"I Just Can't Wait To Be Queen" An Investigation of Predictive Factors in the SAI Quartet Competition

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2 December 2025
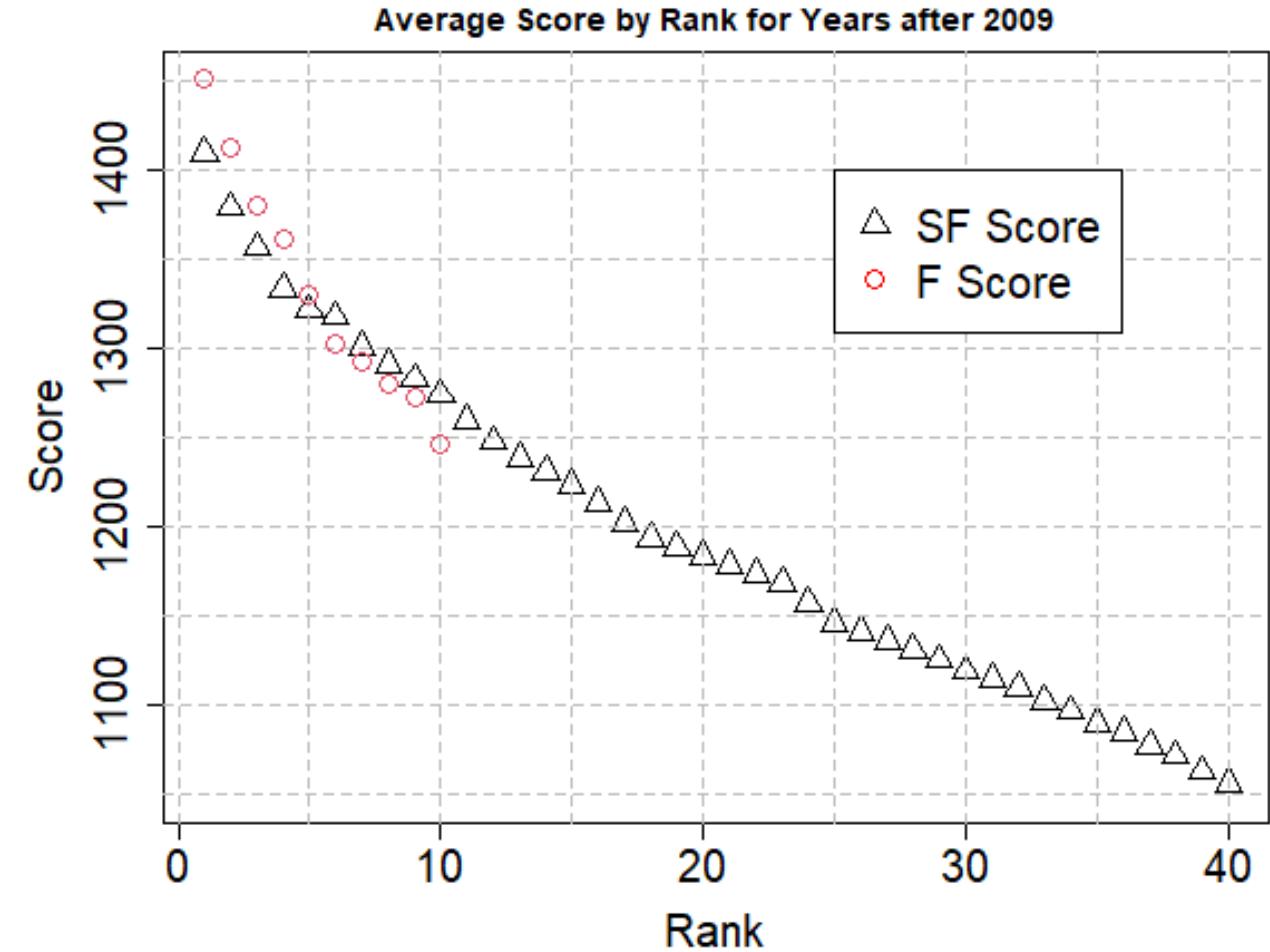
"Clever Girl", winners of the 2024 Quartet Competition, credit SAI

- SAI = Sweet Adelines International

- Previous Queens must form new quartets

- Semifinals (SF) and Finals (F)

- Two songs, scored across four categories, with "perfect score" of 1600
  - Typical score: 1100 ~ 1250
  - Exceptional score: > 1350

Average Score by Rank for Years after 2009

$$SF \cong 1411 - 18.1 \cdot Rank + 0.434 \cdot Rank^2 - 0.005 \cdot Rank^3$$
(Typically within 5 points)

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Research Questions

- Do Quartets containing a Queen of Harmony tend to score higher?

- Does performing a common song (a barbershop "standard") influence score?

- Do quartets who "make a splash", i.e. score highly at their first international competition, achieve more success at future competitions?

