

# Research Directions

Office of Research Services

## ***Probing Early Speech Perception***

Professor Catherine Best and Dr Christine Kitamura from MARCS Auditory Laboratories, along with eminent overseas researchers from the University of Newcastle upon Tyne and University of Pennsylvania, have been awarded an ARC Discovery to explore how infants and toddlers learn to explore how infants and toddlers learn to recognise words in their native language, using unfamiliar dialects of English.



'The project addresses the ongoing debate about whether early word representations have global "sound shapes" - specific sound patterns - or are perceived as an abstract set of sounds' says Professor Best. 'This goes to the heart of an unresolved theoretical debate about children's word representations as they move from being a pre-linguistic infant to being a word-learning toddler.'

The project team will address this issue by comparing infants' and toddlers' responses to words spoken in their native dialect relative to their responses to words spoken in four other English dialects. The findings will reveal how young language learners use details of native speech to uncover the abstract linguistic structure in their native language, and will clarify the vital link between the speech sounds infants perceive and early word recognition.

It is expected that the research will advance knowledge and theories about language acquisition in children, and lead to crucial new insights into language and speech-related developmental disorders, improving early diagnosis and treatment. It will also assist in understanding issues of second language learning.

By understanding the process by which young learners handle dialect variation, the project may also provide insights into how automated speech recognition systems can be made more robust to dialectal and foreign accent differences.

**Project Title:** *How Strict is the Mother Tongue? Using dialects to probe early speech perception and word recognition*

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