

Contrary to popular belief, a dog's breed won't predict behavior

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Mase a pit bull plays in the grass with Delonte Hillery in a park in Escondido, California.

They're well-known stereotypes: rottweilers and pit bulls are aggressive, while Labradors and golden retrievers are extra friendly.

But a genetic study published in the journal *Science* on Thursday involving more than 2,000 [dogs](#) paired with 200,000 survey answers from owners demonstrates that the widespread assumptions are largely unfounded.

To be sure, many [behavioral traits](#) can be inherited—but the modern concept of breed offers only partial predictive value for most types of behavior—and almost none whatsoever for how affectionate a dog will be, or conversely, how quick to anger.

"While genetics plays a role in the personality of any individual dog, specific dog breed is not a good predictor of those traits," said senior author Elinor Karlsson, of UMass Chan and the Broad Institute of MIT and Harvard.

"What we found is that the defining criteria of a golden retriever are its [physical characteristics](#)—the shape of its ears, the color and quality of its fur, its size—not whether it is friendly," she added.

Lead author Kathleen Morrill explained that understanding the relationship between breeds and behavior could be the first step in understanding the genes responsible for psychiatric conditions in humans, like obsessive disorders.

"Although we can't really ask a dog themselves about their problems or thoughts or anxieties, we do know that dogs lead rich emotional lives and experience disorders that manifests in their behavior," she said on a press call.

Implications for legislation

The team sequenced the DNA of 2,155 purebred and mixed-breed dogs to search for common genetic variations that could predict behavior, and

combined this info with surveys from 18,385 pet-owner surveys from Darwin's Ark.

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