- Is there a relationship between rank and longevity of a quartet?
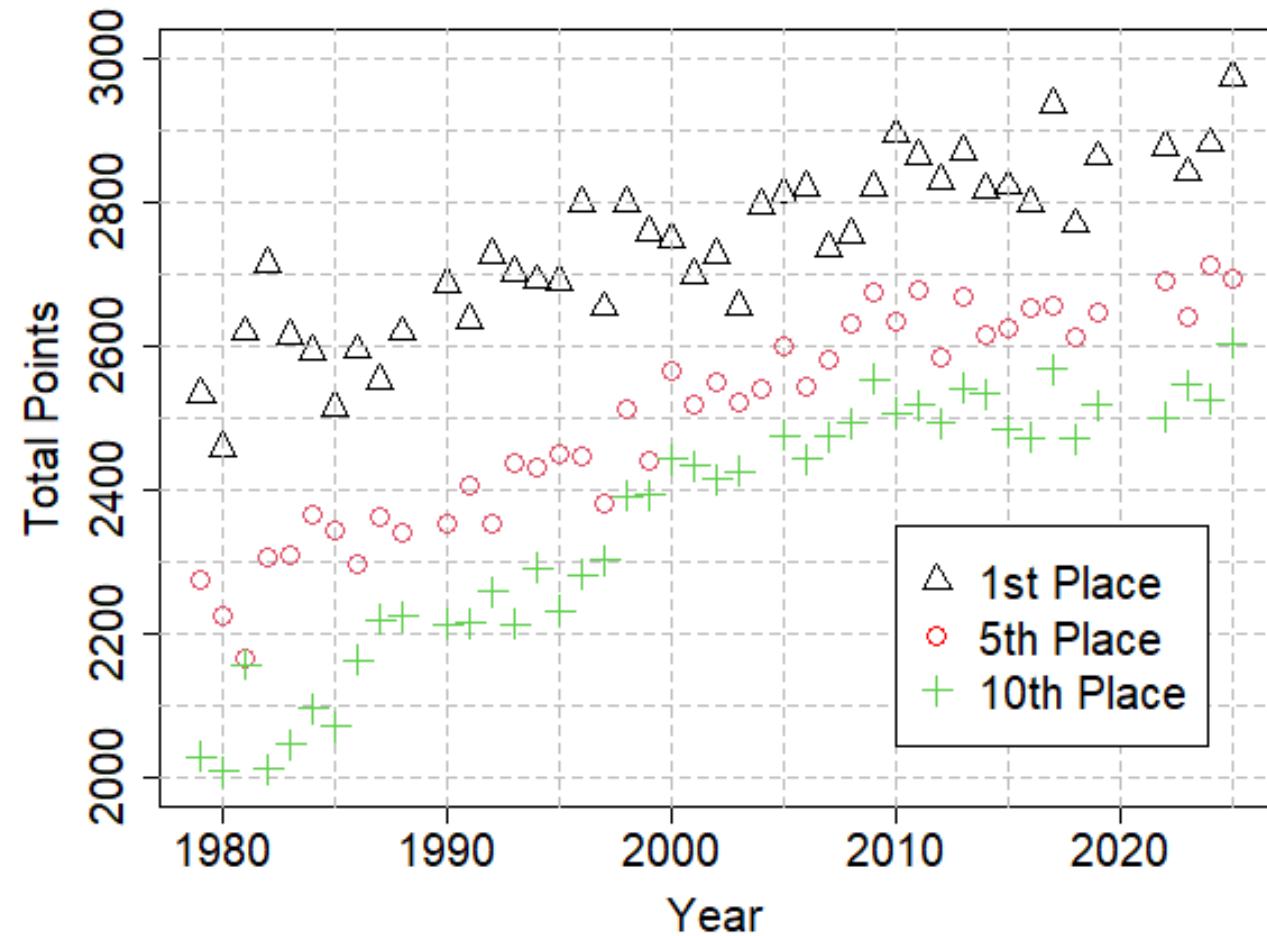
- Do Quartets containing a Queen of Harmony tend to score higher?
  - *Score ~ Number of Past Winners in Quartet*

- Does performing a common song (a barbershop "standard") influence score?
  - *Score ~ Song Title*

- Do quartets who "make a splash", i.e. score highly at their first international competition, achieve more success at future competitions?
  - *Future Rank ~ First Year Rank*

- Is there a relationship between rank and longevity of a quartet?
  - *Rank ~ Number of Appearances*

