

# Analyzing Tonality with Note Distributions

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**society**

expertise

politics

...  
creativity

psychology  
emotion

genius

**music**

art

economy

culture

...

events

dance

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# Research Question

« What can we learn about the **history of tonality** by analyzing **note distributions** of musical pieces? »



# Representation of Music

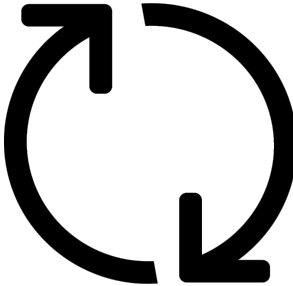
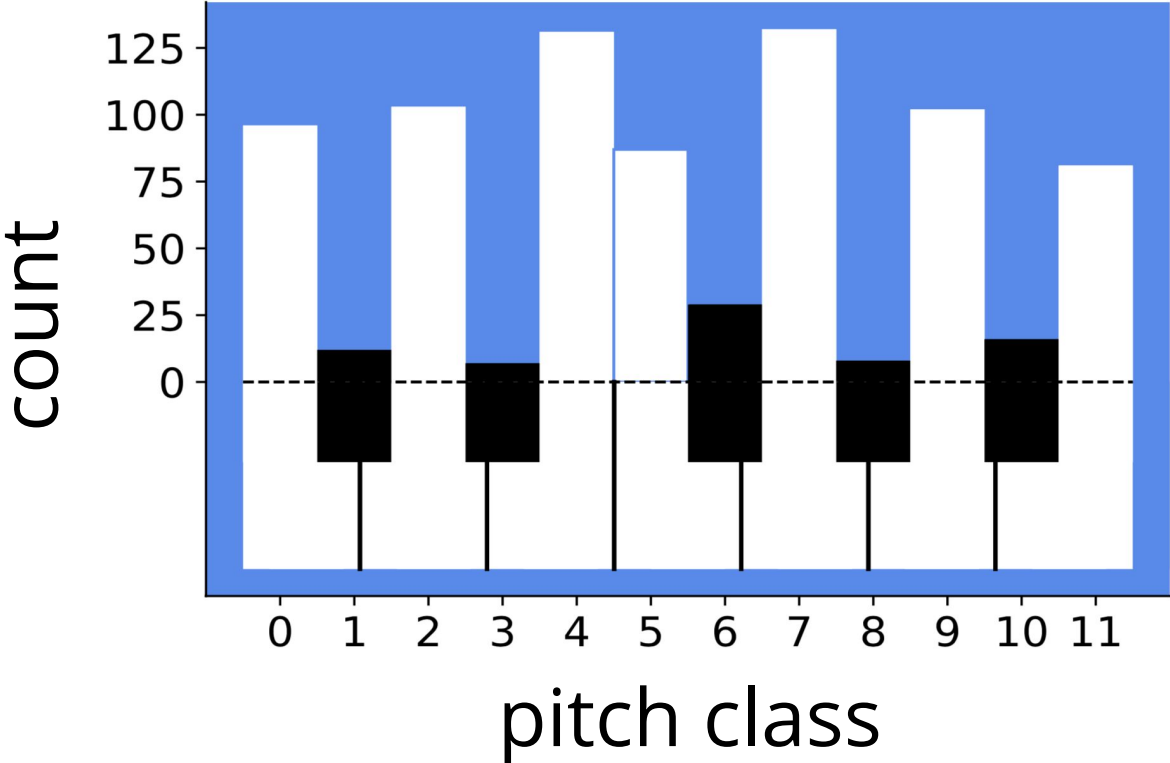
## Allemande.



