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Cats 'exploit' humans by purring

<http://news.bbc.co.uk/go/pr/fr/-/1/hi/sci/tech/8147566.stm>

Adapted from BBC News 13.07.2009 © BBC MMIX



Cat owners may have suspected as much, but it seems our feline friends have found a way to manipulate us humans.

Researchers at the University of Sussex have discovered that cats use a "soliciting purr" to overpower their owners and *garner* attention and food.

Unlike regular purring, this sound incorporates a "cry", with a similar frequency to a human baby's. The team said cats have "tapped into" a human bias - producing a sound that humans find very difficult to ignore.

Dr Karen McComb, the lead author of the study that was published in the journal *Current Biology*, said the research was inspired by her own cat, Pepo. "He would wake me up in the morning with this insistent purr that was really rather annoying," Dr McComb told BBC News. After a little bit of investigation, I discovered that there are other cat owners who are similarly *bombarded* early in the morning."

While meowing might get a cat expelled from the bedroom, Dr McComb said that this *pestering* purr often convinced beleaguered pet lovers to get up and fill their cat's bowl. To find out why, her team had to train cat owners to make recordings of their own cats' vocal tactics - recording both their "soliciting purrs" and regular, "non-soliciting" purrs.

"When we played the recordings to human volunteers, even those people with no experience of cats found the soliciting purrs more urgent and less pleasant," said Dr McComb.

How annoying?

She and her team also asked the volunteers to *rate* the different purrs - giving them a score based on how urgent and pleasant they perceived them to be.

"We could then *relate* the scores back to the specific purrs," explained Dr McComb. "The key thing (that made the purrs more unpleasant and difficult to ignore) was the relative level of this embedded high-frequency sound."

"When an animal vocalises, the vocal folds (or cords) held across the stream of air snap shut at a *particular* frequency," explained Dr McComb. The perceived pitch of that sound depends on the size, length and tension of the vocal folds.

"But cats are able to produce a low frequency purr by activating the muscles of their vocal folds - stimulating them to vibrate," explained Dr McComb.

Since each of these sounds is produced by a different mechanism, cats are able to embed a high-pitched cry in an otherwise *relaxing* purr.

"How urgent and unpleasant the purr is seems to depend on how much energy the cat puts into producing that cry," said Dr McComb.

Previous studies have found *similarities* between a domestic cat's cry and the cry of a human baby - a sound that humans are highly sensitive to.

Dr McComb said that the cry occurs at a low level in cats' normal purring. "But we think that (they) learn to dramatically *exaggerate* it when it proves effective in generating a response from humans." She added that the trait seemed to most often develop in cats that have a one-on-one relationship with their owners. "Obviously we don't know what's going on inside their minds," said Dr McComb. "But they learn how to do this, and then they do it quite deliberately." So how does Dr McComb feel about Pepo now she knows he has been manipulating her all these years? "He's been the *inspiration* for this whole study, so I'll forgive him - credit where credit's due."

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Read the article.

1. Answer the following questions.

- a) Why is this type of purring hard for humans to disregard?
- b) How did non-cat people react to the recordings they were played?
- c) Which cats are more likely to develop this type of purring?
- d) How did Karen McComb describe the purring when she was woken in the morning?
- e) What then led her to carry out further research?
- f) What specific combination of sounds tends to make humans react?

2. Look at the words in the text that are in **bold**. They are listed on the left below.

Match them with a word on the right that can replace them in the text.

For example **garner** can be replaced by gain.

garner	→	gain
bombarded		embellish
pestering		soothing
rate		attacked
relate		motivation
particular		score
relaxing		parallels
similarities		refer
exaggerate		specific
inspiration		irritating

3. What are your views?

Do you think cats or any animals are intelligent enough to have such an effect on humans? Is it just what humans want to believe, so that they can pamper their cats? Have you had any personal experiences of animals manipulating humans? Explain your views and experiences on a separate sheet of paper.

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Answers

1

- a) Because it mimics the cry of a human baby.
- b) They found the soliciting purrs more urgent and less pleasant
- c) Those that have a one-to-one relationship with their owners.
- d) Really rather annoying
- e) She discovered that other cat owners had similar experiences
- f) High pitched cry in a relaxing purr.

2

garner	gain
bombarded	attacked
pestering	irritating
rate	score
relate	refer
particular	specific
relaxing	soothing
similarities	parallels
exaggerate	embellish
inspiration	motivation