Dataset

- Score sheets from 1979 through 2025
  - Scores by category and by song
  - Song titles listed ~ 20 years
  - When time effect cannot be removed, use data after 2009
- Coronet Club membership listed online
- Quartet membership from competition programs, available after 2018
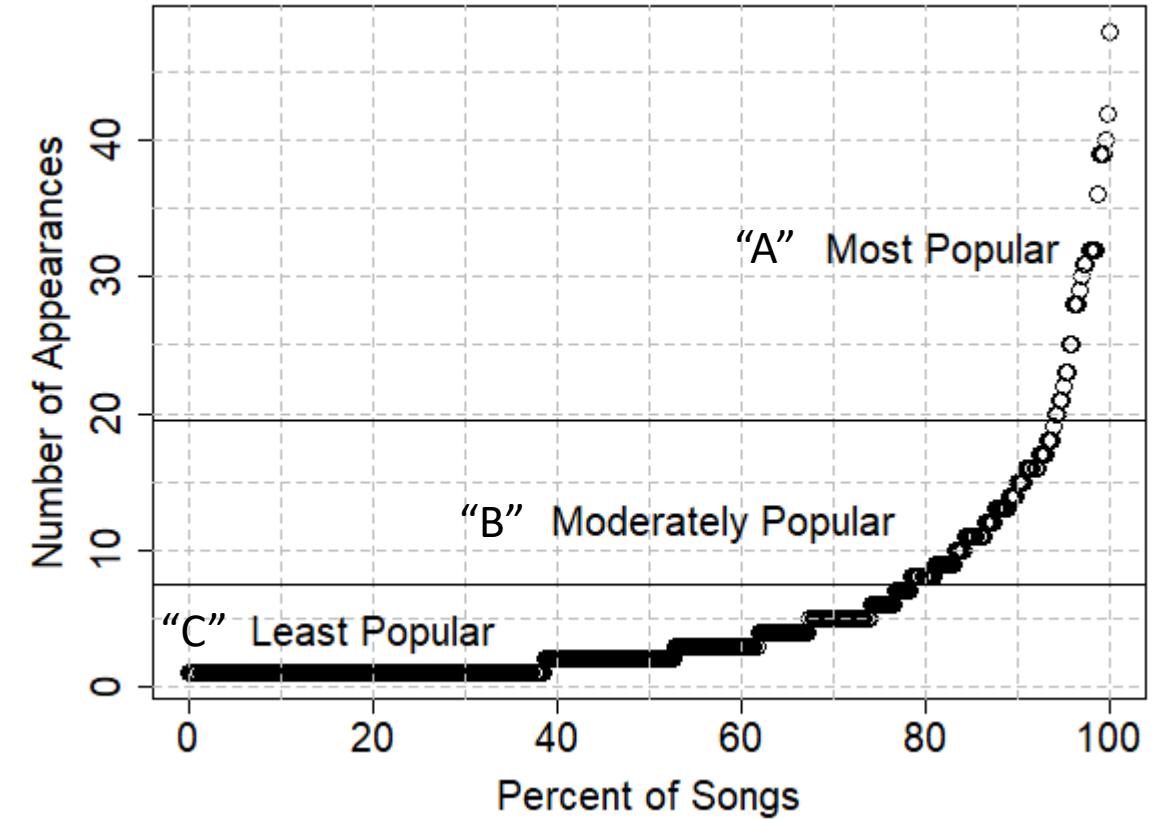
Does performing a common song (a barbershop "standard") influence score?
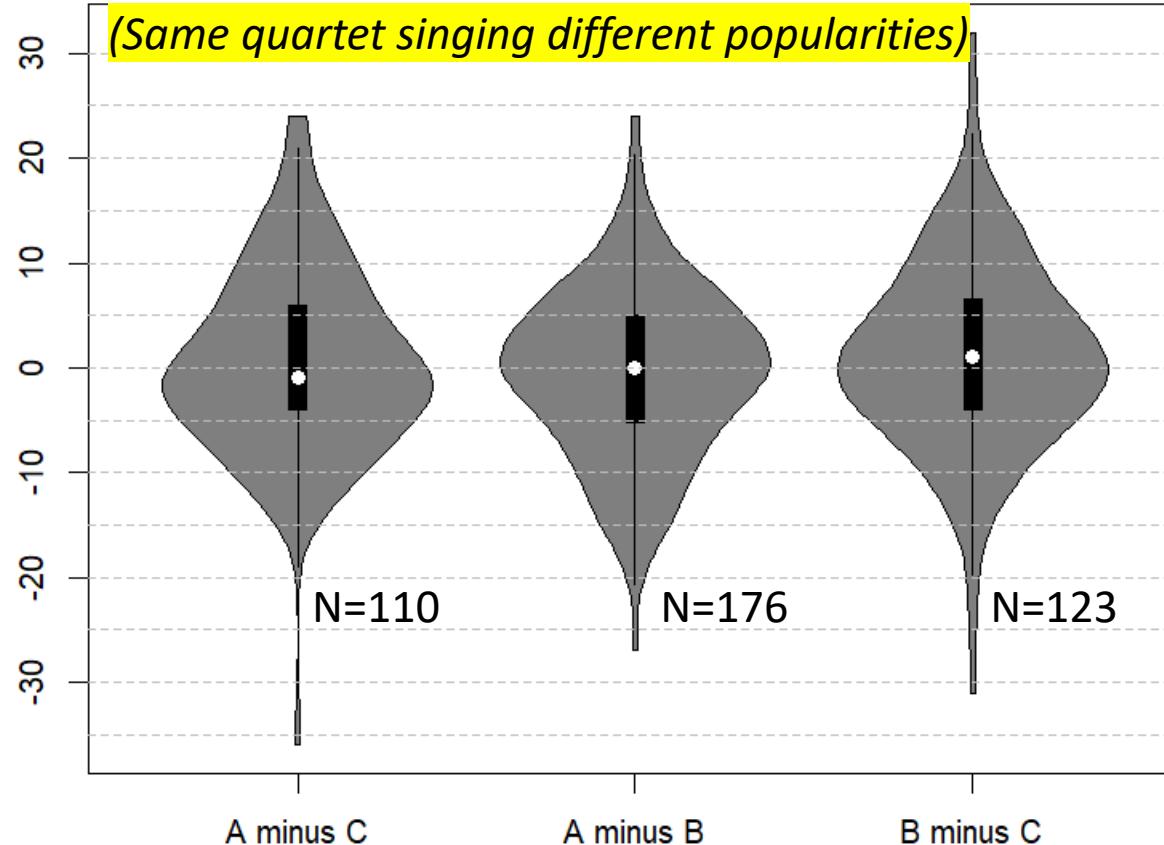
- 2437 song appearances

- > 200 regular expressions

- 444 unique titles

- Split into three equal groups

Pop Song Effect

SF Score of Different Song Popularities

(Same quartet singing different popularities)