# Representation of Music

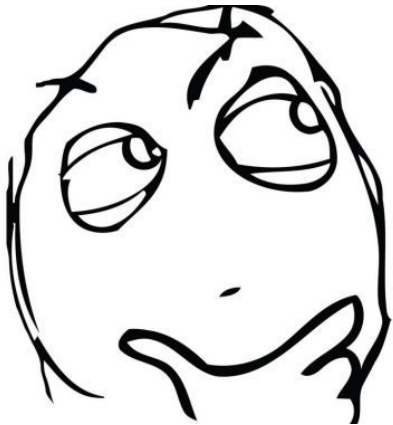


# Representation of Music

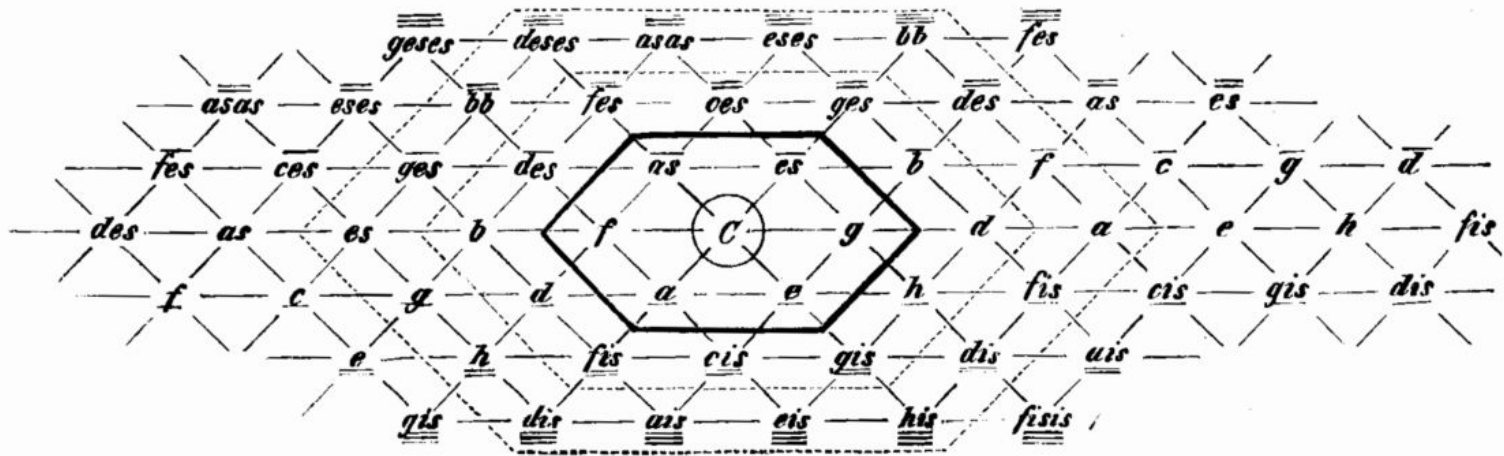




« Are there **other representations**  
of musical pieces? »

