

ARE CATS ASOCIAL?



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INTRODUCTION

Cats and dogs, two of human's best friends, are precious companions in our lives. Nowadays, most of us have a feeling that cats are more independent and behave in a selfish way. This difference in behavior can be explained by the fact that the ancestors of dogs and cats had a very different livelihood and **domestication process** (*Table*)¹. Social coordination with humans seems to be much more important for dogs than cats. However, are these evidences enough to say that cats are not very social?

	WILD CATS	WOLVES
SURVIVAL IN NATURE	- independent hunting - solitary	- hunting in groups - live in packs
DOMESTICATION PROCESS	- catching rodents in human stocks - more natural selection	- hunting and guard assistant - more artificial selection



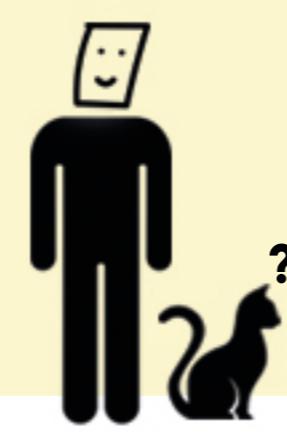
ARE CATS NOT VERY SOCIAL WHEN COMPARED TO DOGS IN TERMS OF ANIMAL-HUMAN INTERACTION?

METHOD

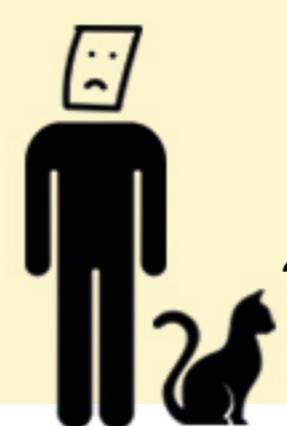
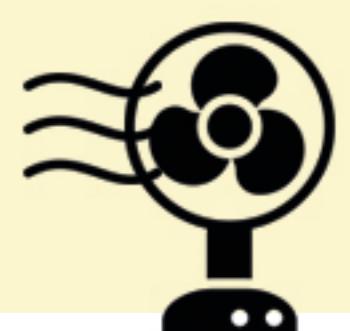
- The so-called "fan experiment" done by Merola et al. was conducted on both cats² and dogs^{3,4} to see both animals' ability to use the emotional reactions of their owners, to evaluate an unfamiliar situation and adjust their behaviour accordingly (**social referencing**).
- Two groups were created and the owners were instructed to show through facial and vocal expression: a positive (smile, "that's nice") or a negative feeling (worried face, "that's scary").
- The stimulus used in the experiment to evoke a slight fear reaction was an electric fan.

The experiment had the following 4 phases:

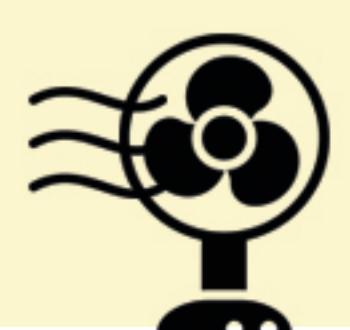
- 1 The owner and their pet entered the room, then the fan was activated remotely. Next, the owner had to face the fan and remain silent with a neutral behavior.
- 2 The owner had to stand in place and talk transmitting either a happy or fearful mood, alternating their eyes between the pet and the fan.
- 3 In the positive group the owner had to walk towards the fan and touch it. While, in the negative group the owner had to distance themselves further away from the fan.
- 4 The fan was turned off. The owners maintained their locations and behaviors.



1.6 m



1.6 m



RESULTS

GAZE ALTERNATION
79%

REFERENTIAL LOOKING
54%

POSITIVE GROUP ☺
+ STATIC

NEGATIVE GROUP ☹
+ INTERACTION

DISCUSSION

- "Fan experiment" on cats suggests that cats can evaluate the emotional state of humans and show a **certain degree of social referencing**².
- "Fan experiments" on dogs^{3,4} had **similar results**: 76% show referential looking and 54% gaze alternation.
- Main behavioral difference → in the negative group cats had less static behavior compared to dogs. Why? Cats are both a **predator and a prey species**⁶.

The lack of synchrony cat-owner could be attributed to:

- 1 **Procedural differences**: cat's fear towards the fan was higher than dogs².
- 2 **Differences in evolutionary history**: dogs have been selected to work with humans, increasing their willingness to cooperate². Furthermore, dogs have always been highly social animals living in packs-like groups, while cats tended to be solitary.

CONCLUSION

Without a doubt, dogs possess a superior social cognition compared to cats. However, thanks to the increasing cat-human interaction in the past millennia, cats can be considered as "**optionally social animals**"⁶. Apart from social referencing, they possess other social abilities such as **vocal recognition, social communication** by meowing and purring, and **attachment** to their owners⁵.

Finally, we can state that **cats have a developed social cognition**, but simply, they do not approach and interact with people in the same manner as dogs. In order to shed some light on their social behaviour, we should encourage scientific research to accumulate evidence that contrast the thought of cats being unfriendly and not very social.

References:

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