N=110 N=176 N=123

A minus C   A minus B   B minus C

$H_o: \mu_{AC} = \mu_{AB} = \mu_{BC} = 0$

$t_{AC} = 0.56 \qquad p_{AC} = 0.58$
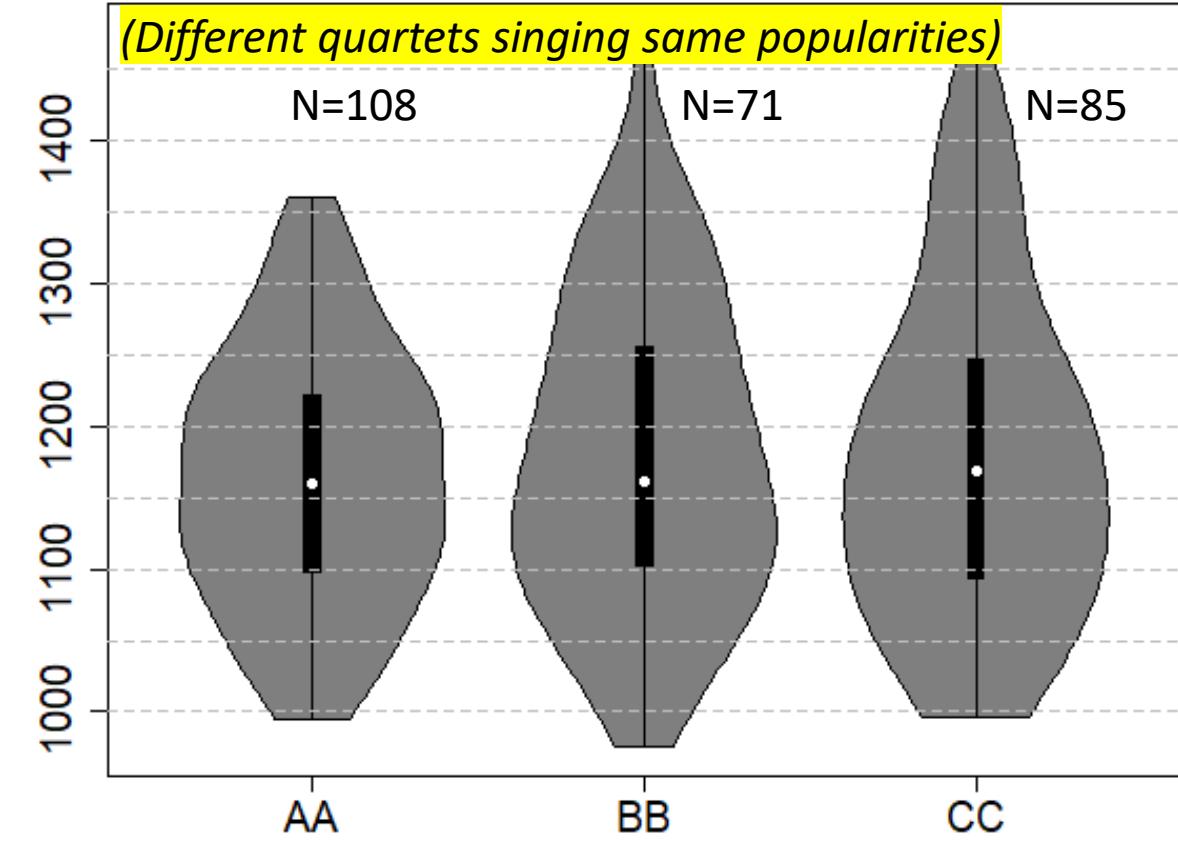
$t_{AB} = 0.89 \qquad p_{AB} = 0.37$

$t_{BC} = 1.39 \qquad p_{BC} = 0.17$

SF Score of Quartets with Single Popularity

(Different quartets singing same popularities)

N=108 N=71 N=85

AA   BB   CC

$H_o: \mu_{AA} = \mu_{BB} = \mu_{CC} = \mu$

Limitation: cannot account for song selection bias

$t_{AA} = 1.26 \qquad p_{AA} = 0.21$

$t_{BB} = 0.64 \qquad p_{BB} = 0.52$

$t_{CC} = 0.61 \qquad p_{CC} = 0.55$

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Rank of FQ the Year Before Winning Crown

2009, Zing!

Total Number of Appearances for FQ

2003, Brava!