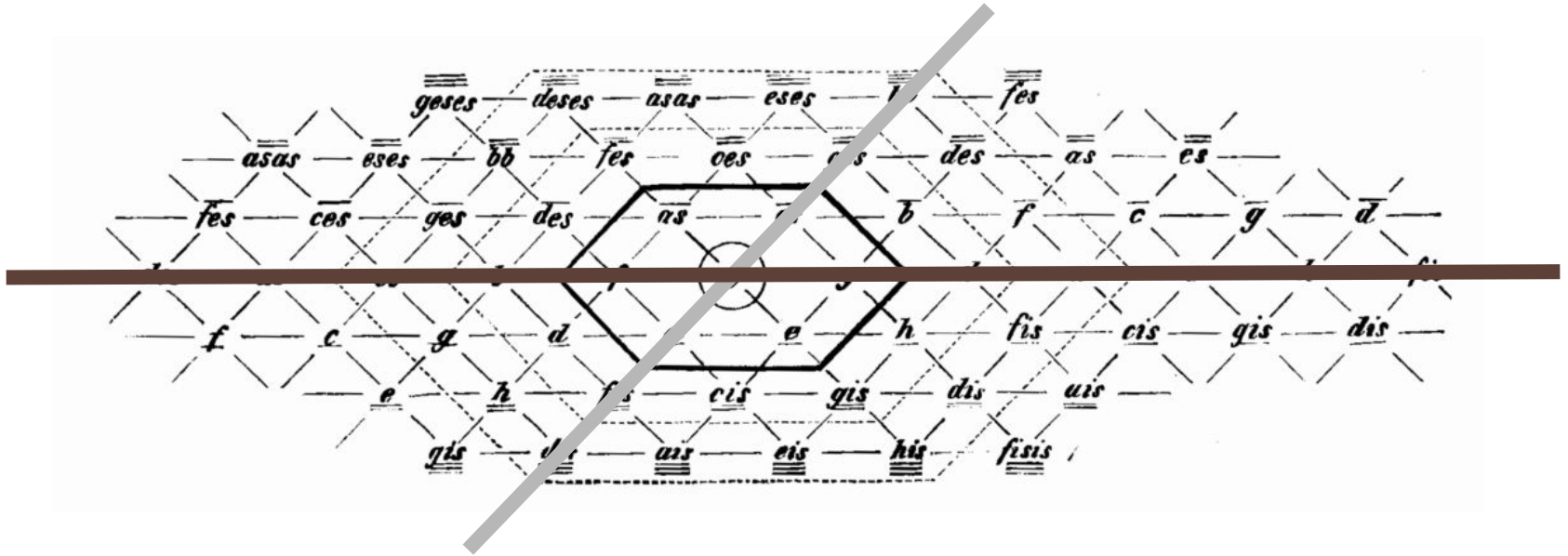


# Representations: Tonnetz



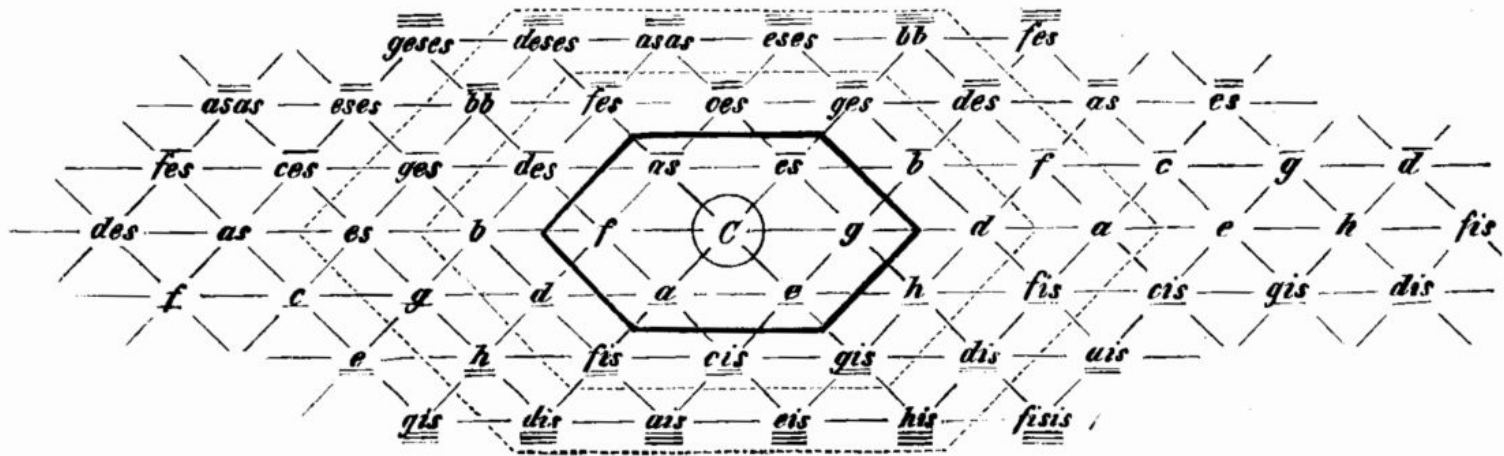
Hostinský (1879): *Die Lehre von den musikalischen Klängen*.

