参考译文

This is Scientific American's 60-second Science, I'm Susanne Bard.

这里是科学美国人——60秒科学系列，我是苏珊娜·巴德。

Dogs began to diverge from wolves tens of thousands of years ago, when their wild ancestors started interacting with humans. Over time, domestication shaped canine behavior, and today dogs are especially ad﻿﻿﻿ept at understanding cues from humans. For example, when a person points at a bowl, a pet dog will usually approach it.

数万年前，狗和狼开始分化，当时狗狗的野生祖先开始与人类互动。随着时间的推移，驯化塑造了犬类行为，如今的狗狗尤为善于理解人类的提示。比如，当一个人指着碗时，宠物狗通常会靠近碗。

"All kinds of complex pointing gestures have been tried with pet dogs, and they seem to be good at it."

“人们尝试对宠物狗做过各种复杂的指示手势，而狗狗似乎非常擅长理解。”

Behavioral biologist Anindita Bhadra of the Indian Institute of Science Education and Research.

印度科学教育和研究所的行为生物学家阿尼迪塔·巴德拉说到。

Wolves are a different story, however.

而狼则不然。

"When the same experiments are done with semi-captive wolves, wolves seem to be quite bad at it. So there's this big open question of 'How did dogs become dogs?'"

“人们对半驯化狼进行同样的实验时，狼似乎非常不擅长理解手势。这就产生了一个巨大的疑问：‘狗是如何变成狗的?’”

Bhadra is interested in whether dogs require training to understand cues like pointing or if the behavior is innate. Most studies have focused on pet dogs in developed countries. But Bhadra thinks it's a mistake to overlook how stray dogs respond to human cues.

巴德拉感兴趣的是，狗狗理解“指向”等提示是训练的结果还是与生俱来的行为?大多数研究都聚焦发达国家的宠物狗。但巴德拉认为，忽视流浪狗对人类提示的反应是错误的。

"In India, we have a huge population of stray dogs. They're not controlled by humans. And they live on the streets for generations. So we felt that the free-ranging dogs are a very nice system, which could give us inputs about what dogs could have been like before they came into our homes, before we made them parts of our families."

“印度有大量流浪狗。它们不受人类控制。它们世代生活在街头。因此，我们认为自由放养的狗是个非常好的系统，它可以让我们了解狗在进入家庭、成为家庭一员之前可能是什么样子。”

For the study, the researchers approached stray dogs on the streets of several Indian cities. One experimenter presented the dogs with a piece of raw chicken in a plastic bowl. About half of the time, the dogs ran away scared. But the friendlier dogs that stuck around were tested for their ability to respond to pointing.

在这项研究中，研究人员接触了印度多座城市的街头流浪狗。一位实验者将一块生鸡肉放进塑料碗，然后将碗放在狗狗面前。狗狗大约有一半几率会被吓跑。但是，也有较友善的狗狗留在原地，实验者测试了这些狗狗对指向的反应能力。

"And the idea was to test the innate ability of dogs to understand simple gestures like pointing cues when they have no training whatsoever."

“我们想测试狗狗在没有经过任何训练的情况下，理解‘指向'等简单手势的先天能力。”

Once a dog proved interested, the first experimenter put chicken in one of two bowls and covered both bowls. A second experimenter—who had no knowledge of which bowl contained the meat and thus could not give subconscious cue information—pointed at one of the bowls while the dog watched.

一旦狗狗显示出兴趣，第一位实验者会将鸡肉放入两个碗中的一个里，然后盖住两个碗。第二位实验者不知道哪只碗里有肉，因此无法发出潜意识提示信息——在狗狗的注视下指出其中一只碗。

"And then, in this experiment, about 80 percent actually followed the point and went to the bowl that we pointed toward."

“在这项实验中，大约80%的狗会追随手指的方向，跑到指向的那只碗。”

That result was true whether the experimenter pointed at it just momentarily or for an extended period of time.

无论实验者是仅指了一下还是长时间指向某只碗，结果都如此。

Bhadra thinks this demonstration provides evidence that training is not required for dogs to understand complex pointing cues. The study is in the journal Frontiers in Psychology.

巴德拉认为这一示范提供了证据，证明狗狗无需训练就可以理解复杂的指向提示。这项研究发表在《心理学前沿》期刊上。

Perhaps further studies with feral canines can help reveal more about what makes dogs our best friends—apparently even when a person and a dog have just met.

对野生犬类的进一步研究，可能有助于揭示为何狗狗会成为我们最好的朋友，显然即使一个人刚刚见到一只狗的时候也会如此。

Thanks for listening for Scientific American's 60-second Science. I'm Susanne Bard.

谢谢大家收听科学美国人——60秒科学。我是苏珊娜·巴德。

听力原文

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