1986, Ambiance
2004, the BUZZ
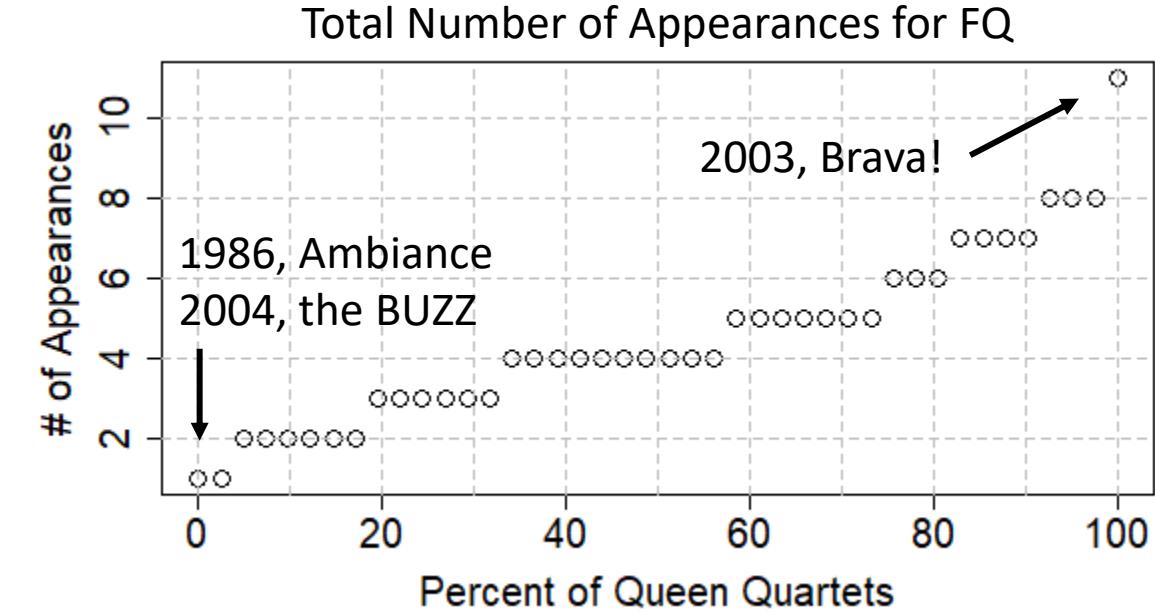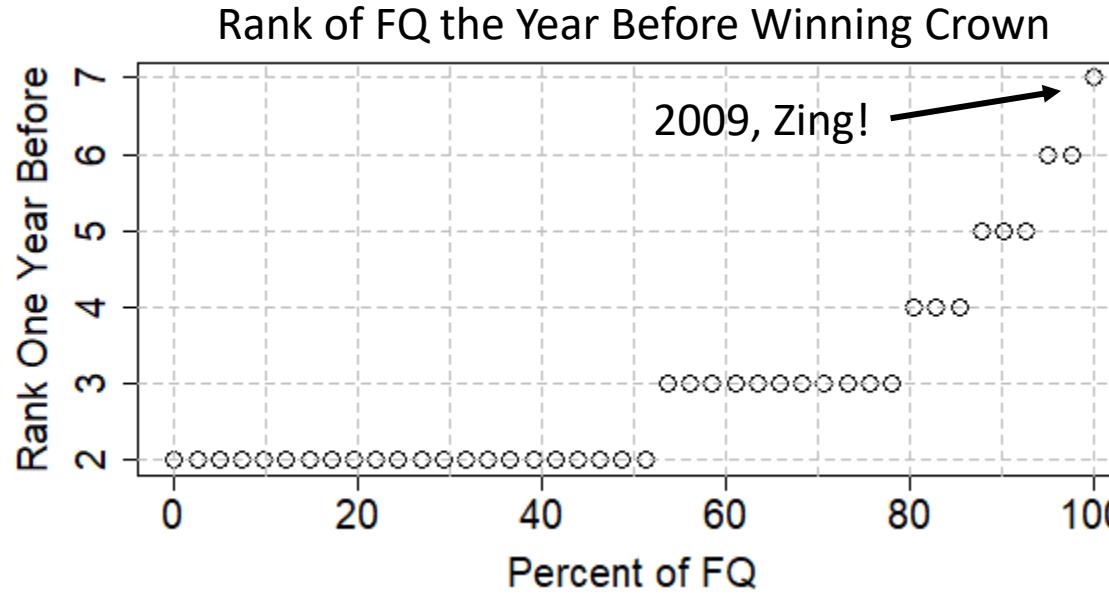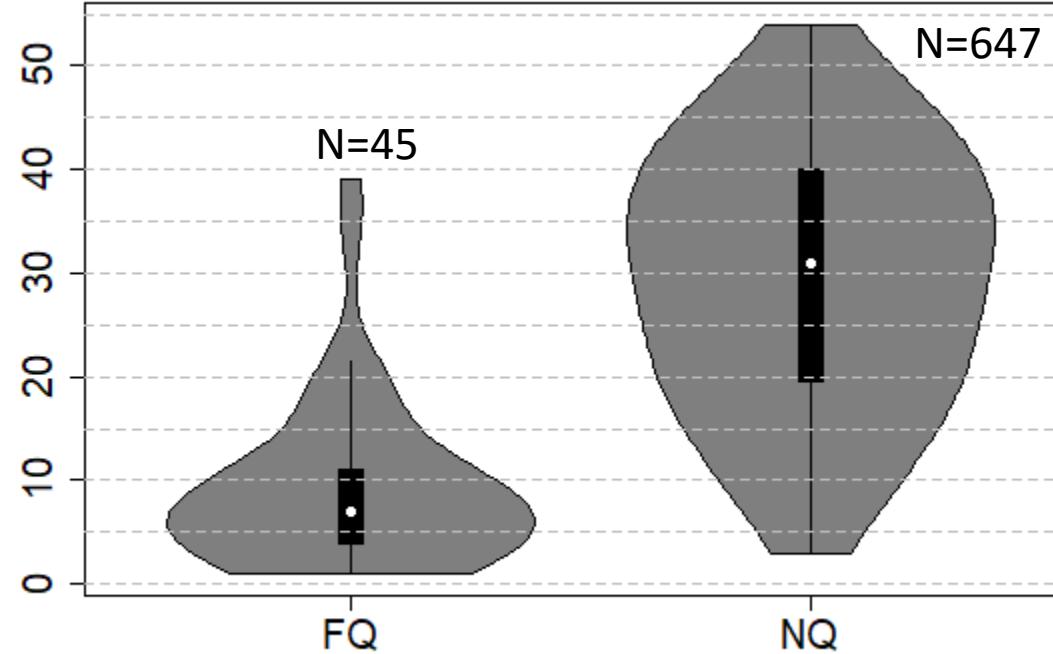
Take-away: To win, quartet must score in the Top ~5 the year before

Most winners earn their crown within 7 appearances
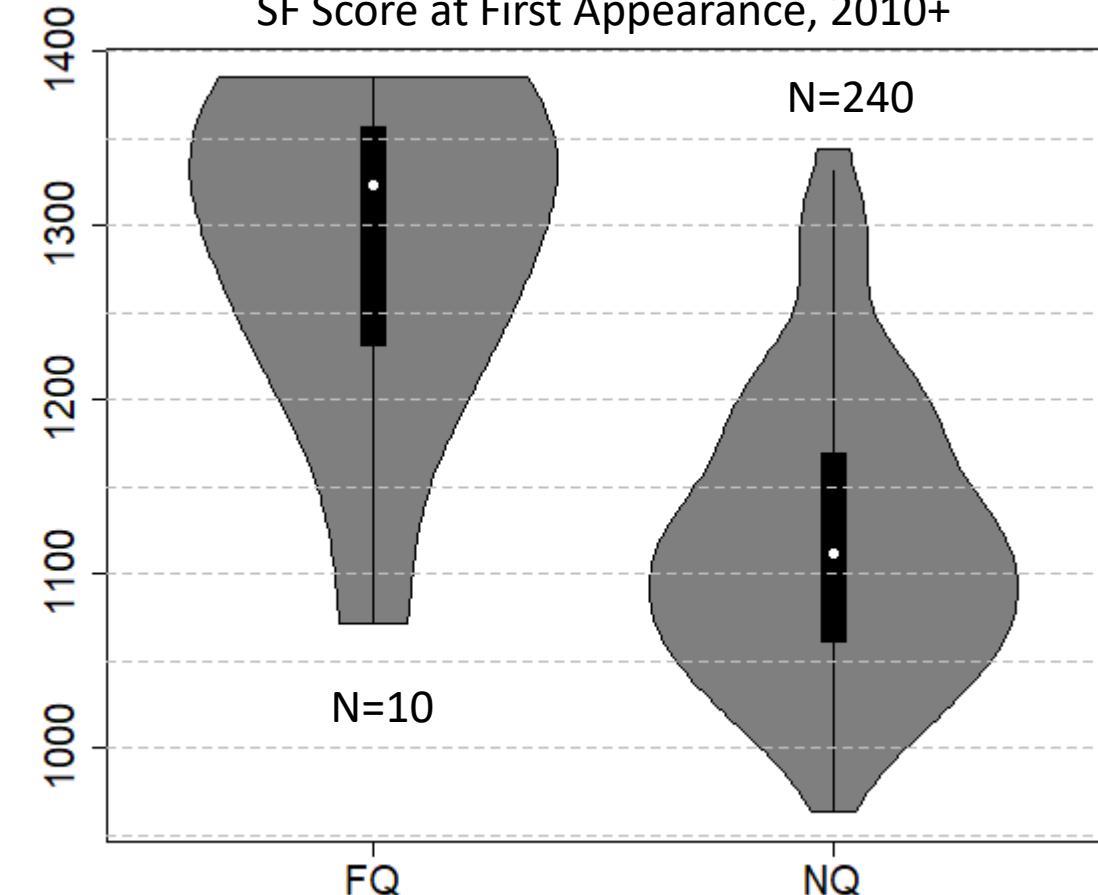
Do quartets who score highly at their first competition achieve more success at future competitions?

