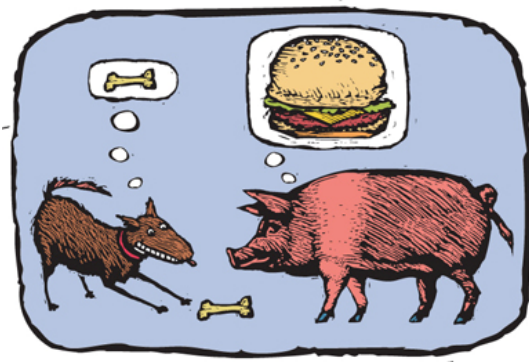


Are pigs smarter than dogs?

Illustration by James Collins



Flying pigs are still the stuff of fantasy. But talking pigs, like E.B. White's mud-loving runt Wilbur, may not be all that far-fetched.

Barnyard pigs are clever creatures. They're known to work in pairs to maneuver the latches and gates of their pens. Once they figure out how to open the gates, they'll do so repeatedly, says Ken Kephart, a Penn State professor of animal science who has spent more than 20 years working with pigs.

The smartest swine even open up the rest of the pens to let the others out, he says. On the occasional early morning, a farmer will arrive at his barn to find many of the pigs loose. "They're very clever, without a doubt," says Kephart. "They can be trained to do many of the same tasks we ask other animals to do."

Some of these useful tasks are instinctual for pigs. For instance, they've long been used to lead people deep into the forests of France to sniff out buried treasure. Truffles, fungi growing beneath the roots of oak trees, can fetch hundreds of dollars, sometimes more than \$1,000 per pound on the gourmet food market.

Other behaviors showcase pigs' ability to learn new behaviors. Using their snouts, pigs can even be taught to maneuver a modified joystick to move a cursor on a video monitor, as proven in research done at Penn State from 1996 to 1998 by Stanley Curtis, then professor of dairy and animal science and now an adjunct animal sciences professor at the University of Illinois.

For rewards of M&M's, Skittles or Reese's Pieces, the pigs moved the cursor over to a target, then used the cursor to distinguish among scribbles drawn by Curtis' grandchild. The pigs were shown one scribble, then a few seconds later shown the same scribble along with a second. They used the joystick and cursor to distinguish between the scribble they had seen before and the one they were seeing for the first time.

The pigs learned these tasks within 5 to 10 attempts, "very quickly," says Curtis. "As quickly as chimpanzees."

But are pigs smarter than dogs?

Both pigs and dogs are quite smart, says Brenda Coe, adjunct assistant professor of animal science, who helped Curtis in the initial stages of his work and also teaches dog behavior in a canine management class. But "intelligence" in animals is typically defined in a limited way, as the ability to learn what people try to teach them.

There is no such thing as an animal IQ or other standard measure for animal intelligence that would allow a straight comparison. "You can compare two pigs or compare two dogs, but you can't compare species to species," says Coe.

Pigs and dogs perform well on different tasks, depending on their motivation and strengths. Food is the motivator for pigs while loyalty and eagerness to please are the primary motivators for dogs.

Pigs can be loyal, but not to the degree that dogs are, Kephart concurs. "Dogs really like to please the people they're working with. Pigs are much more independently minded in my observation."

The animals have different physical abilities, too: Pigs tend to be near-sighted and rely on their senses of smell and hearing. Dogs also have a keen sense of smell, but rely more on their sight than pigs do, says Coe. Dogs are also better able to use their mouths to pick up objects.

"A dog can learn task A quicker than a pig, but a pig may learn task B faster than a dog," Coe adds.

Except for those bred to hunt truffles, pigs have not been bred or raised for much besides food, or trained for tasks in the way many breeds of dogs have. The cognitive skills of the two species have evolved differently as a result of their environments and what has been required of them to survive, says Curtis.

"Both of those species have spent a lot of time with humans, hundreds of thousands of years with hominids. Their behavior was shaped as they evolved, shaped by their interactions with humans."

Curtis hopes to teach a crude language to pigs by teaching them words for images and building a vocabulary. The objective is simple: build a better hog house. "If we're going to build a better piggery so that animals' needs and wants are being supported, then we need to know more about what they need and want," he says. Designing hog houses this way would be both humane and practical, he argues.

If you're thinking by now that it might be nice to have a pig as a pet, think twice. They're as curious as they are clever, and can be destructive as they explore, says Coe. And they need a lot of space. Market hogs are sold at around 250 pounds for slaughter, but can reach 600 to 700 pounds. Though many people are happy owners of potbelly pigs, she adds, these much-smaller animals can sometimes be aggressive.

"I don't think a pig is a good pet for everyone," warns Coe.

Maybe they're just too smart for that.

—Lisa Duchene

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