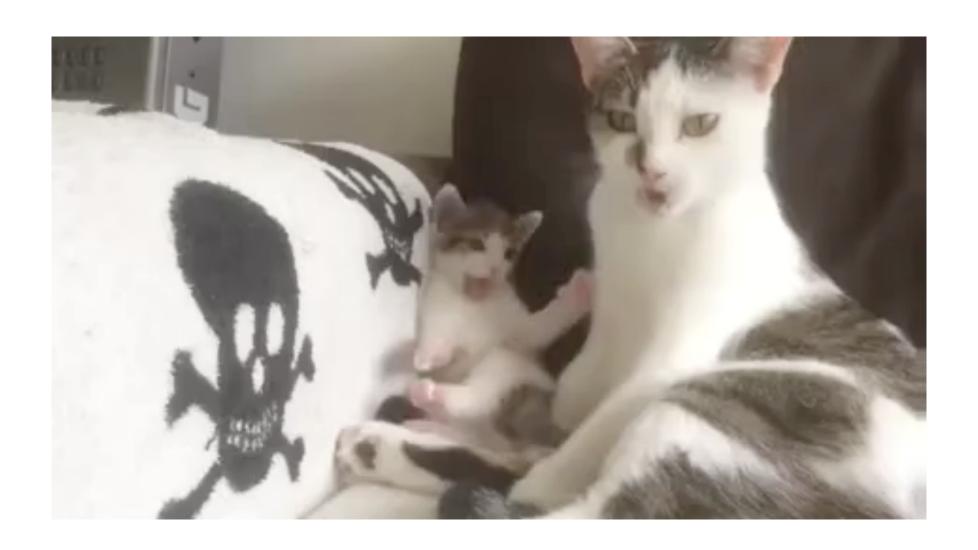
# What can we learn from songbirds?

(And their bird brains)





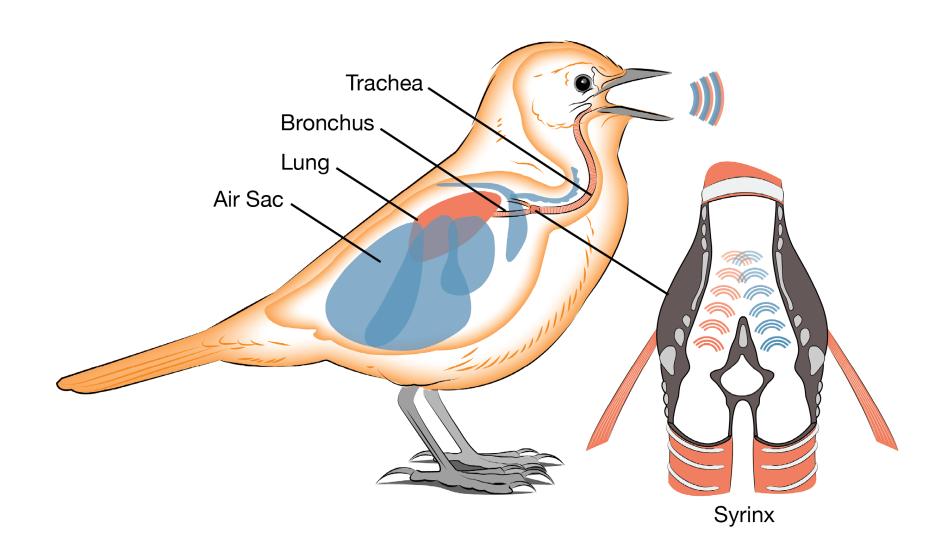
### Singing (and speaking) is a choreographed movement



# There are ~5000 songbird species



### The musical instrument of songbirds — the syrinx





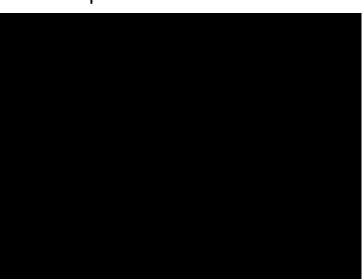




Beatles



Eric Clapton



Cat Stevens



# Songbirds learn to copy their parents









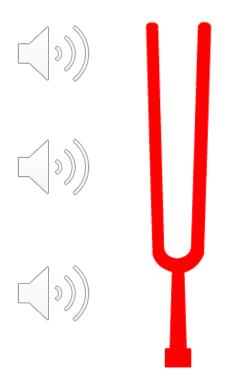






#### What is sound?

• How do we describe sound?







# Spectrograms

## Specialized neurons are active when birds sing