Quartet Rank at First Appearance

N=647

N=45

FQ   NQ

SF Score at First Appearance, 2010+

N=240

N=10
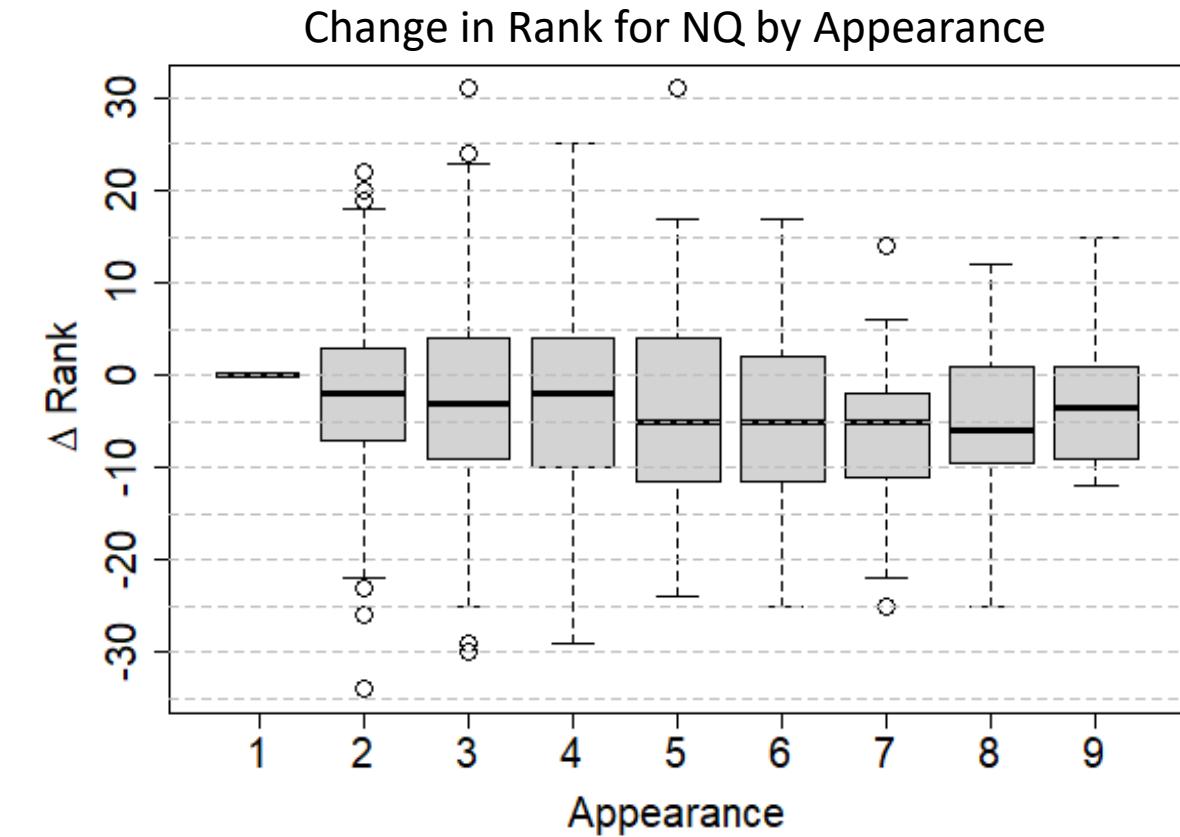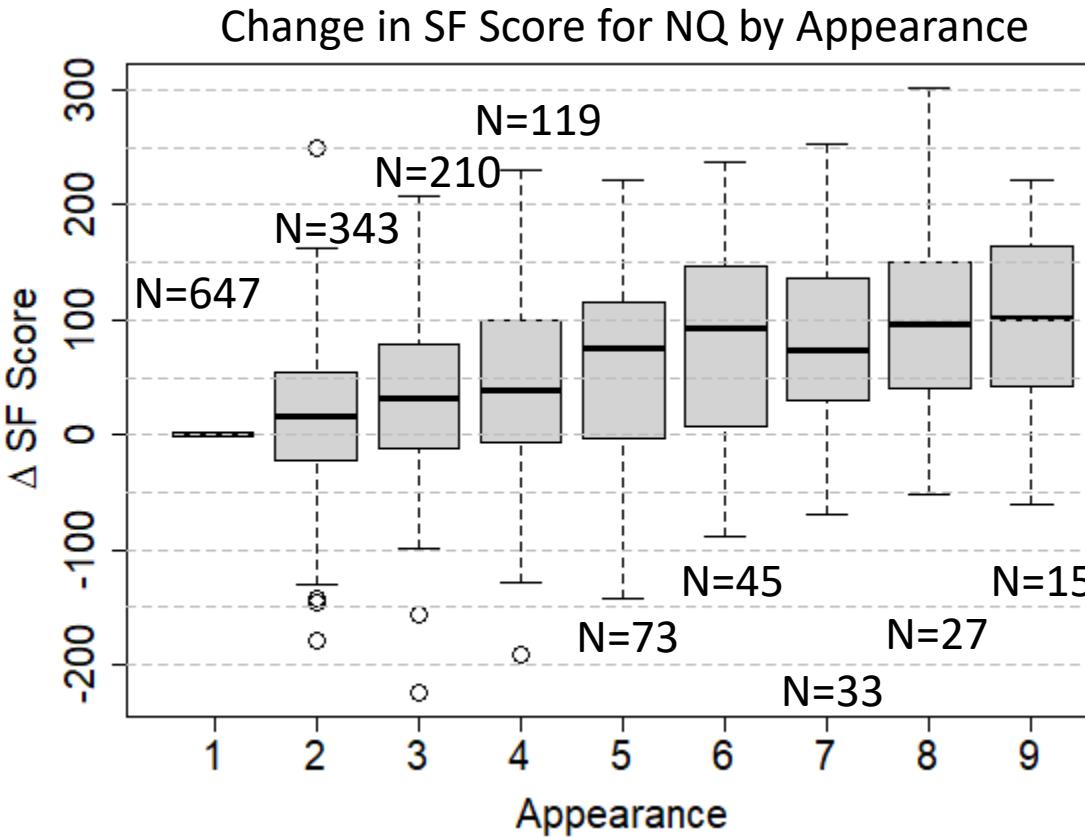
FQ   NQ

