

Goat kids can develop accents

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The ability to change vocal sounds (vocal plasticity) and develop an accent is potentially far more widespread in mammals than previously believed, according to new research on goats from Queen Mary, University of London.

Vocal plasticity is the ability of an individual to modify the sound of their voice according to their [social environment](#). Humans benefit from an extreme form of vocal plasticity which allows us to produce a wide range of sounds and accents, but in most other [mammals](#) (except, for example, bats and [whales](#)) vocalisations were thought to be genetically determined, with very limited flexibility and ability to learn.

Dr Elodie Briefer and Dr Alan McElligott from Queen Mary's School of Biological and Chemical Sciences investigated genetic and social effects on goat kid calls.

The team studied four groups of pygmy goats, who were all full or half [siblings](#). They were recorded during two socially and ecologically distinct periods: at one week old, when they typically stay hidden from [predators](#) with their siblings; and at five weeks old, when they form [social groups](#) with animals of the same age, known as 'crèches'.

Writing in the journal *Animal Behaviour*, the team report that despite their limited vocal repertoire, the calls of goat half-siblings became more similar when they were raised in the same social group together.

Dr Briefer explains: "We found that genetically related kids produced similar calls, which is not that surprising. But the calls of kids raised in the same social groups were also similar to each other, and became more similar as the kids grew older. This suggests that goat kids modify their calls according their social surroundings, developing similar 'accents'."

The existence of vocal plasticity in mammals such as goats reveals a possible early pathway in the evolution of vocal communication, which eventually led to human language and speech. Dr McElligott explains: "The research also highlights the important cognitive abilities that some of our domestic animals possess, and which have remained undetected until now. Improved knowledge of their behaviour and cognition provides essential information for improving animal welfare."

More information: 'Social effects on vocal ontogeny in an ungulate (*Capra hircus*),' *Animal Behaviour*, February 16, 2012.

Provided by Queen Mary, University of London

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