

HOMEWORK

EXERCISE 1²⁶

Animal minds: Parrot Alex

A.

In 1977 Irene Pepperberg, a recent graduate of Harvard University did something very bold. At a time when animals still were considered automatons, she set out to find what was on another creature's mind by talking to it. She brought a one-year-old African gray parrot she named Alex into her lab to teach him to reproduce the sounds of the English language. "I thought if he learned to communicate, I could ask him questions about how he sees the worlds."

B.

When Pepperberg began her dialogue with Alex, who died last September at the age of 31, many scientists believed animals were incapable of any thought. They were simply machines, robots programmed to react to stimuli but lacking the ability to think or feel. Any pet owner would disagree. We see the love in our dogs' eyes and know that, of course, they have thoughts and emotions. But such claims remain highly controversial. Gut instinct is not science, and it is all too easy to project human thoughts and feelings onto another creature. How, then, does a scientist prove that an animal is capable of thinking – that it is able to acquire information about the world and act on it? "That's why I started my studies with Alex," Pepperberg said. They were seated – she at her desk, he on top of his cage – in her lab, a windowless room about the size of a boxcar, at Brandeis University. Newspapers lined the floor; baskets of bright toys were stacked on the shelves. They were clearly a team – and because of their work, the notion that animals can think is no longer so fanciful.

C.

Certain skills are considered key signs of higher mental abilities: good memory, a grasp of grammar and symbols, self-awareness, understanding others' motives, imitating others, and being creative. Bit by bit, in ingenious experiments, researchers have documented these talents in other species, gradually chipping away at what we thought made human beings distinctive while offering a glimpse of where our own abilities came from. Scrub jays know that other jays are thieves and that stashed food can spoil; sheep can recognize faces; chimpanzees use a variety of tools to probe termite mounds and even use weapons to hunt small mammals; dolphins can imitate human postures; the archerfish, which stuns insects with a sudden blast of water, can learn how to aim its squirt simply by watching

an experienced fish perform the task. And Alex the parrot turned out to be a surprisingly good talker.

D.

Thirty years after the Alex studies began; Pepperberg and a changing collection of assistants were still giving him English lessons. The humans, along with two younger parrots, also served as Alex's flock, providing the social input all parrots crave. Like any flock, this one – as small as it was – had its share of drama. Alex dominated his fellow parrots, acted huffy at times around Pepperberg, tolerated the other female humans, and fell to pieces over a male assistant who dropped by for a visit. Pepperberg bought Alex in a Chicago pet store where she let the store's assistant pick him out because she didn't want other scientists saying later that she'd particularly chosen an especially smart bird for her work. Given that Alex's brain was the size of a shelled walnut, most researchers thought Pepperberg's interspecies communication study would be futile.

E.

In other words, because Alex was able to produce a close approximation of the sounds of some English words, Pepperberg could ask him questions about a bird's basic understanding of the world. She couldn't ask him what he was thinking about, but she could ask him about his knowledge of numbers, shapes, and colors. To demonstrate, Pepperberg carried Alex on her arm to a tall wooden perch in the middle of the room. She then retrieved a green key and a small green cup from a basket on a shelf. She held up the two items to Alex's eye. "What's same?" she asked. Without hesitation, Alex's beak opened: "Co-lor." "What's different?" Pepperberg asked. "Shape," Alex said. His voice had the digitized sound of a cartoon character. Since parrots lack lips (another reason it was difficult for Alex to pronounce some sounds, such as ba), the words seemed to come from the air around him, as if a ventriloquist were speaking. But the words – and what can only be called the thoughts – were entirely his.

F.

For the next 20 minutes, Alex can through his tests, distinguishing colors, shapes, sizes, and materials (wool versus wood versus metal). He did some simple arithmetic, such as accounting the yellow toy blocks among a pile of mixed hues. And, then, as if to offer final proof of the mind inside his bird's brain, Alex spoke up. "Talk clearly!" he commanded, when one of the younger birds Pepperberg was also teaching talked with wrong pronunciation. "Talk clearly!" "Don't be a smart aleck," Pepperberg said, shaking her head at him. "He knows all this, and he gets bored, so he interrupts the others, or he gives the wrong answer just to be obstinate. At this stage, he's like a teenager; he's moody, and I'm never sure what he'll do."

