells us that lasting cognitive and linguistic abilities are being laid down even in the earliest



months of life and that what has been retained about the birth language is abstract knowledge about what patterns are possible, not, for instance, words,” she said.

“For people adopted internationally this is good news, especially as many of them try to reconnect with the people and culture of their birth countries.”

A paper describing these results was published in *Royal Society Open Science* on January 18.
<http://rsos.royalsocietypublishing.org/>

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