# Representations: Tonnetz



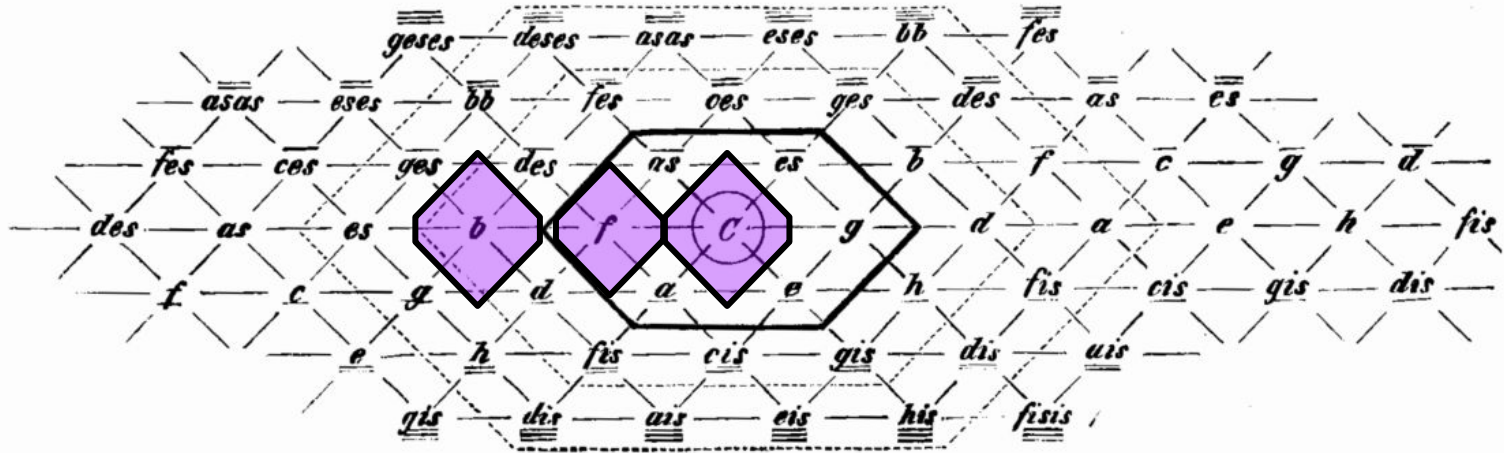
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# Representations: Tonnetz



