

## Vocal accommodation found in African penguins

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A team of researchers affiliated with several institutions in Italy, working with a colleague from Finland, has found that African penguins are capable of vocal accommodation. In their paper published in



Proceedings of the Royal Society B: Biological Sciences, the group describes their study of the vocalizations of penguins in three colonies over three years.

Scientists have long worked to better understand how humans evolved. One such field of study centers on complex human communications, including studying communications in other animals with less evolved communication skills. In this new effort, the researchers looked into one aspect of vocalizations—vocal accommodation. This is where humans and other animals learn to speak more like others around them—learning Spanish, for example, after moving to Spain. In their work, the researchers focused on vocal accommodation in African penguins.

The researchers set up recording devices in three separate penguin colonies to capture their vocalizations over a three-year period. They looked for vocal patterns between pairs of penguins that were on friendly terms. They then parsed out calls made by the pairs when they were separated and looking for one another.

Next, they looked at the audio signatures of the calls over time. They found that their signatures became more alike. The penguins in pairs learned to speak more like each other—a form of vocal accommodation. The researchers suggest the reason the penguins learned to speak more alike was that it made communications much easier when attempting to converse over the loud noise generated by hundreds of other penguins trying to communicate at the same time. They also suggest that vocal accommodation among the penguins could make the colony more cohesive due to the increase in social bonds between friends and mates.

Vocal accommodation has only been seen in a few other creatures besides humans, but the researchers note that the distance between humans and penguins on the <u>evolutionary tree</u> suggests that there are likely many more species with the ability.



**More information:** Luigi Baciadonna et al, Vocal accommodation in penguins (Spheniscus demersus) as a result of social environment, *Proceedings of the Royal Society B: Biological Sciences* (2022). DOI: 10.1098/rspb.2022.0626

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