

# What Does It Mean to Be Human: Music

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Becca Rose and Ben Sheppard

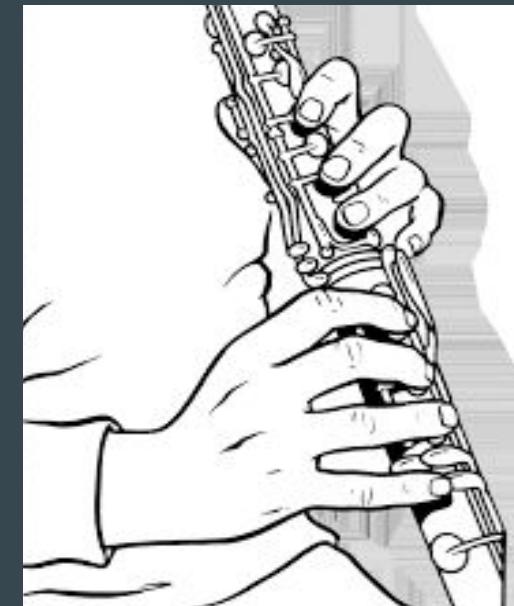
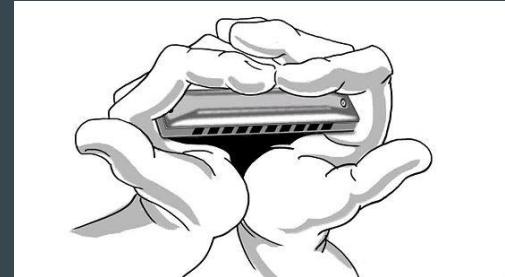
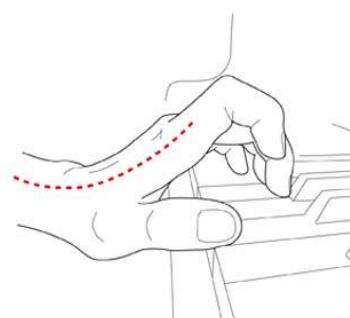
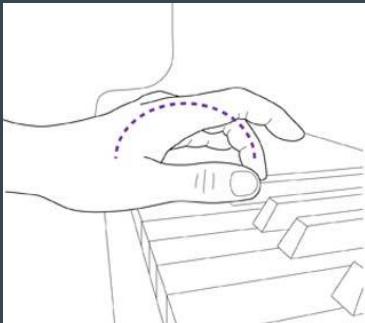
# Marching Bipeds

- Humans have evolved to walk upright on their two legs
  - Rounded pelvis
  - Restructured knee joints
  - Thighs in line with feet
  - Forward-positioned foramen magnum
- Increased stability compared to other animals
  - Vertically grounded center of gravity



# Opposable Thumbs

- Happy? Humans can play a variety of musical instruments thanks to their opposable thumbs
  - Wide range of motion
  - Diverse amount of possible positions
- Surrounding fingers have high mobility from all joints as well
- Dexterity



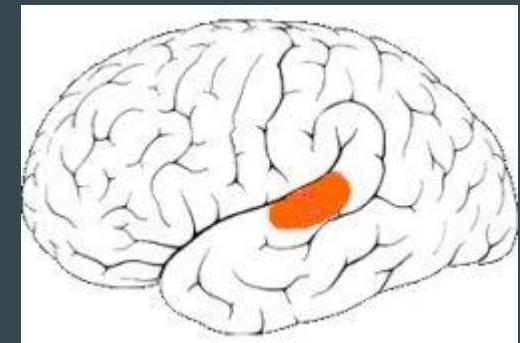
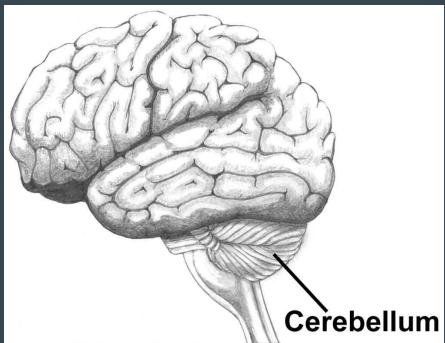
# Can A Chimp Play the Tuba?

- Humans are not the only primates with opposable thumbs
  - Gorillas, chimpanzees, orangutans, baboons, Old World monkeys, gibbons, etc
- However, humans have the largest movement range
  - Able to touch thumb to pinky
  - Can manipulate more skillfully



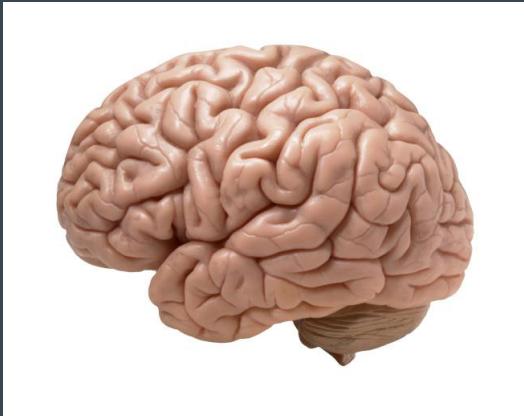
# Musical Thought

- Parts of brain active with music:
  - Auditory
  - Cerebellum
  - Limbic System
- Playing/listening to music increases certain auditory/motor skills



# Can Animals Think in 4/4?

- Human's complex brains can:
  - Recognize and repeat a rhythm sequence
  - Understand complex patterns
  - Read and comprehend music notes
- Animal brains cannot



Similarities: Cerebrum and Cerebellum,  
Optic Nerve

Differences: Human brain is much larger  
and more complex



# Primitive Music

- Early humans make rudimentary instruments
  - Proves the vital nature of music in human culture
  - Shows that our ancestors had the knowledge and physical ability to form rather complex structures
- Scientists can inference that the first homo sapiens used music as a way to bond and form communities



# Baby Beats

- Music is innately tied to “language babble”
  - Can more easily comprehend syntax and structure via song
- Helps to develop spatial and logical reasoning
- Aids in the growth of bodily intelligence
  - Learning an instrument fast-tracks this inherent learning
- Long childhood means longer time for the brain to acquire knowledge and neurologically mature
  - Scientists have proven that music generates growth in a multitude of important areas in early-childhood humans.



# Bibliography

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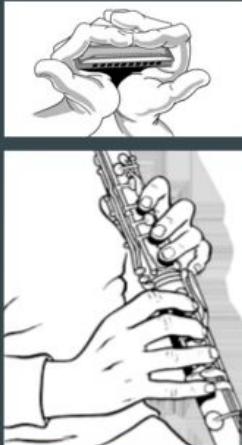
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We studied the human experience via the unique lens of music. For many people, music defines their very character via self expression and a network of collaborative independence. Music is a vital aspect of the remarkable uniqueness of humankind, as exemplified by the fact that many facets of music are enriched by abilities and adaptations that are innately human. Created by Becca Rose and Ben Sheppard.

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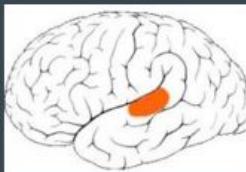
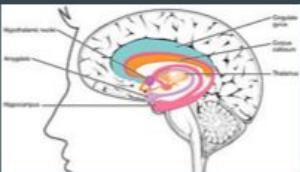
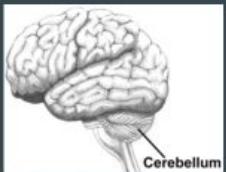
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