Take-away: FQ start in the Top 10

FQ start with scores >1300

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$H_o: \mu_{FQ} = \mu_{NQ}$
$t = 5.3, df = 9.5$
$p = 4E - 4$
**Limitation**: small sample size, non-normal

Change in SF Score for NQ by Appearance

Change in Rank for NQ by Appearance
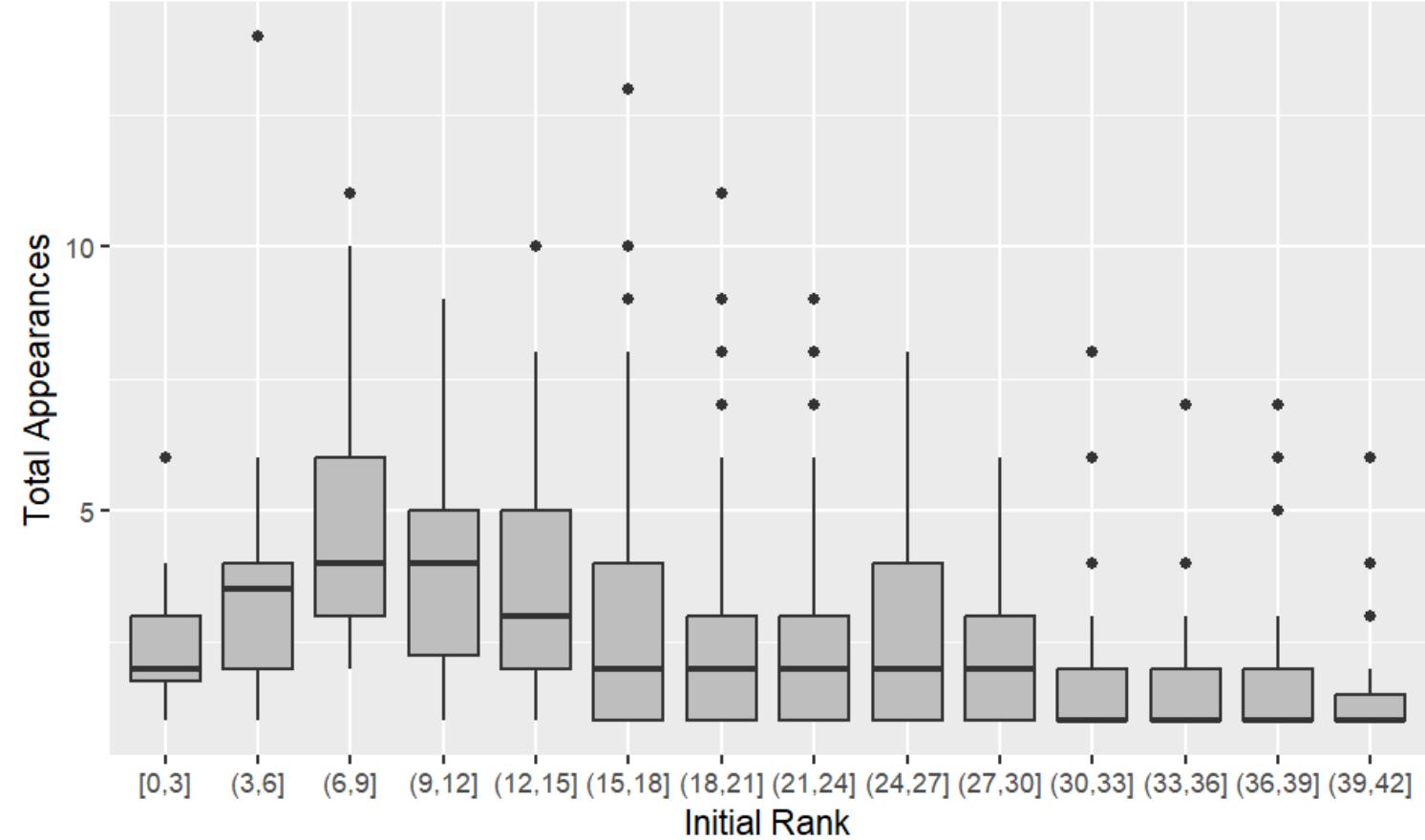
Take-away: Most quartets improve by ~16 points per year

