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FINDINGS

In That Tucked Tail, Real Pangs of Regret?

By John Tierney
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If you own a dog, especially a dog that has anointed your favorite rug, you know that an animal is capable of apologizing. He can whimper and slouch and tuck his tail and look positively mortified — “I don’t know *what* possessed me.” But is he really feeling sorry?

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Viktor Koen

Could any animal feel true pangs of regret? Scientists once scorned this notion as silly anthropomorphism, and I used to side with the skeptics who dismissed these displays of contrition as variations of crocodile tears. Animals seemed too in-the-moment, too busy chasing the next meal, to indulge in much self-recrimination. If old animals had a song, it would be “My Way.”

Yet as new reports keep appearing — moping coyotes, rueful monkeys, tigers that cover their eyes in remorse, chimpanzees that second-guess their choices — the more I wonder if animals do indulge in a little paw-wrangling.

Your dog may not share Hamlet’s dithering melancholia, but he might have something in common with [Woody Allen](#).

The latest data comes from brain scans of monkeys trying to win a large prize of juice by guessing where it was hidden. When the monkeys picked wrongly and were shown the location of the prize, the neurons in their brain clearly registered what might have been, according to the [Duke University](#) neurobiologists who recently [reported the experiment in Science](#).

“This is the first evidence that monkeys, like people, have ‘would-have, could-have, should-have’ thoughts,” said Ben Hayden, one of the researchers. Another of the authors,

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"Fictive Reward Signals in the Anterior Cingulate Cortex." B. Hayden, J.M. Pearson, M.L. Platt. Science, 2009 (PDF)

"Nonhuman species' reactions to inequity and their implications for fairness." S.Brosnan, Journal of Social Justice, 2006. (PDF)

"Wild Justice." M. Bekoff, J. Pierce

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University of Chicago Press, 2009.
 "The Parrot's Lament." E. Linden. Dutton, 1999.

"Are we barking up the right tree?" S. D. Gosling, S. Vazire. Journal of Research in Personality, 2003. (PDF)

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Michael Platt, noted that the monkeys reacted to their losses by shifting their subsequent guesses, just like humans who respond to a missed opportunity by shifting strategy.

"I can well imagine that regret would be highly advantageous evolutionarily, so long as one doesn't obsess over it, as in depression," Dr. Platt said. "A monkey lacking in regret might act like a psychopath or a simian Don Quixote."

In earlier experiments, both chimpanzees and monkeys that traded tokens for cucumbers responded negatively once they saw that other animals were getting a tastier treat — grapes — for the same price. They made angry sounds and sometimes flung away the cucumbers or their tokens, [reported Sarah Brosnan](#), a psychologist at Georgia State University.

"I think animals do experience regret, as defined as the recognition of a missed opportunity," Dr. Brosnan said. "In the wild, these abilities may help them to recognize when they should forage in different areas or find a different cooperative partner who will share the spoils more equitably."

No one knows, of course, exactly how this sense of regret affects an animal emotionally. When we see a dog slouching and bowing, we like to assume he's suffering the way we do after a faux pas, but maybe he's just sending a useful signal: I messed up.

"It's possible that this kind of social signal in animals could have evolved without the conscious experience of regret," said [Sam Gosling](#), a psychologist at the [University of Texas](#), Austin. "But it seems more plausible that there is some kind of conscious experience even if it's not the same kind of thing that you or I feel."

Marc Bekoff, a behavioral ecologist at the [University of Colorado](#), says he's convinced that animals feel emotional pain for their mistakes and missed opportunities. In "[Wild Justice](#)," a new book he wrote with the philosopher Jessica Pierce, Dr. Bekoff reports on thousands of hours of observation of coyotes in the wild as well as free-running domesticated dogs.

When a coyote recoiled after being bitten too hard while playing, the offending coyote would promptly bow to acknowledge the mistake, Dr. Bekoff said. If a coyote was shunned for playing unfairly, he would slouch around with his ears slightly back, head cocked and tail down, tentatively approaching and then withdrawing from the other animals. Dr. Bekoff said the apologetic coyotes reminded him of the unpopular animals skulking at the perimeter of a dog park.

"These animals are not as emotionally sophisticated as humans, but they have to know what's right and wrong because it's the only way their social groups can work," he said. "Regret is essential, especially in the wild. Humans are very forgiving to their pets, but if a coyote in the wild gets a reputation as a cheater, he's ignored or ostracized, and he ends up leaving the group." Once the coyote is on his own, Dr. Bekoff discovered, the coyote's risk of dying young rises fourfold.

If our pets realize what soft touches we are, perhaps their regret is mostly just performance art to sucker us. But I like to think that some of the ruefulness is real, and that researchers will one day compile a list of the Top 10 Pet Regrets. (You can make nominations at TierneyLab, at nytimes.com/tierneylab.) At the very least, I'd like to see

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researchers tackle a few of the great unanswered questions:

When you're playing fetch with a dog, how much regret does he suffer when he gives you back the ball? As much as when he ends the game by hanging on to the ball?

Do animal vandals feel any moral qualms? After seeing rugs, suitcases and furniture destroyed by my pets, I'm not convinced that evolution has endowed animals with any reliable sense of property rights. But I'm heartened by Eugene Linden's stories of contrite vandals in his book on animal behavior, "[The Parrot's Lament.](#)"

He tells of a young tiger that, after tearing up all the newly planted trees at a California animal park, covered his eyes with his paws when the zookeeper arrived. And there were the female chimpanzees at the Tulsa Zoo that took advantage of a renovation project to steal the painters' supplies, don gloves and paint their babies solid white. When confronted by their furious keeper, the mothers scurried away, then returned with peace offerings and paint-free babies.

How awkward is the King Kong Syndrome? Both male and female gorillas have become so fond of their human keepers that they've made sexual overtures — one even took to dragging his keeper by her hair. After the inevitable rebuff, do they regret ruining a beautiful friendship?

Do pet cats ever regret anything?

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