



# Composer Attribution by Quantifying Compositional Strategies

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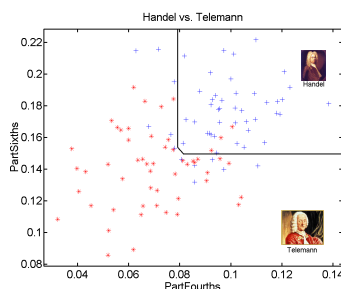
L.B. Meyer:

**"Style** is a **replication** of **patterning**, whether in **human behavior** or in the **artifacts** produced by human behavior, that results from a **series of choices** made within some **set of constraints**."

**Laws** (physical)  
**Rules** (cultural)  
**Strategies** (individual)

**Feature set**, designed to detect low-level, unconscious replicated patterns:

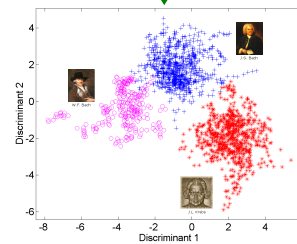
Amount of seconds	Amount of parallel fourths
Amount of thirds	Amount of parallel sixths
Amount of fourths	Suspension by step
Amount of augmented fourths	Voice density
Amount of diminished fifths	Amount of dissonance
Amount of fifths	Bars starting with dissonant
Amount of sixths	Entropy of harmonies
Amount of sevenths	Entropy of pitches
Amount of octaves	Entropy of sonorities
Amount of parallel thirds	Stability of rhythm



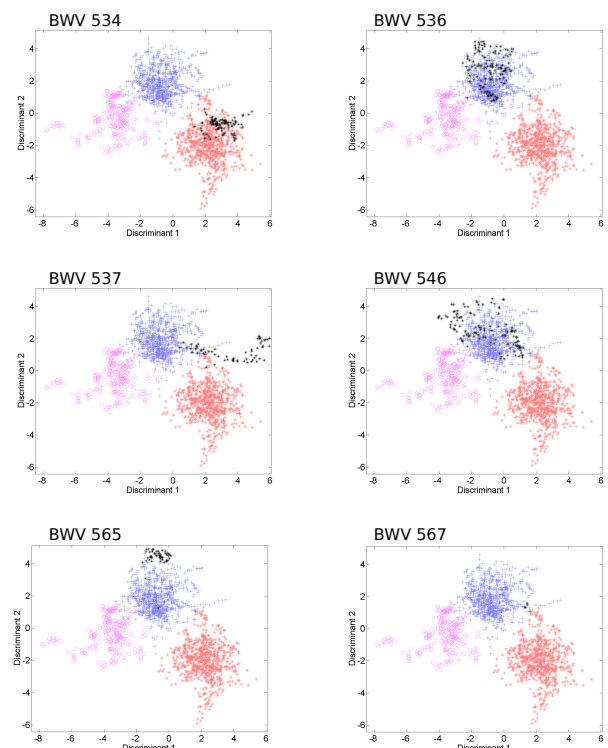
## Application

Attribution of disputed organ fugues in Bach catalogue.

Undisputed fugues of J.S. Bach, W.F. Bach (son) and J.L. Krebs (student), for comparison. Projection into two dimensional space using Fisher-transformation.



## Classification of disputed fugues



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