Speaking with Animals: Inter-species Conversation [B1]

Come si interpreta il linguaggio delle creature non umane? Sarà possibile parlare con gli animali? Un tempo era una fantasia, oggi invece sta diventando una possibilità grazie ai progressi dell'intelligenza artificiale.

For a long time, the idea of humans speaking with animals has been confined to fiction, with children's stories like Dr. Dolittle, The Jungle Book and The Chronicles of Narnia. In recent years, a special form of AI called machine learning **has enabled** apps such as Google Translate and Microsoft Translator to **accurately** and rapidly translate between different human languages. So far, nobody has been able to translate non-human communication — but that could be about to change!

LANGUAGE TEACHING

People have attempted to teach human words to animals for centuries, but with little success. Scientists have conducted studies on the signals, gestures and sounds of a wide range of different creatures, including **parrots**, chimpanzees, dogs, dolphins, and even bees. Most of that work involved **time-consuming** observation, recording and data analysis.

ALIGNING SHAPES

Machine learning has changed everything. Working with human languages, it represents words in physical space using multi-dimensional geometry. Translation becomes possible when geometric **shapes** from two different languages align. If AI can match the complex variety and meaning of two unrelated human languages, perhaps it could do the same between non-human and human communication.

CONSERVATION

Earth Species Project (ESP) is a California-based **non-profit organisation** that **aims** to decode non-human communication. ESP uses machine learning to analyse a large volume of recorded data from a variety of creatures to check for alignment between the geometry of the animal sounds and signals, and human language. ESP believes that the project will support conservation and change human relationships with nature.

RACE FOR UNDERSTANDING

In a race for understanding, other scientists are also using advanced AI to learn more about animal language within the context of their lives, needs and emotions. Project CETI, for example, studies **sperm whales** using underwater microphones, digital mini-recorders, drones and robot fish. Elsewhere, experts are using technology to study elephants, **mole rats**, turtles, bees and birds. Scientists at Tel Aviv University have recently decoded the vocalisation of **fruit bats**.

LISTEN CAREFULLY

Globally, conservationists have described the combination of digital recordings and AI analysis as a “planetary-scale **hearing aid**” to other species. No one knows how many species of animal exist on earth: estimates vary from just over two million to perhaps one hundred million. So far, we only understand the language of one species: human. Could we now be on the brink of inter-species communication? How different would our world be if we could learn to talk to animals?

Glossary

- **aims** = aspirare, mirare
- **sperm whales** = capodogli
- **hearing aid** = apparecchio acustico
- **time-consuming** = che richiede tempo
- **shapes** = forme
- **parrots** = pappagalli
- **non-profit organisation** = organizzazione senza scopo di lucro
- **mole rats** = ratti talpa
- **fruit bats** = pipistrelli della frutta
- **has enabled** = permettere, consentire
- **accurately** = con precisione