

House cats know what they want and how to get it from you

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Anyone who has ever had cats knows how difficult it can be to get them to do anything they don't already want to do. But it seems that the house cats themselves have had distinctly less trouble getting humans to do their bidding, according to a report published in the July 14th issue of *Current Biology*, a Cell Press publication.

The rather crafty felines motivate people to fill their food dishes by sending something of a mixed signal: an urgent cry or meowing sound embedded within an otherwise pleasant purr. The result is a call that humans generally find annoyingly difficult to ignore.

"The embedding of a cry within a call that we normally associate with contentment is quite a subtle means of eliciting a response," said Karen

McComb of the University of Sussex. "Solicitation purring is probably more acceptable to humans than overt meowing, which is likely to get cats ejected from the bedroom." She suggests that this form of cat communication sends a subliminal sort of message, tapping into an inherent sensitivity that humans and other [mammals](#) have to cues relevant in the context of nurturing their offspring.

McComb said that she was inspired by her own cat, who consistently wakes her up in the mornings with a very insistent purr. She learned in talking with other cat owners that some of their cats too had mastered the same manipulative trick. As a scientist who already studied vocal communication in mammals, from elephants to lions, she decided to get to the bottom of it.

It turned out that wasn't so easy to do. The cats were perfectly willing to use their coercive cries in private, but when strangers came around they tended to clam right up. Her team therefore had to train cat owners to record their own cats' cries.

In a series of playback experiments with those calls, they found that humans judged the purrs recorded while cats were actively seeking food as more urgent and less pleasant than those made in other contexts, even if they had never had a cat themselves.

"We found that the crucial factor determining the urgency and pleasantness ratings that purrs received was an unusual high-frequency element—reminiscent of a cry or meow—embedded within the naturally low-pitched purr," McComb said. "Human participants in our experiments judged purrs with high levels of this element to be particularly urgent and unpleasant." When the team re-synthesised the recorded purrs to remove the embedded cry, leaving all else unchanged, the urgency ratings for those calls decreased significantly.

McComb said she thinks this cry occurs at a low level in cats' normal purring, "but we think that cats learn to dramatically exaggerate it when it proves effective in generating a response from humans." In fact, not all cats use this form of purring at all, she said, noting that it seems to most often develop in cats that have a one-on-one relationship with their owners rather than those living in large households, where their purrs might get overlooked by poorly trained people.

In those instances, she said, [cats](#) seem to find it more effective to stick to the standard meow.

Source: Cell Press ([news](#) : [web](#))

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