Do the following statements agree with the information given in Reading Passage?

TRUE	<i>if the statement agrees with the information</i>
FALSE	<i>if the statement contradicts the information</i>
NOT GIVEN	<i>if there is no information on this</i>

1. Firstly, Alex has grasped quite a lot of vocabulary.
2. At the beginning of the study, Alex felt frightened in the presence of humans.
3. Previously, many scientists realized that the animal possesses the ability of thinking.
4. It has taken a long time before people get to know cognition existing in animals.
5. As Alex could approximately imitate the sounds of English words, he was capable of roughly answering Irene's questions regarding the world.
6. By breaking in other parrots as well as producing the incorrect answers, he tried to be focused.

EXERCISE 2²⁷

Sea monsters are the stuff of legend - lurking not just in the depths of the oceans, but also the darker corners of our minds. What is it that draws us to these creatures?

"This inhuman place makes human monsters," wrote Stephen King in his novel *The Shining*. Many academics agree that monsters lurk in the deepest recesses, they prowl through our ancestral minds appearing in the half-light, under the bed - or at the bottom of the sea.

"They don't really exist, but they play a huge role in our mindscapes, in our dreams, stories, nightmares, myths and so on," says Matthias Classen, assistant professor of literature and media at Aarhus University in Denmark, who studies monsters in literature. "Monsters say something about human psychology, not the world."

One Norse legend talks of the Kraken, a deep sea creature that was the curse of fishermen. If sailors found a place with many fish, most likely it was the monster that was driving them to the surface. If it saw the ship it would pluck the hapless sailors from the boat and drag them to a watery grave. This terrifying legend occupied the mind and pen of the poet Alfred Lord Tennyson too. In his short 1830 poem *The Kraken* he wrote: "Below the thunders of the upper deep, / Far far beneath in the abysmal sea, / His ancient, dreamless, uninvaded sleep / The Kraken sleepeth."

The deeper we travel into the ocean, the deeper we delve into our own psyche. And when we can go no further - there lurks the Kraken.

Most likely the Kraken is based on a real creature - the giant squid. The huge mollusc takes pride of place as the personification of the terrors of the deep sea. Sailors would

have encountered it at the surface, dying, and probably thrashing about. It would have made a weird sight, "about the most alien thing you can imagine," says Edith Widder, CEO at the Ocean Research and Conservation Association.

That myth wasn't busted until 2012, when Edith Widder and her colleagues were the first people to successfully film giant squid under water and see first-hand the true character of the monster of the deep. They realised previous attempts to film squid had failed because the bright lights and noisy thrusters on submersibles had frightened them away.

Another giant squid lies peacefully in the Natural History Museum in London, in the Spirit Room, where it is preserved in a huge glass case. In 2004 it was caught in a fishing net off the Falkland Islands and died at the surface. The crew immediately froze its body and it was sent to be preserved in the museum by the Curator of Molluscs, Jon Ablett. It is called Archie, an affectionate short version of its Latin name *Architeuthis dux*. It is the longest preserved specimen of a giant squid in the world.

And so today we can watch Archie's graceful relative on film and stare Archie herself (she is a female) eye-to-eye in a museum. But have we finally slain the monster of the deep? Now we know there is nothing to be afraid of, can the Kraken finally be laid to rest? Probably not says Classen. "We humans are afraid of the strangest things. They don't need to be realistic. There's no indication that enlightenment and scientific progress has banished the monsters from the shadows of our imaginations. We will continue to be afraid of very strange things, including probably sea monsters."

Indeed we are. The Kraken made a fearsome appearance in the blockbuster series *Pirates of the Caribbean*. It forced Captain Jack Sparrow to face his demons in a terrifying face-to-face encounter. Pirates needed the monstrous Kraken, nothing else would do. Or, as the German film director Werner Herzog put it, "What would an ocean be without a monster lurking in the dark? It would be like sleep without dreams."

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1. Matthias Classen is unsure about the possibility of monster's existence.
2. Kraken is probably based on an imaginary animal.
3. Previous attempts on filming the squid had failed due to the fact that the creature was scared.
4. Giant squid was caught alive in 2004 and brought to the museum.
5. Jon Ablett admits that he likes Archie.
6. According to Classen, people can be scared both by imaginary and real monsters.
7. Werner Herzog suggests that Kraken is essential to the ocean.