

#CANINE

Why Do Dogs Tilt Their Heads?

The endearing behaviour is well-known, but few researchers have investigated the reasons why dogs tilt their heads. A recent study offers some clues.



You already know the look: Your dog is staring up at you, its eyes shining with curiosity and ears perked up. And, of course, the pup's head is cocked and slightly to one side in response to the sound of your voice.

It's just one of the many charming quirks that dogs possess. And a quick Google search will offer up plenty of theories for their adorable head-tilting behaviour. For example, some veterinarians suggest that dogs tilt their heads toward their owners to show that they are engaged and prolong the interaction, similar to the way that humans nod during a conversation to show that we're listening.

But surprisingly, little research has investigated the reasons behind it. A recent study, however, may offer some hints - and suggests that the head-tilt could be a sign that your canine companion is trying to better understand you.

Studying the Head-Tilt

Researchers have found that types of animals - fish, reptiles, birds, mammals and even humans - process sensory



information asymmetrically, meaning that they use the left or right side of their brain. Other studies demonstrate that dogs display this asymmetry too, often wagging their tails to one side or sniffing with one nostril over the other.

But when it comes to head tilting in dogs, the scientific literature is far scarcer. "It's a very common behaviour in dogs," says Andrea Sommesse, an animal behaviour researcher at Eötvös Loránd University in Hungary. "There are a lot of anecdotes and stories and all that, but there is no scientific publication on this."

That is, until Sommesse and his colleagues found that "gifted" dogs - meaning those that could memorize the names of a number of different toys - frequently cocked their heads to the side before correctly fetching a specific toy.

An Unexpected Discovery

Sommese says that the finding



came as a surprise: the scientists stumbled upon it while conducting a small study of gifted "word learner" dogs. While most dogs have a hard time learning the names of even two toys, these seven special pups could remember and retrieve at least 10 different toys, by name, after learning them from researchers.

What's more, the team saw that the pups with a penchant for playing fetch cocked their heads after being prompted with a command ("bring rope!") more often than their less-skilled peers. That's when Sommesse and his colleagues decided to dig deeper.

"All of us noticed this," he adds. "So we started talking about it, because it was getting more and more consistent. And then we decided to analyse it."

Tilting Their Heads

In the 2021 study, which took place over several months, the scientists compared the retrieval abilities of the seven "gifted" dogs - all of them border collies - with those of 33 "typical" dogs. Sommesse says they designed the experiment with the dogs in one room and the toys in another.

"So [the dogs] don't actually see the toys," he continues. "And when the owner asks for a toy by name, [the dog] hears the word, the stimulus, and they're like 'Okay, let me think about this. What is it?' And then they go and fetch it."

The study authors found that when prompted by a command from their owner, the gifted dogs cocked their heads 43 percent of the time, compared to just 2 percent of the typical dogs. Thus, the head tilt could be a sign of mental processing - meaning that the pups are likely paying attention or even matching the toy's name with a visual memory of it in their head.

"[The head tilt] is a way to think about something," adds Sommesse. "To get what we call a 'mental representation' of the item or the toy."

Other Reasons For The Tilt

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When Corruption Vanished

#GODLY WAYS



M.N. Sachitanand
Senior Journalist

The gods were disgusted. A nauseous stink pervaded the high heavens. Vishwakarma, the engineer for the immortals, was urgently summoned by the Most High.

"Whence this odious odour, Vishwakarma?" asked the Lord. "Sire, it comes from the land of Bharat in Bhoo Lok. It arises from a peculiar type of decay called Corruption."

"Well, whatever it is, do tackle it expeditiously. The stench is getting to be unbearable. I must say, though, I did not expect this from my own people. What's the matter? Have the good folk of Bharat forgotten us?"

Vishwakarma hesitated, then blurted out, "Not exactly, sire. They do sing your praises still in their temples. But a devil named Mammon is overwhelmingly guiding their actions. Some mental tempering will be required to wean Bharat wassis from his influence."

"Hm! In that case send down Narad to do the job. He is adept at such things."

"Just what I was going to suggest," Narad murmured. "So [the dogs] don't actually see the toys," he continues. "And when the owner asks for a toy by name, [the dog] hears the word, the stimulus, and they're like 'Okay, let me think about this. What is it?' And then they go and fetch it."

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gest. Lord," concurred Vishwakarma.

