STAR TREK

THE ANALYSIS

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RESEARCH QUESTIONS

- Are there differences in quality across directors?
- What are the differences in quality across four shows and their constituent seasons?
- Which characters were the most liked/disliked?

DATA

TNG (1987-1994) — Seasons: 7, Episodes: 176

DS9 (1993-1999) — Seasons: 7, Episodes: 173

VOY (1995-2001) — Seasons: 7, Episodes: 168

ENT (2001-2005) — Seasons: 5, Episodes: 97

SCRIPTS → CHARACTER PROMINANCE

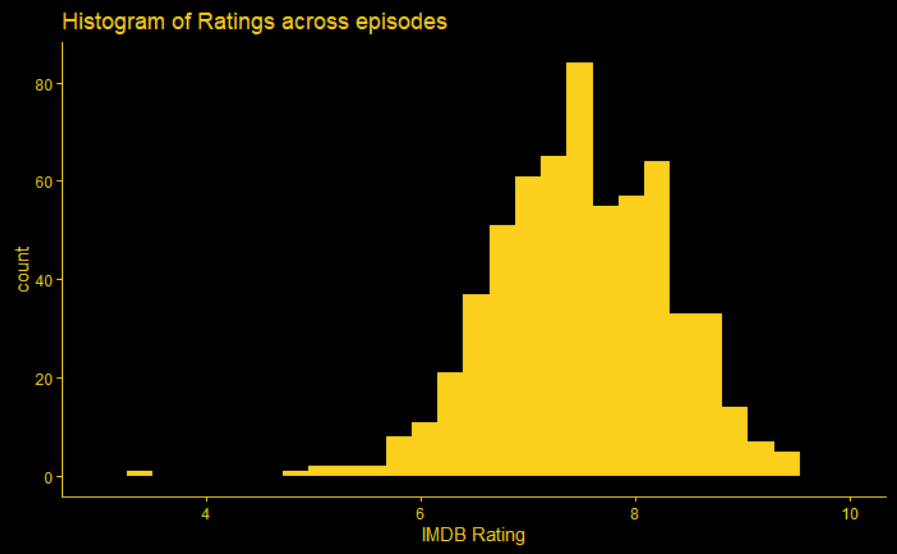
Director

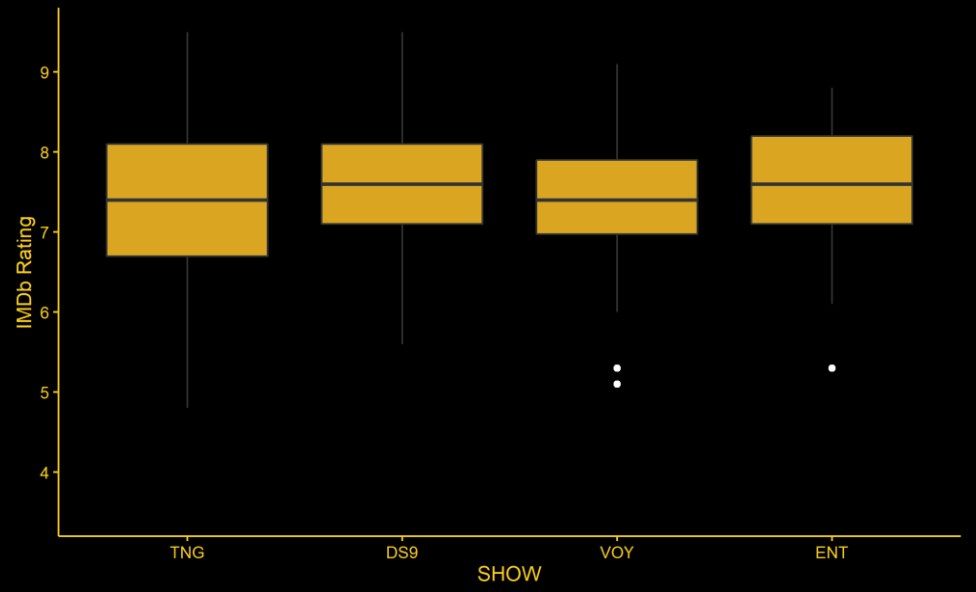
IMDb

CHARACTER PROMINENCE = Percentage of words spoken by each main character within each episode