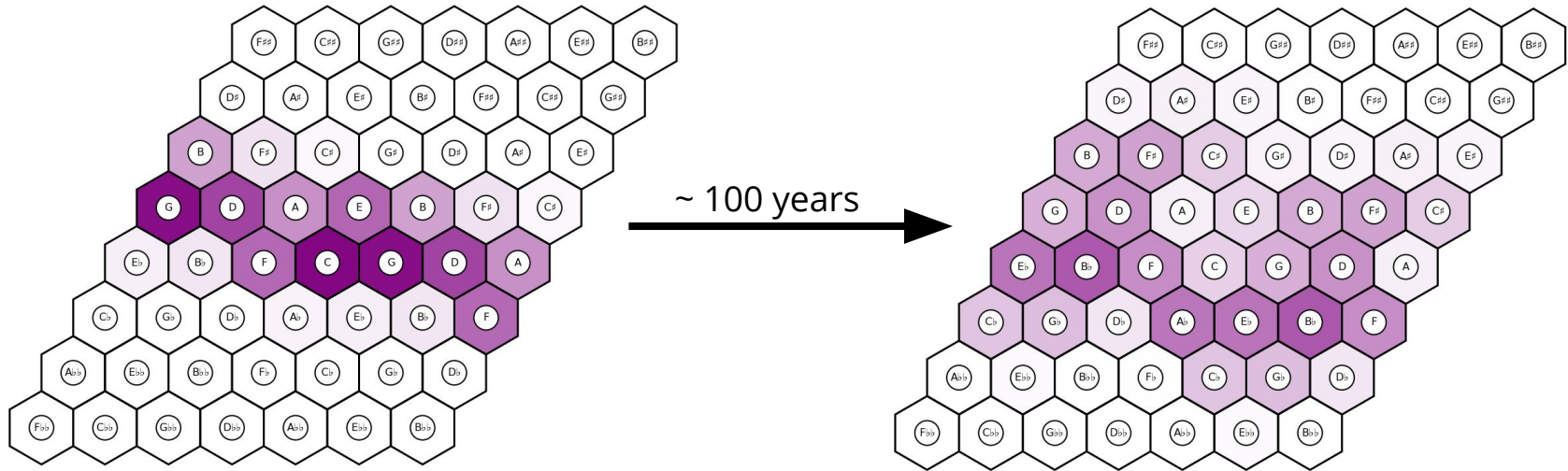
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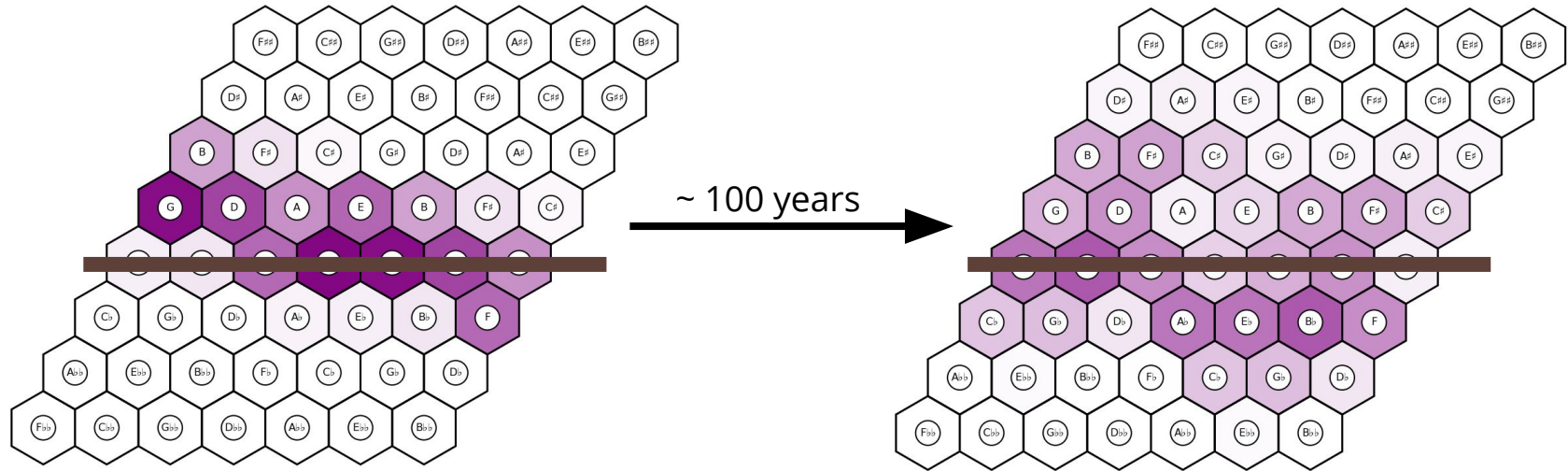
# History of Tonality in Note Distributions?



