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# If You Could Talk To The Animals, Just Imagine It...

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By Rob Manning

Corvallis, OR August 21, 2008 3:38 p.m.

Anyone who's ever owned a pet has wondered, at some point, "What are they trying to tell me?"

So, what can humans understand about animal communication?

Oregon State University recently hosted an international animal acoustic conference to discuss just such questions. As Rob Manning reports, animals and people do have some communication habits in common.

Alright, so maybe you think you know what your dog is saying when he barks at the mailman. But what about this?

< mouse squeaking >

OK, how about this?

< brief squawk of killer whale >

Is this one any easier?

< elephant rumble >

What you heard was – in order – a mouse, a killer whale, and the low rumble of an African elephant.

None of those sound much like the family dog. And they don't sound like anything people can make much sense of. But when those sounds are combined with behavioral observations, there are patterns that emerge that aren't that different from how people act.

Take for instance, how animals behave at cocktail parties.

Michelle Dent is a psychologist from the State University of New York at Buffalo. She studies something called “the cocktail party effect” in birds.

Michelle Dent: “The ‘cocktail party effect’ or the ‘cocktail party problem’ is the problem that humans have, similar to what humans have, when they’re trying to hear out, or listen, to a speaker when that speaker is embedded in a lot of broad-band noise, such as what you might find at a cocktail party when you’re trying to listen to one person, and there’s a lot of diffuse sound around you.”

So what the typical party-goer does is turn her head, so that one ear faces the voice she’s interested in.

Michelle Dent: “Turns out that birds can do exactly the same thing, and so birds, if they’re having a problem communicating with one another, they can change their spatial position and improve their communication effectiveness pretty easily.”

Dent says there’s another interesting phenomenon shared between animals and people – and it’s also easily explained by party behavior. It’s the other side of the cocktail party – when people raise their voices to be heard.

Michelle Dent: “Birds do that, monkeys do that – it’s called the ‘Lombard Effect’.”

It’s not just our furry and feathered friends, though. Marla Holt is a biologist at the federal fish science center in Seattle. She specializes in killer whales.

Maria Holt: “My main goal is to look at the effects of background noise on their vocal behavior.”

Holt looks specifically at what happens if you increase the noise in the frequency range that killer whales are sensitive to.

Maria Holt: “As those noise levels are raised, how do whales adjust for that? And what I found is that they do increase their call level.”

In other words, killer whales experience the Lombard Effect. Holt studies endangered whale pods off the Washington Coast. Those killer whales tend to swim through the same waters as large noisy ships. Some species may migrate based on noise.

Marla Holt says she's now studying what happens when killer whales 'raise their voices.'

Maria Holt: “Does it increase stress, or does it make it more difficult to communicate with members of your pod – which are related. To be together is essential to your survival. Even if they’re able to raise their voice, there might be costs associated with that.”

Animals communicate, but scientists tend to agree that animal noises lack the syntax of formal “language.” But people who study animals that sing, do hear the songs as “music.”

Oregon State music historian Julia Goodwin points to the example of modern French composer, Olivier Messiaen.

She says he took musical dictation from birds.

Julia Goodwin: “He used that as basic musical material to literally take what he viewed as the music of the finest musicians on the planet and translate it into something that human instruments could play.”

One researcher at the recent animal acoustic conference sort of turned Messiaen’s mimickry on its head. She had played computer-generated tunes to mockingbirds. She found some limits to mockingbirds' ability to mock.

Of course, scientists are quick to acknowledge that the limits go both ways. There's still plenty about animal communication for scientists and musicians to puzzle over for years to come.

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