Ear, Mind, or Brain?
Reflections on Musical Similarity

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Stanford University
Melodic elaboration in Mozart


Example 1:

Example 2:
Human factors in assessments of similarity

- **Cognitive weights** of feature-based comparisons
- **Perceptual factors** in the experience of “similarity”
- **Cultural conditions**
We shall overcome
Morehouse College Glee Club 2009
[arr. Wendell P. Whalum]

Cultural dissonance

O Sanctissima (after Beethoven, WoO 157)

https://www.youtube.com/watch?v=Aor6-DkzBJ0

Coro Città di Castelarano, dir. Marco Giudorizzi, 2017
Musical similarity in music-copyright infringement
Seminal cases

Arnstein vs. Porter (1946)
- establishes concept of **substantial musical similarity** (SMS)
- establishes idea of **lay listener** test

Gaye vs. Williams and Thicke (2013)
- Verdict on appeal—March 2018
- Provisionally **prohibits similarity of style** in protected work

Skidmore vs Zeppelin (2020) “Taurus” vs “Stairway to Heaven”
- Dispute concerns only introductory descending sequence
Ira Arnstein and the concept of substantial musical similarity

**Arnstein vs. Porter (1946)**

- Long series of cases (1940…) in which Arnstein was the plaintiff. (He always lost.)

- **1946 ruling by Jerome Frank** established two principles:
  - Similarity must be “substantial”
  - Likeness must be determined by “lay listeners”
Irving Berlin’s opinion of Arnstein

Upon learning that he had just been sued, and not for the first time, by Ira B. Arnstein, Irving Berlin responded with uncharacteristic equanimity: “I suppose we have to take the bad with the good in our system which gives everyone a chance to have their day in court.” “Of course,” he added puckishly, “Arnstein is stretching his day in court into a lifetime.”
Detectives investigate musical similarity

Dr. Sigmund Spaeth parlayed an amusing musical dissection of “Yes! We Have No Bananas” into a long career as America’s favorite popularizer of classical music andclassicizer of popular music, and into a lucrative sideline giving expert testimony in music plagiarism cases, playing a relentless Inspector Javert to Ira B. Arnstein’s beleaguered Jean Valjean.
Similarity of which features?

1946: Notation base
Main parameters
- Melody
- Harmony
- Rhythm

2013: Audio/video base
Main parameters
- Timbre
- Tempo
- Dynamics
Contractual disagreements

- We shall overcome (2015)

- Audio-visual synchronization rights: $100,000 [film = The Butler, Lee Daniels, 2013]
Gaye (L) vs Williams, Thicke (R) (2013; appeal, 2015; re-appeal pending)


Pharrell Williams and Robin Thicke (2013).
Melodic comparison (involves slipping positions)

- Timbre
- Tempo
- Dynamics

![Fig. 1. Marvin Gaye, “Got to give it up,” Bars 8-11.](image1)

![Fig. 2. Pharrell Williams and Robin Thicke, “Blurred Lines,” Bars 25-28.](image2)
What is a substantial melody?

- Timbre
- Tempo
- Dynamics

Fig. 1. Marvin Gaye, “Got to give it up,” Bars 8-11.

Fig. 2. Pharrell Williams and Robin Thicke, “Blurred Lines,” Bars 25-28.
Notated vs. performed music in copyright litigation

Sandi Wilbur’s diagram of rhythmic activity
Gaye estate vs Williams and Thicke; Williams et al vs Gaye estate*

2013 (copyright), 2015 (suit), 2018 (appeal),

Standing judgment:
*Musical style is a protectable element
Notated vs performed music in (US) copyright registrations, 1940-2017

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Source: Charles Cronin’s
Drift in registration media (1940-2017)
Changing music technology as pivot

- 1999: Record sales peak
- 2009: Streaming music downloads peak
- 2015: Digital downloads = 90% of music sales

Yearly Record Sales

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**1999**
- Record sales peak

**2009**
- Streaming music downloads peak

**2015**
- Digital downloads = 90% of music sales
Controversial points ("Blurred Lines")

Can a musical style be owned by one entity?

Should cases be argued on the basis of registered copies only?

Should every “style” be exclusive to its own creator?

Improvisatory pastiche (18th/20th centuries)

Ethan Uslan, 2012

(parody)