J. S. Bach: *Prelude in C major* (BWV 846; 1722)

F. Schubert: *Impromptu in E $\flat$  major* (op. 90/2; 1827)

# History of Tonality in Note Distributions?

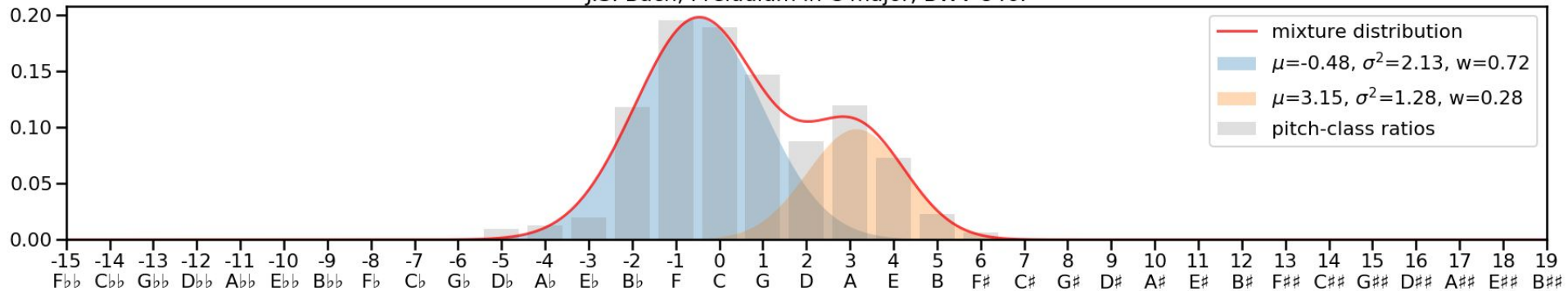


J. S. Bach: *Prelude in C major* (BWV 846; 1722)

F. Schubert: *Impromptu in E<sub>b</sub> major* (op. 90/2; 1827)

# Representations: Line of Fifths

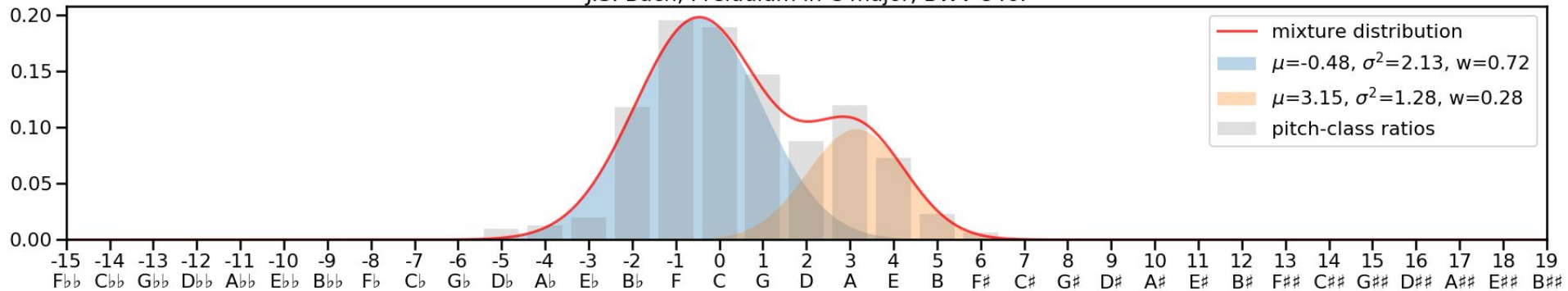
J.S. Bach, Preludium in C major, BWV 846.