As he descended to Bharat on his mission, the sage Narad was appalled. The whole country stank. For a moment he was at a loss as to where to begin. Then his sharp intelligence reasserted itself. He decided to explore the land and find out which places gave off the most awful odour.

Sure enough, he landed up in the capital. "Narayan! Narayan!" he exclaimed, holding on to his nostrils. "This place smells like a sewer. Corruption must have reached a stage of final putrefaction here. I guess this is the most appropriate place to begin my experiment."

Closing his eyes in meditation, the sage recited a mantra. PWD engineer O.P. (Open Palm) Singh felt a funny tingle go through him. For a while he felt queasy and then everything settled down. But his mind was spinning with strange thoughts which he had never entertained before.

He strode towards the work site where the contractor was supervising the concrete mixing. He observed that the contractor was cheating on the portion of cement to be added.

He shouted out, "Stop this work immediately. What do you mean by using inferior concrete in this building?"

The contractor looked at him and said, "How much what?" asked the engineer in a puzzled tone. "Oh come on. There is no time for games. You know what I mean. But don't keep pestering me so frequently. After all, I can only afford so much. And the AE and EE have also been taken care of."

"Just what are you talking about?"

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in puzzlement. Never in the past ten years of cheating had the engineer sahib ever put such a question. "Must be a touch of the sun," he surmised.

He put his arm around the engineer's shoulders and said soothingly, "Now, now O.P. Babu, you have been working too hard. Why don't you go and lie down in the shade and let us get on with the work?"

Shrugging off the contractor's arm the engineer retorted angrily, "Don't you try to soft soap me. I am going to report you to the authorities. The audacity of it! Mixing low grade concrete before my very eyes!"

Since he had been doing just that for the past two months, without O.P.J. raising even a frown, the contractor was bewildered. Then he thought, "Oh, the chap wants more money. My God! Won't these leeches ever be satisfied? Just the other day he had given the fellow Rs. 20,000."

"All right, how much this time?" asked the contractor resignedly. "How much what?" asked the engineer in a puzzled tone. "Oh come on. There is no time for games. You know what I mean. But don't keep pestering me so frequently. After all, I can only afford so much. And the AE and EE have also been taken care of."

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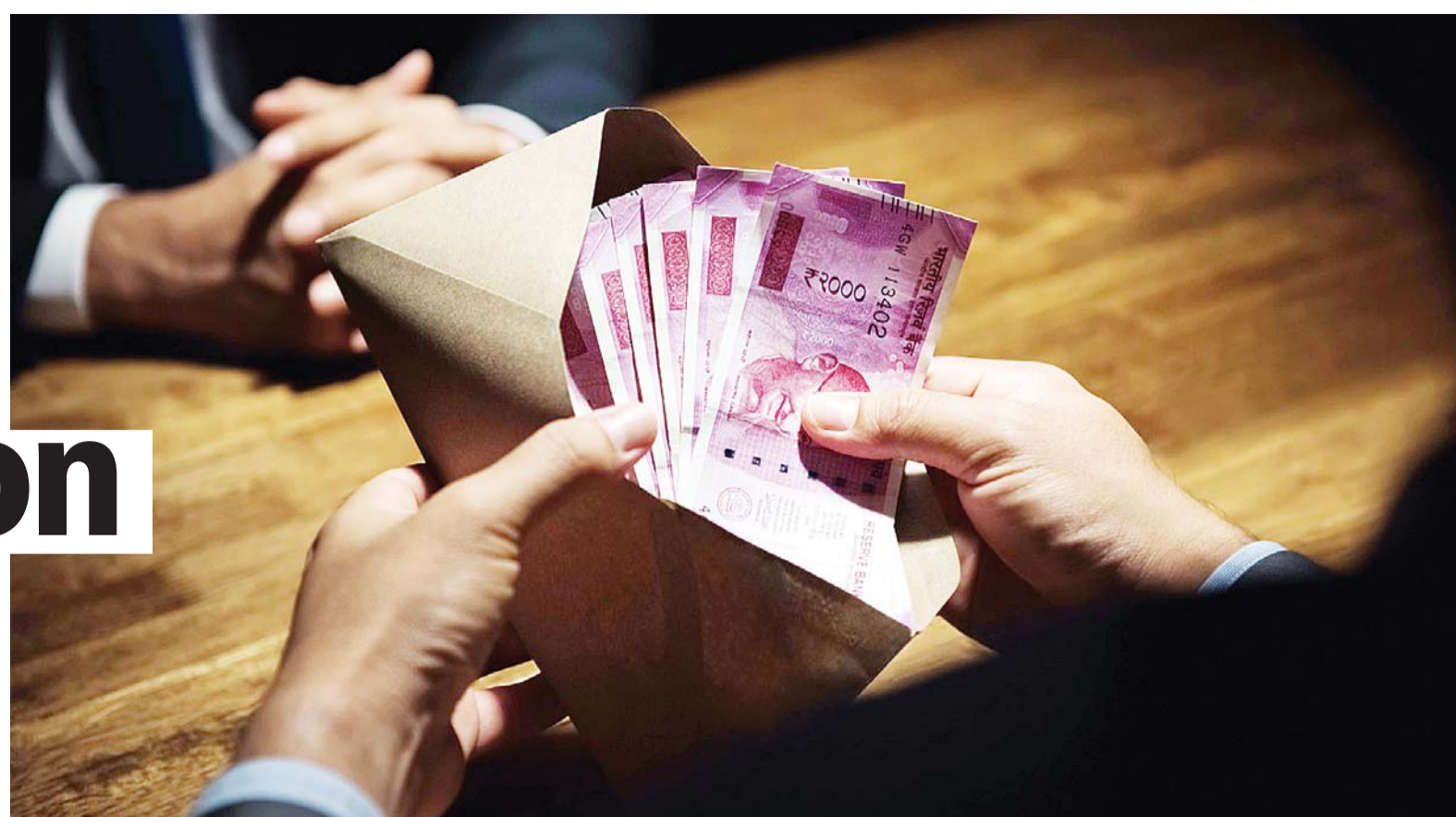
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"Mad!" thought the contractor. "The strain of work must have been too much for the chap."

