Wolves and relatives have species-specific howls, extensive study finds

Organisms living in groups have means of communicating with one another, which can be visual, acoustic and/or olfactory. Even though groups may use the same communication system (e.g. acoustic cues), even among closely related species communication (i.e. language) may differ.

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This is true for the acoustic communication of humans as well as other animals, including songbirds, whales and monkeys. Now, a multinational study involving scientists from Cambridge University shows that canids, a diverse genus of top predators including wolves, jackals, coyotes and domestic dogs, also have distinct vocal calls within species and subspecies.

Even subspecies of canids able to interbreed are distinguished by their 'dialects'.

In order to analyse canid calls, the researchers collected over 2000 howls of 13 distinct species and subspecies. Then they used machine-learning algorithms to sort these calls into discrete types. They found that each species and subspecies used very different howl types. This suggests that canid howls are not arbitrary, but instead encode species-specific information. This is the most comprehensive study of canid communication calls to date, and the first one to use machine-learning in this research area.

How human language evolved and what drove the diversity of languages we have today are questions that remain unanswered. Because our closest relatives, the chimpanzees, have relatively simple vocal communication systems, it is difficult to compare our language to theirs. Lead researcher Arik Kershenbaum and collaborators think that understanding how animals living in complex societies communicate with one another could grant us insight into the evolution of our own language. Furthermore, the scientists note that their findings might help in the planning and management of canid conservation programs.

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