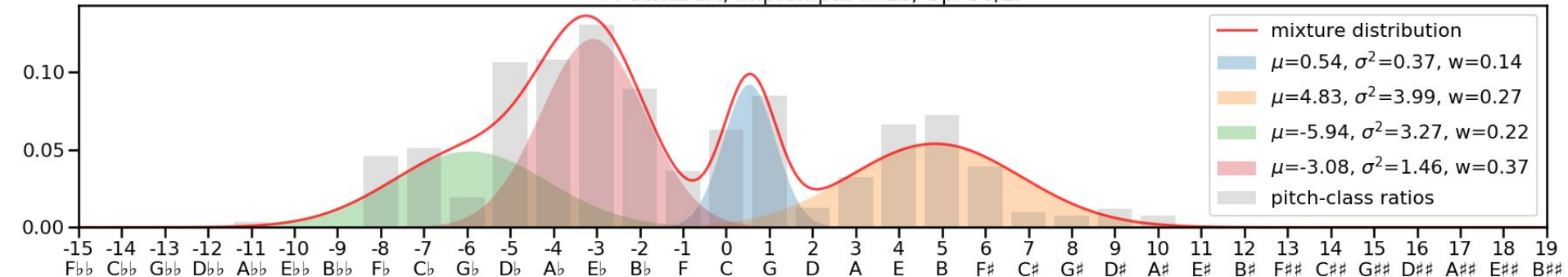


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J.S. Bach, Preludium in C major, BWV 846.

