Mining the performance history of the New York Philharmonic, 1842-2015

Programming trends and performer networks

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Introduction

Concert programs

- Every concert consists in a selection of works by some composers
- **Who are the most ‘characteristic’ composers in a generation?**
- Represent the performances in a decade as ‘bag-of-composers’ (composer/peformance-count pairs)
- Apply **tf-idf** (term-frequency/interdocument-frequency) transformation
- Rank each decade’s composers by both raw and transformed performance counts
- Raw counts reflect canon: concert “warhorses”
- Transformed rankings reflect characteristic composers e.g. emergence of musical theatre in 50s/60s under conductor Bernstein
- Same can be done for pieces.
- **Applications to:** cultural history; playlist generation

Decade	Top composer (raw)	Top composer (tf-idf transformed)
1920	Wagner	Hadley, Henry Kimball
1930	Wagner	Debussy, Claude
1940	Beethoven	Tchaikovsky, Pyotr Ilyich
1950	Beethoven	Rodgers, Richard
1960	Tchaikovsky	Bernstein, Leonard
1970	Mozart	Stravinsky, Igor
1980	Beethoven	Prokofiev, Sergei
1990	Beethoven	Copland, Aaron
2000	Beethoven	Bernstein, Leonard
2010	Tchaikovsky	Bernstein, Leonard

Performance time-series clustering

Number of works performed over time, grouped by composer

Grouped by work

Social networks of performers

References

Dataset

DTWclust paper

- Gensim paper