Sources: www.chakoteya.net/StarTrek/index.html
datasets.imdbws.com

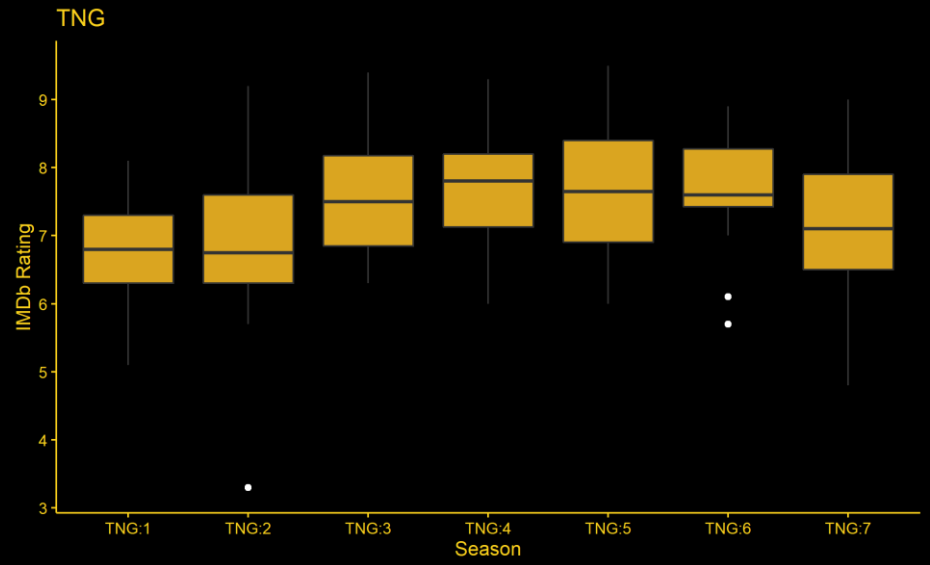
EXPLORATORY DATA ANALYSIS

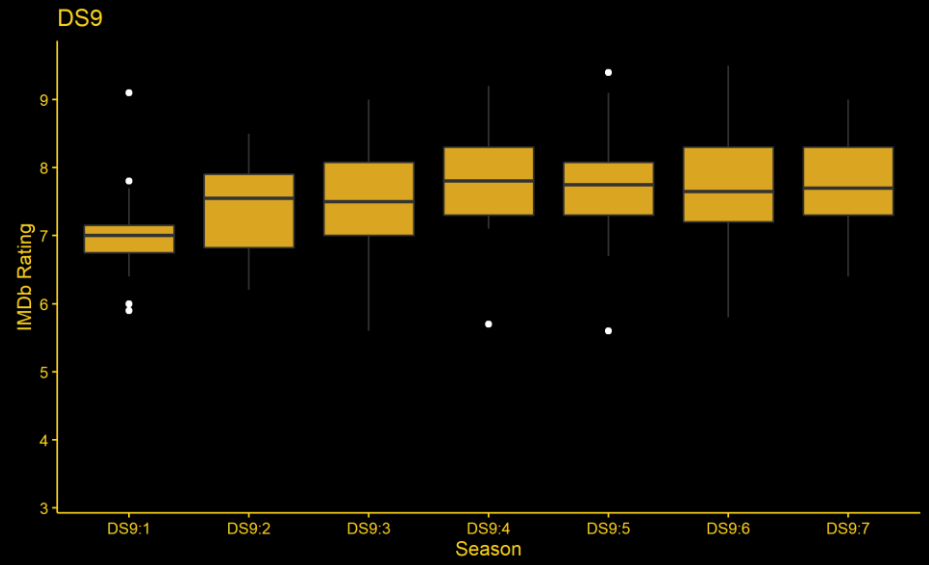


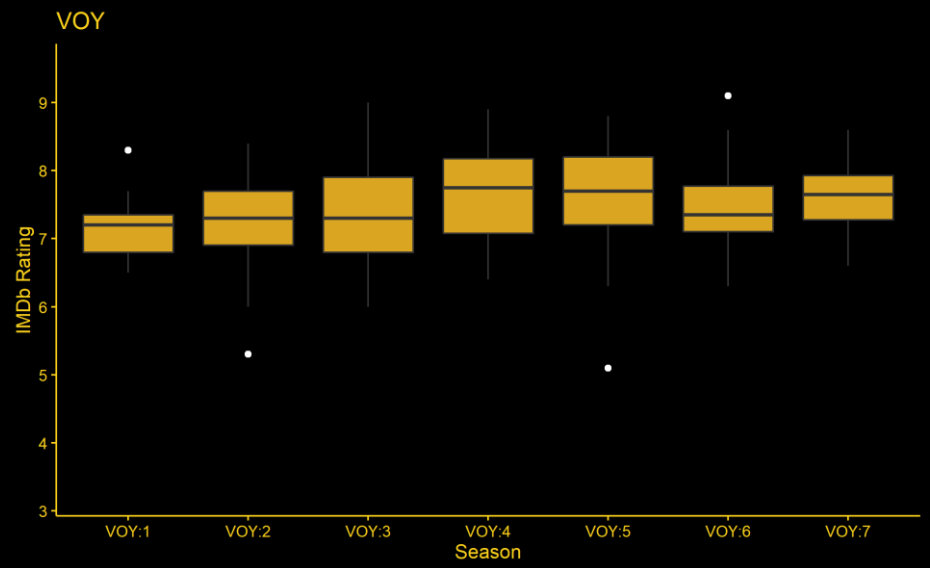


