A WORD-LEARNING DOG

A word-learning pet dog has given scientists clues* that some animals may have the comprehension necessary for language, even though they cannot actually talk.

Rico, a smart border collie, was spotted on television by Julia Fischer and her colleagues at the Max Planck Institute for Evolutionary Anthropology in Leipzig, Germany. With a «vocabulary» of 200 words, Rico showed exceptional ability in retrieving* specific toys when asked to look for them.

The researchers decided to test whether Rico's ability was based on understanding and if he could learn and remember new words. They placed a new toy among his favourites and asked Rico to go and pick it up, using the unfamiliar name. The dog almost always chose the correct object. This suggests that Rico is using a system called «fast-mapping», which young children use to learn new words by matching new words to new objects. The study is the first to show fast-mapping in animals. In a commentary accompanying the study in the journal *Science,* Paul Bloom, a psychologist at Yale University, US, writes that dog owners often say that their pets have communicative and social abilities and this study seems to prove they are right.

Fischer adds that the results of the experiment suggest there may be reasons other than comprehension which have stopped language evolving* in dogs and chimpanzees. She says that making the jump from comprehension to talking may require a change in neural organisation in order to give voluntary control and precise articulation of sounds. Another hypothesis suggests that gesturing is a pre-requisite to language developing. «Monkeys have fabulous control of their hands, but they don't gesture,» Fischer explains. «So this shows there must be more things going on, perhaps in terms of social relationships.»

To be sure that Rico's language skills were not based on visual prompts, the researchers carried out a second experiment. They placed ten known objects in a room, while Rico and his owner waited in another room. The owner asked Rico to go in and pick two randomly* chosen items. Rico did this 20 times and he correctly fetched 37 out of 40 toys. When a new toy was placed in the adjacent room with seven other familiar objects, Rico correctly chose the unfamiliar item in seven out of ten sessions.

He was then tested four weeks later to see if he remembered the link between the new word and the new object. The learned toy was placed among four completely new toys, and four familiar ones. In three out of six sessions, Rico picked the right one. «His performance is comparable to the performance of three-year-old children,» write the researchers.

Rico may be an exceptionally bright and studious dog, admits Fischer: «If he were human, we would call him a workaholic. He's highly motivated.» She also points out that dogs may be a special case in responding to human language because they have co-evolved with humans for centuries. But the fact that other animals like apes* have also shown comprehension may suggest that people are not the only beings who can talk and that perhaps, in the future, we will discover other smart animals who may be taught to «talk» like Rico.

(From the press. Adapted)

clue: pista, indici / pista, indicio
retrieving (to retrieve): recollir, recuperar / recoger, recuperar
evolving (to evolve): evolucionar, desenvolupar-se / evolucionar, desarrollarse
randomly: a l'atzar / al azar
ape: simi, primat / simio, primate

PART ONE: READING COMPREHENSION

Choose the best answer according to the text.
[0,5 points for each correct answer] [Wrong answers will be penalized (-0,16)]

1. The first experiment with Rico proves that...
    a) young children use fast-mapping to learn new words.
    b) matching new words to new objects is a social ability.
    c) communicative abilities are a quality pet owners show.
    d) fast-mapping may be used by animals.

2. Evolution from understanding to talking...
    a) is related to the matching of new words to new objects.
    b) may be the result of alterations in the neural system.
    c) is due only to factors closely linked to comprehension.
    d) results from voluntary control and precise articulation of sounds.

3. One of the theories seems to indicate that in the process of language evolution...
    a) monkeys do not gesture because they have good hand control.
    b) gestures must exist before language.
    c) language is a pre-requisite to all kinds of gesturing.
    d) there are other factors but perhaps not in terms of social relationships.

4. The second experiment with Rico...
    a) was carried out to prove independence of language from visible clues.
    b) included placing seven unknown objects in another room.
    c) showed that Rico picked up only randomly chosen objects.
    d) showed that Rico's performance was lower than 60%.

5. To check whether the association between new word and new object still existed, Rico...
    a) was given eight new toys, including the learned one.
    b) performed well —over 60% in the given test.
    c) was submitted to a new experiment.
    d) performed well but not as well as the average young child.

6. Rico's exceptional performance may be the result of his...
    a) addiction to habit-creating drugs.
    b) similarity to apes in comprehension skills.
    c) advanced age and long cohabitation with humans.
    d) strong desire and impulse to learn.

7. Which of these sentences is true according to the text?
    a) We may find that only animals smarter than Rico can be language trained.
    b) Apes and other animals also talk.
    c) The future may reveal that other smart animals can be trained to talk.
    d) Eventually we may find that all animals are smart and can be language trained.

8. In this article, experiments with animal language skills...
    a) are based on object recognition and retrieval following verbal orders.
    b) show that pets' communicative abilities easily go beyond the 200-word limit.
    c) show random performance depending on gesturing abilities.
    d) show that only familiar toys are recognized.