

Can Your Cat Actually Recognize Your Voice?

Uncover the truth about your feline's ability to recognize and react to your distinct voice.

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STORY AT-A-GLANCE

- A recent study shows that big cats (e.g., lions, tigers, cheetahs, leopards, cougars) have the remarkable ability to distinguish familiar from unfamiliar human voices
- When tested, the cats responded more quickly, intensely, and for longer durations to familiar vs. unfamiliar voices
- According to the researchers, the cats' ability to tell the difference between familiar and unfamiliar human voices could have significant implications for their welfare and interactions with caregivers
- A 2022 study demonstrated that pet cats respond most intensely to their humans' (but not strangers') "kitty voices" vs. their normal voices
- A study published in 2013 revealed that your favorite feline shares over 95% of his or her DNA with tigers, despite having split apart on the evolutionary tree almost 11 million years ago

A recent study by researchers at Oakland University shows that big cats demonstrate the "remarkable" ability to distinguish familiar from unfamiliar human voices. Their research results were published in PeerJ in February.¹

As is often the case, while considerable research has delved into understanding the ability of animals to differentiate between familiar and unfamiliar humans, very few of those studies have involved felines. According to the study co-authors:

*"Few studies have focused on voice recognition in Felidae despite the fact that this family presents the rare opportunity to compare domesticated species to their wild counterparts and to examine the role of human rearing. If wild cats share with **domestic cats** the ability to differentiate human voices, this would suggest that this ability is not dependent on domestication or human rearing."*²

Yes, Big Cats CAN Tell Familiar From Unfamiliar Human Voices

Graduate student and study co-author Taylor Crews and her team used carefully designed experiments to investigate whether wild cats recognize familiar human voices. The results provided some surprises:

- There was consistent evidence of voice recognition in 25 cats from various species, including lions, tigers, cheetahs, leopards, lynxes, cougars, and servals.
- The cats responded "more quickly, intensely, and for longer durations" to familiar vs. unfamiliar voices, whether or not their names were used, and regardless of their rearing history. As noted in a Discover

Magazine article on the study:

"Felines as ferocious as tigers, cougars, and cheetahs could tell people apart, and weren't afraid to pick favorites."³

- It seems that close human contact and not domestication is what gives big cats the ability to distinguish between human voices.
- The results also challenge the belief that less social species lack sociocognitive abilities when compared to more social species.

According to study co-author Professor Jennifer Vonk:

"Non-group-living animals can exhibit social cognitive abilities such as heterospecific vocal recognition, so we should not neglect the study of social cognition in less highly social species."⁴

The researchers believe the implications of their study are profound, especially in light of the widespread incidence of human caretakers of cats of all species. The cats' ability to tell the difference between familiar and unfamiliar human voices "could have significant implications for their welfare and interactions with caregivers."

This is yet another study that challenges the notion that cats are aloof animals, and it highlights the importance of acknowledging the cognitive abilities of all species, including less social animals.

Pet Cats Tend to React Only to Their Human's 'Kitty Voice'

The results of a 2022 study suggest that cats react to their owner's voices — especially when we speak in a high-pitched "kitty voice" — but not to the voices of strangers.⁵

Whereas dogs respond when both their owners and strangers speak directly to them, cats seem to put everyone but their human on ignore. According to lead study author Charlotte de Mouzon at the University Paris Nanterre in France, this suggests that cats and their owners bond through their own unique form of communication.⁶

For their study, de Mouzon and her colleagues recruited 16 cats (9 males and 7 females) who lived in studio apartments as either the only pet with a female owner, or in pairs with a heterosexual couple. All the humans in the study were veterinary students at the National Veterinary School in Alfort, near Paris; the kitties ranged in age from 8 months to 2 years.

The owners were asked to use a high-pitched voice to call their cats by name, and also to say phrases (in French) such as, "Do you want to play?", "Do you want to eat?", "See you later!", and "How are you?" The pet owners then repeated the same phrases to humans using their normal voice.

The researchers recorded all this, along with the voices of 16 women not known to the cats, saying the same 4 phrases to humans, and to the cats via video in de Mouzon's laboratory.

The recordings were then played to the cats in their own homes, with their humans present but not interacting with them. Interestingly, when the cats heard their owners' "kitty voices," they tended to stop what they were doing and begin doing something else, for example, looking around, moving their ears and tails, or becoming very still. They were noticeably less responsive when their owners used their normal voices.

However, when they heard the strangers speak to them in their “kitty voices,” calling them by name and enticing them to play or eat, the cats pretty much ignored them. According to de Mouzon, that could be because all 16 were **exclusively indoor cats** with little to no interaction with strangers. She believes the findings are further evidence that cats have considerable social cognitive skills and are “sensitive and communicative individuals.”

“We know that they react to this kind of speech and it’s a good way for cats to know that we’re addressing them,” says de Mouzon. “So, we should feel confident about speaking to our cats with this kind of ‘baby talk.’”⁷

Pet vs. Wild Cats: More Alike Than Different

Whether you share your life with Madame Meow or Admiral Snuggles, believe it or not, your little fluffer is a real tiger at heart. In fact, your favorite feline shares over 95% of his or her DNA with tigers, despite having split apart on the evolutionary tree almost 11 million years ago.

This fascinating detail was among the discoveries of a team of researchers from China and the Republic of Korea who sequenced the genomes of tigers, lions and snow leopards as part of conservation efforts to save these magnificent animals from extinction. Their findings were published in 2013 in the journal *Nature Communications*.⁸

In the study, geneticists sequenced the whole genome of a 9-year-old Amur tiger, also known as the Siberian tiger, and compared it to the genomes of a white Bengal tiger, an African lion, a white African lion, and a snow leopard.

Beyond the discovery that Siberian tigers share 95.6% of their DNA with housecats, the sequencing also revealed that:

- In big cats, several genes are altered in the metabolic pathways linked to protein digestion and metabolism. Those adaptations, which evolved over tens of millions of years, are thought to be what allows felines, as obligate carnivores, to digest and live solely on a diet of animal meat.
- Big cats also have a number of gene mutations that explain their incredibly powerful, fast-acting muscles.
- The snow leopard had unique amino-acid changes in certain genes that may contribute to its ability to adapt to high altitudes.
- The genes associated with muscle strength, energy metabolism, and sensory nerves — including those involved in visual acuity and sense of smell — seem to be undergoing rapid evolution in the tiger.
- White lions possess a variant in the TYR gene, which is the gene related with white coat color in domestic cats, as well as a form of albinism in humans.

Sources and References

^{1,2} [Crews, T. et al. PeerJ, Zoological Science, February 15, 2024](#)

³ [Discover Magazine, February 15, 2024](#)

⁴ [Phys.org, February 15, 2024](#)

⁵ [de Mouzon, C. et al. Animal Cognition, October 25, 2022](#)

^{6,7} [NewScientist, October 25, 2022](#)

⁸ [Cho, Y.S. et al. Nature Communications, Volume 4, Article Number: 2433 \(2013\)](#)