He was not overtly worried about the threat of the engineer. After all, both the AE and his boss, the EE, had been taken care of.

"Better pay them a visit, though, and brace them with some offerings," he decided. "The poor man was in for some nasty shocks that day. The AE raised the roof when offered an 'incentive' to ignore the engineer's complaint. The contractor found himself all but thrown out of the AE's office."

The interview with the EE was still worse. "Just what sort of a person do you think I am, you crook!" roared the EE. "I will have you arrested for offering me a

regained his heartiness.

He had to inspect the local brewery that day. When he reached the place, the manager welcomed him with easy familiarity, led him to the office and called for a glass of beer for him.

However, before the manager could even settle down in his seat the inspector stunned him by saying curtly, "No thank you. I don't drink while I am on duty. Let us get on with work at hand. Please show me the stock that has to go through Excise."

The manager was thunderstruck. He stammered, "B-but you have never asked to be shown the stock before. What is the matter?"

"What do you mean? I am here to check the manufactured stock. That is my job."

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International Virtual Assistants Day



Virtual assistants are individuals who mostly work on a freelance basis to deliver managerial, administrative and personal assistance related services to clients. They offer support to clients and business owners who need a bit of help but don't need to hire a person to stay in an office or do their work in person. International Virtual Assistants Day is here to raise awareness for the plight of these work-from-home professionals and show appreciation for them! Boost awareness about the role of virtual assistants in the world of business.

formal greeting. "Yes, Mr. Dave?" (None of that usual - "Hello FP. What are you fishing for today?")

Masking his unease at this change in stance, FP assumed an unctuous manner and said, "How are you now, sir?"

"What do you mean - now?" "Why I thought you were indisposed in the morning and therefore unable to meet me."

"That had nothing to do with my health," snapped the minister. "I just do not like to meet business visitors at my residence."

"Since when, you old rascal!" thought FP. "Must be one of your tricks to raise the ante."

But aloud he said effusively, "Quite right, sir. That is the correct attitude for a public servant to adopt."

"Well, well, what have you come to see me about Mr. Dave? Please be brief for I have a very busy schedule today."

"No doubt, you unscrupulous crook," thought FP. "Must be many more chickens to be plucked today."

But aloud he said, "I quite understand, sir. It is about the iron ore mine which Mr. Aggarwal is planning to put up. He is very anxious to commence the project soon. So, he would be very grateful if you would kindly

announced that Mr. FP. (Free Purse) Dave was waiting to see him. The minister frowned. This struck the aide as unusual. Normally, Mr. Dave's name brought a gleam of anticipation into the ministerial eye and dissipated the furrows on his brow. Dave was the liaison officer for the well-known industrialist M.B. (Money Bags) Aggarwal.