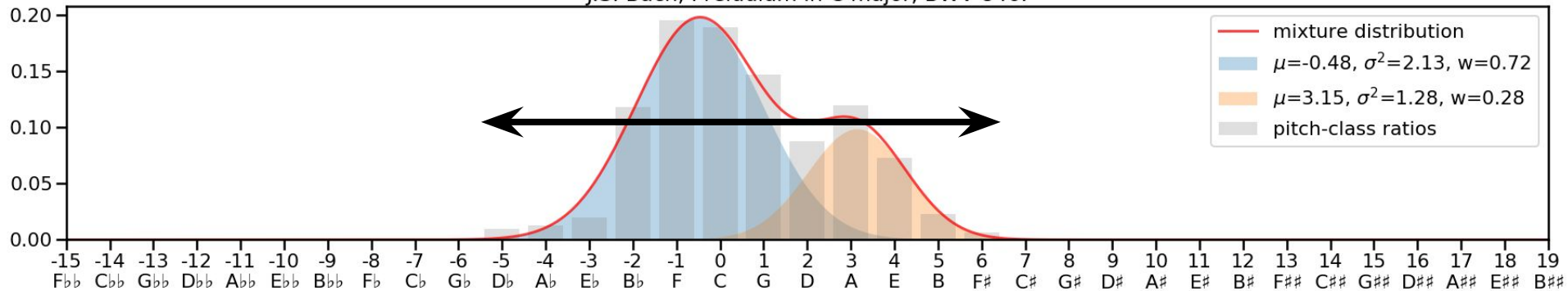


F. Schubert, Impromptu in E<sub>b</sub>, Op. 90/2.

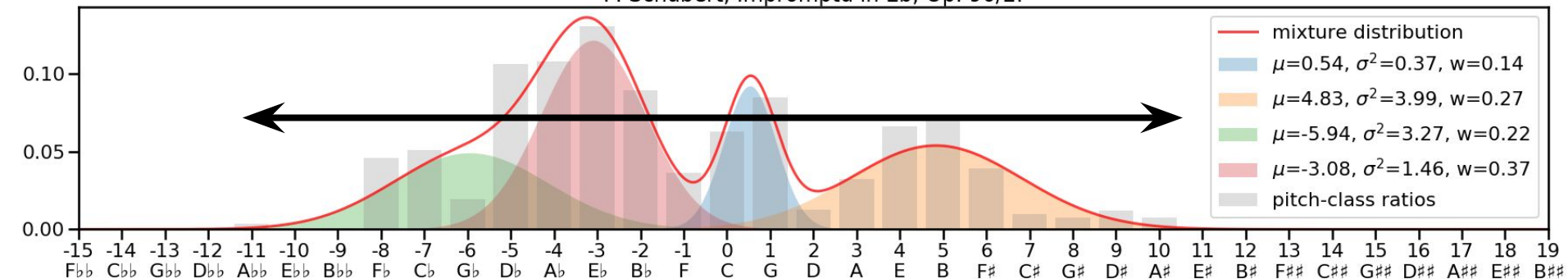


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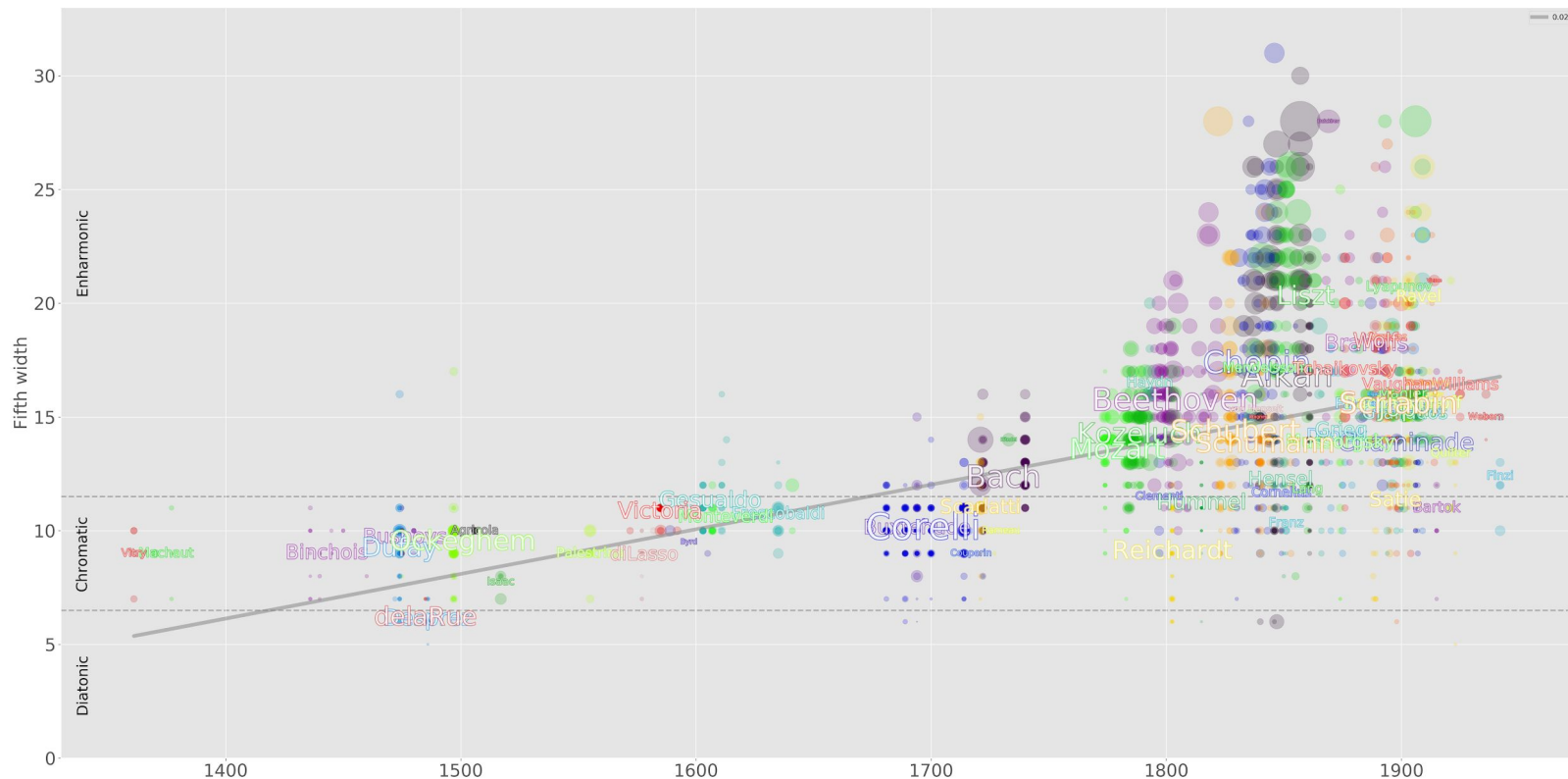
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# Historical development of tonality



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