Most quartets improve by ~1 place per year
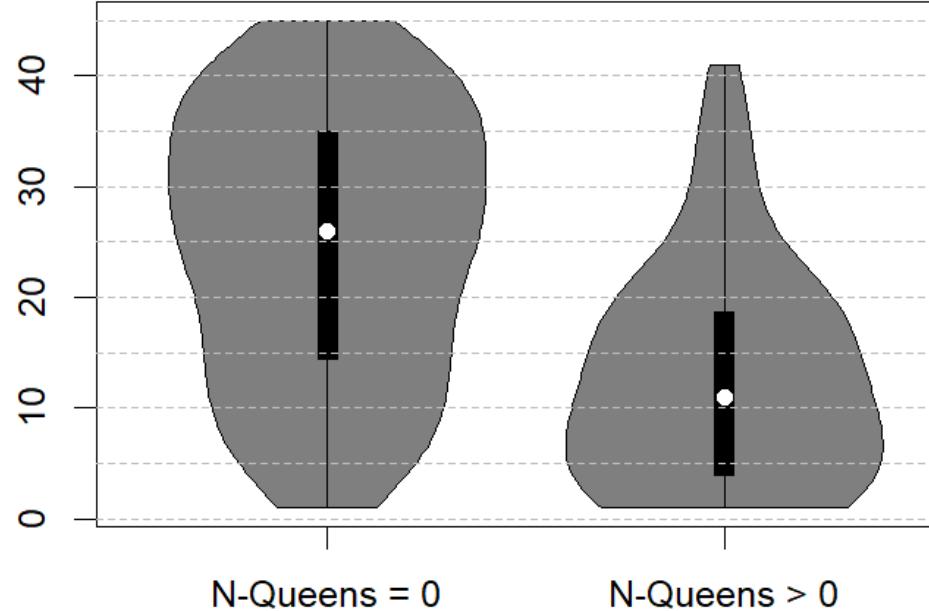
Take-away: The longest-lived quartets start near Rank 10

Initial rank > 29 are short-lived, only 63% return
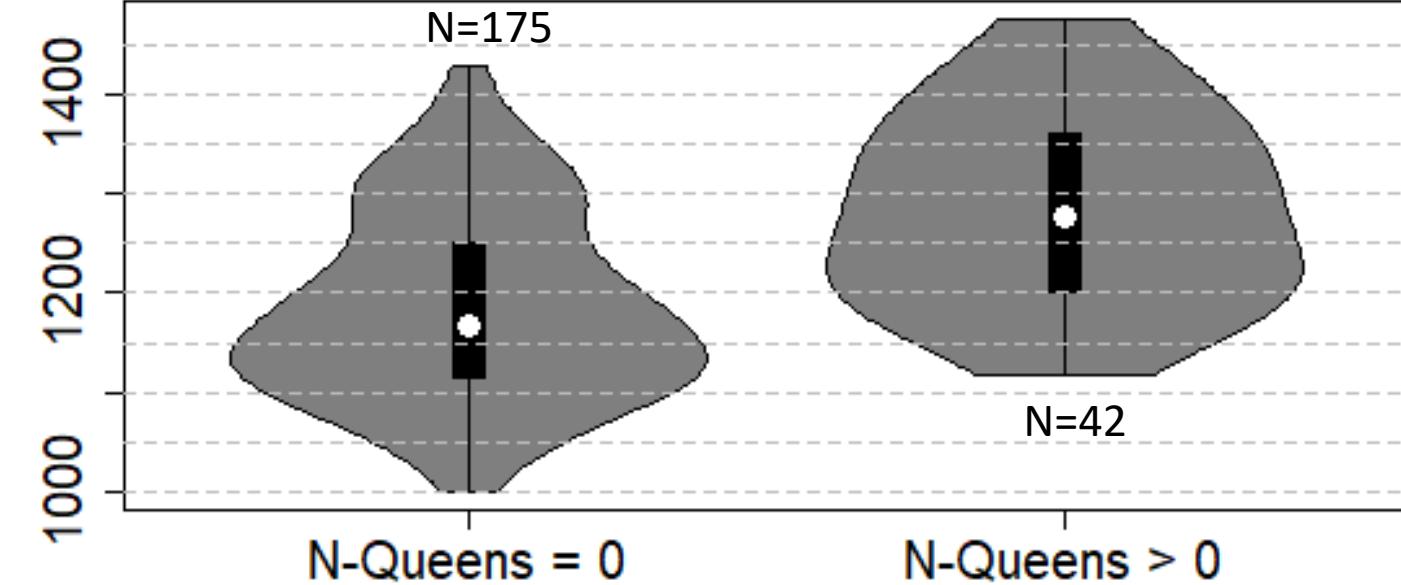
Rank by Number of Queens, 2018+

SF Score by Number of Queens, 2018+

N=175

N=42

Take-away: Having a past winner improves performance by -15 ranks / +110 points

$H_o: \mu_A = \mu_B$
$t = 6.0, df = 61.9$
$p = 1.3E - 7$
Limitation: treats repeated appearances as independent

- <u>No</u> statistically significant difference in score with song popularity
- Statistically significant difference in <u>initial</u> score between Winners (*FQ*) and Non-winners (*NQ*)
  - Difference between medians of two populations is +211 points or -25 ranks
- Statistically significant difference in score between Quartets with Past Winners (*N-Queens>0*) and Without (*N-Queens=0*)
  - Difference between medians of two populations is +110 points or -15 ranks
- For quartets that return 5+ times, half of quartets improve by between [0, +150] points or between [+2, -11] ranks
  - Median improvement at 5 appearances is +81 points or -5.5 ranks
  - 11% of quartets have at least 5 appearances