

# African Grey Parrot

## **Alex**

African grey parrot. Since 1977 he has been the subject of a running experiment under animal psychologist Irene Pepperberg, initially at the University of Arizona and currently at Brandeis University.

Alex had a vocabulary of around 100 words as of 2000, but is exceptional in that he appears to have understanding of what he says. For example, when Alex is shown an object and is asked about its shape, color, or material, he can label it correctly. If asked the difference between two objects, he will also answer that, but if there is no difference between the objects, he will say "none." When he is tired of being tested, he will say "I'm gonna go away, " and if the researcher displays annoyance, Alex tries to defuse it with the phrase, "I'm sorry." If he says "Wanna banana", but is offered a nut instead, he will stare in silence, ask for the banana again, or take the nut and throw it at the researcher. When asked how many objects of a particular color or a particular material are on a tray, he gives the correct answer approximately 80% of the time.

Preliminary research also seems to indicate that Alex can carry over the concept of four blue balls of wool on a tray to four notes from a piano. Intriguingly, Dr. Pepperberg is also training him to recognize the Arabic numeral "4" as "four."

As of July 2005, Pepperberg reports that Alex has the concept of zero.

The name Alex is actually an acronym, A.L.EX., standing for Avian Learning EXperiment.

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## ***Is Alex using language?***

Although Alex shows understanding of what he says, sceptics question whether he is using language. He has a contextually tested vocabulary of about one hundred words, and has even coined a new word. At first, he did not associate an apple with the word "apple" but instead with the word "banerry," and since the other fruit names he knew at the time were "grape," "banana," and "cherry," it could be considered to be a linguistic elision/portmanteau of "banana" and "cherry." Dr. Pepperberg is currently training him to recognize English phonemes, in the hopes that he might conceptually relate an English written word with the spoken word. However, according to Dr. Pepperberg herself, Alex is not using human language, but is rather using "complex two-way communication." This means that Alex is able to translate a concept as he understands it into a form comprehensible to humans by using his knowledge of English (as demonstrated by the "banerry" example, which suggests that to Alex at least, an apple has more in common with cherries and bananas than with grapes). English cannot be assumed to have an inherent meaning for Alex, being rather a set of symbols, which are meaningless by themselves (e.g. utterly lack etymology) but can be reliably mapped to concepts, as the parrot understands them. Indeed, Alex speaking English would compare better with someone writing down spoken language and then passing this on to a deaf person.

The communication system of parrots in the wild is poorly known. Parrots are highly social birds, and it seems likely that when humans are their companions, they attempt to use the

communication system of those humans (language). Nonetheless, how these animals are able to come so close to human language is not known.

### **Criticisms**

Some in the scientific community, notably Noam Chomsky, are highly sceptical of Pepperberg's findings, pointing to Alex's alleged use of language as merely operant conditioning.

### **Selected Quotes**

- "Holding a colored cloth ball in front of the bird, Pepperberg asks What matter? in the kind of laboratory pidgin she uses to train her subjects. Alex - who can identify wood, plastic, metal and paper, among other matter - clearly says wool. Having answered correctly, he's entitled to a reward - but he has to ask for it. Unlike animals in conventional conditioning experiments, he gets nothing unless he asks for it by name, after having given a right answer to a question. Want a nut, he says, and then happily begins nibbling away at the cashew he is given." (Boston Globe, 18 May 1998)
- "Pepperberg, listing Alex's accomplishments, said he could identify 50 different objects and cognise quantities up to 6; that he could distinguish 7 colours and 5 shapes, and understand the concepts of "bigger", "smaller", "same", and "different," and that he was learning "over" and "under". (New York Times, 19 Oct 1999)