There was another shock in store for the aide. Instead of heartily asking Dave to be sent in, the minister coldly ordered, "Tell the gentleman to meet me at my office at 3 pm during the official visiting hours. The nerve of these fellows. Invading the privacy of my house to curry favours."

The aide was perplexed. He had never heard the minister utter such opinions. If the aide was shocked, FP was stunned. "What's biting the pompous ass?" he wondered. Frantically, he tried to recollect whether any promise he had made to the minister for funding had not been fulfilled.

"Why, only last week I had placed the blighter's moronic nephew in a managerial post in Aggarwal's machine tool factory," recollected FP in high dudgeon.

However, though FP personally felt like giving the boot to the minister, functional considerations prevented him from giving vent to his inclination. MB desperately wanted the licence for the proposed iron ore mine to go through. And Favour Seller Prasad's palm had to be greased for that to happen.

At the appointed time, FP breezed into the minister's office with easy familiarity. He was somewhat disconcerted by the minister's frosty glare and curtly

expedite the clearance, sir." The minister frowned and said, "But you know it is against our Government's policy to permit iron ore mining in that area due to environmental concerns."

"Oh sir, you know and I know that there are ways to surmount these policy hurdles. Mr. Aggarwal is prepared to express his gratitude to you in any way you desire, sir." The last was said with special emphasis.

"I am sorry Mr. Dave," said the minister firmly. "We cannot change our policy for just one company's sake."

With a confident air FP played his usual trump card, which had hitherto never failed to work. "Aggarwalji realized, sir, that you might be faced with some difficulty in this matter. He has, therefore, proposed to compensate you personally for it in advance.

Please accept this small token from him. The party will be taken care of later."

FP extended to the minister a small suitcase and clicked it open to show it crammed with currency. To his bewilderment, instead of the usual grasping fingers being extended, the minister's face took on an angry hue. Gripping his chair tightly, he bellowed in indignation, "How dare your Mr. Money Bags, attempt to buy me? Does he think I will betray the trust of the public? Get out of my office before I have you arrested for attempted bribery!"

Totally at a loss at such unprecedented behaviour, FP retreated in haste from the minister's office. Money Bags Aggarwal did not get the mining licence.

A year rolled by. The stench from Bharat had subsided to tolerable limits and the gods were pleased. But they were unhappy about a new nuisance - a terrible din which arose from the land. Vishwakarma was again summoned.

"Whence this cacophony?" asked the Most High.

"Lord, it emanates from the land of Bharat. It is a concerted volley of curses and supplications."

"Why so, Vishwakarma?"

#AIR-POLLUTION

Alzheimer's Risk

The link between air pollution and Alzheimer's disease is concerning, as the prevalence of toxicants in ambient air is rising globally.



In a new study with mice, researchers found exposure to traffic-related air pollution led to memory loss and cognitive decline and triggered neurological pathways associated with the onset of Alzheimer's disease.

"The link between air pollution and Alzheimer's disease is concerning, as the prevalence of toxicants in ambient air is not just on the rise globally, but also hitting close to home here in Irvine," says corresponding and senior author Masashi Kitazawa, associate professor of environmental and occupational health in the program in public health at the University of California, Irvine. "Our findings are just one example of what particulate matter can do to brain function."

Alzheimer's disease is the most common cause of dementia among the elderly and is a growing public health crisis in the US as well as several other countries. Despite extensive research on all aspects of Alzheimer's disease, its exact origins remain elusive. Although genetic predispositions are known to play a prominent role in disease progression, growing bodies of evidence suggest that environmental toxicants, specifically air pollution, may cause the onset of Alzheimer's disease.

Kitazawa and his team compared mouse models at two ages. Researchers exposed a group of 3- and 9-month-old mouse models to ultrafine particulate matter for 12 weeks via ambient air collected in Irvine. A second group was exposed to purified air. The differing ages were used to determine the potential impact of particulate matter exposure during highly vulnerable life stages: developing youth and the elderly.

The researchers conducted testing related to memory tasks and cognitive function and found that exposure to particulate matter impaired both benchmarks. Notably, they also discovered that their older models (12 months at the time of analysis) showed brain plaque build-up and glial cell activation, which are both known to increase inflammation associated with the onset of Alzheimer's disease.

"Air pollution is one of the very few prominent, modifiable environmental