**structure outline + list of sources**

**research question**: Do animals speak a real language or do they just communicate?

1. How do animal communicate?
* Do animals actually speak a language with grammar rules and certain fixed sounds or movements that match our vocabulary?
* Incredibly diverse
* Birds
* Large rage of distinct tunes
* Birdsongs
* Visual communication
* Breeding
* Bats
* high frequency chirps, screeches, and songs
* hear sounds at frequencies over 100,000 waves per second
* biological sonar
* Dolphins
* Beep and clicking noises
* Signature whistles
* comparison with music
* limited and complex vocal learning
* Peter L. Tyack
* why is there a difference in complexity?
* short-term memory limits
* What is the difference between communicating and a language?
* Language
* changes
* a tool of communication
* relies on verbal or non-verbal codes to transfer information
* Communication
* is considered static
* a prosses of transferring messages
* focusing on the message
1. Comparing human and animal language
* The differences between animal and human communication?
* zero-order intentionality & first-order intentionality
* ability to talk about absent objects and events
* human language is innately guided
* animals have a genetically built in system of communication
* What are the similarities between human and animal communication?
* Genes
* Usage of sound
1. The connection between human and animal communication
* Could you translate an animal language into our language?
* a true “translation” is nearly impossible
* Wittgenstein
* ‘if a lion could speak, we could not understand him’
* ‘lion’s form of life is so alien to ours that we cannot seriously claim to know what the lion means by what the lion says’
* Do animals understand our language?
* Some species do try to understand our language
* Gestures
* body language
* tone
* training
1. conclusion
* we share a few basic criteria based on communication
* but we can’t really call animal communication a language

**sources:**

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