As anyone who has spent time with cats knows, our feline companions are mysterious—much more so than those *other* furry family members. Here John Bradshaw, author of *Cat Sense* (Basic Books, 2013), fields a selection of questions submitted by *Scientific American* editors and Twitter followers about the cat's many quirks. Bradshaw is a visiting fellow at the University of Bristol School of Veterinary Sciences in England, where he studies the behavior and welfare of cats and dogs, as well as their interactions with people.

Are cats less domesticated than dogs? Are they becoming more domesticated over time?

Cats are far more similar to their wild ancestors than dogs are to wolves, so dogs are in that sense the more domesticated of the two species. As they adapted to living alongside humans, cats became more sociable with one another and much more accepting of people, but there is no evidence that they have changed much more than that over the past few thousand years.

Will cats, which require meat, eventually evolve to eat a broader array of foods as dogs do?

Cats and dogs belong to a group of mammals known as Carnivora, and the wild ancestors of both species dined primarily on meat. Recent DNA analyses indicate that over the course of their evolution, dogs have acquired more copies of the so-called amylase gene, which makes an enzyme that helps to break down starch. Having more copies of this gene has allowed dogs to eat a more omnivorous diet. In contrast, the cat family, known as Felidae, lost the genes that encode several key enzymes—including those that manufacture vitamin A, prostaglandins and the amino acid taurine—early in its evolution. Whereas dogs (and humans) can synthesize these substances from plant-based precursors, cats have to obtain them from meat. To expand their diet, cats would have to evolve physiological traits that allow them to synthesize these and other key nutrients from

plant foods. This capacity has not emerged during the 10 million years of felid evolution, so it seems unlikely to arise spontaneously in our domestic cats.