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Aboriginal children 'can count without numbers'

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LONDON (AFP) — Australian Aboriginal children can count even without having words for numbers, according to a study by British and Australian experts released Tuesday.

The findings run counter to recently revived scientific claims that children can only count if they know the words for numbers, said the lead author of the research, from University College London (UCL).

The study found that four to seven-year-olds from two Aboriginal communities have an "innate system" to count with, even though their languages only have normal words for one, two, few and many.

"Recently, an extreme form of linguistic determinism has been revived which claims that counting words are needed for children to develop concepts of numbers above three," said Professor Brian Butterworth of UCL.

"That is, to possess the concept of 'five' you need a word for five," he said, adding that evidence from numerate societies as well as Amazonians whose language does not have counting words have been used to support the claim.

"However, our study of Aboriginal children suggests that we have an innate system for recognising and representing numerosities... and that the lack of a number vocabulary should not prevent us from doing numerical tasks," he said.

The study looked at two communities: one on the edge of the Tanami Desert northwest of Alice Springs whose language is Warlpiri; the other on Groote Eylandt in the Gulf of Carpentaria, where the local language is Anindilyakwa.

The researchers devised a series of tasks to test how the children understood numbers, and compared them with an English-speaking indigenous group in Melbourne.

"For example, children were asked to put out counters that matched the number of sounds made by banging two sticks



Gumatj Aboriginal children play by a fish net in Arnhem Land in the Northern Territory

Map



together," said Butterworth.

"They had to use an abstract representation of, for example, the fiveness of the bangs and the fiveness of the counters.

At the end he said: "We found that Warlpiri and Anindilyakwa children performed as well as or better than the English-speaking children on a range of tasks, and on numerosities up to nine, even though they lacked number words.

The study was co-authored by UCL and the University of Melbourne, and published in the US journal the Proceedings of the National Academy of Sciences.

Australia's indigenous Aboriginal population make up just 470,000 of the country's population of 21 million and remain the poorest and most marginalised of Australians.

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