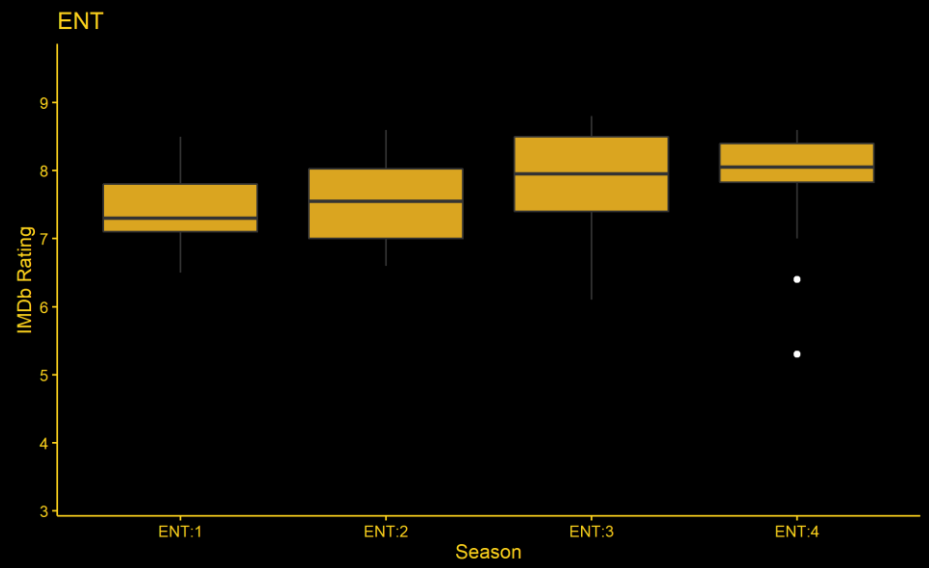
73 Unique Directors, with 33 directing more than 4 episodes

EXPLORATORY DATA ANALYSIS (cont.)

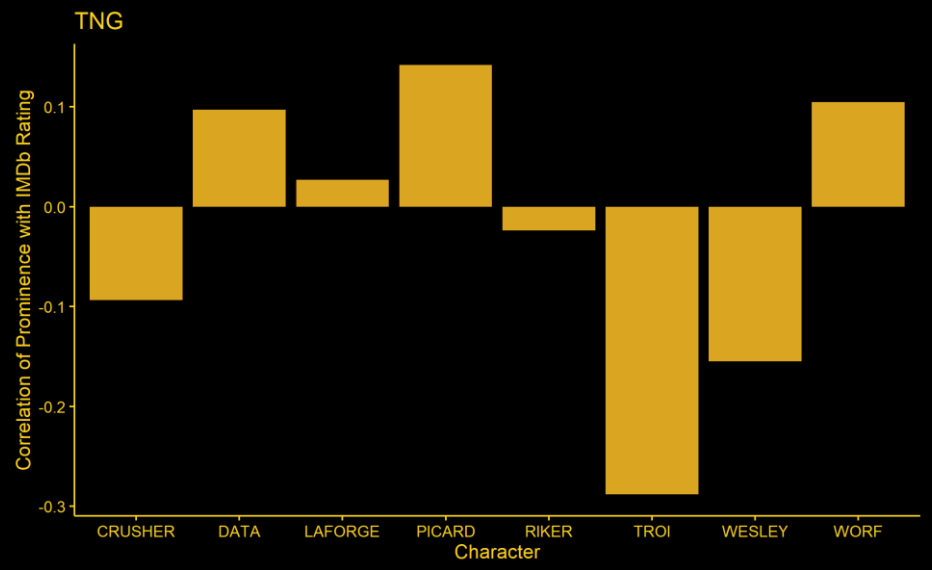


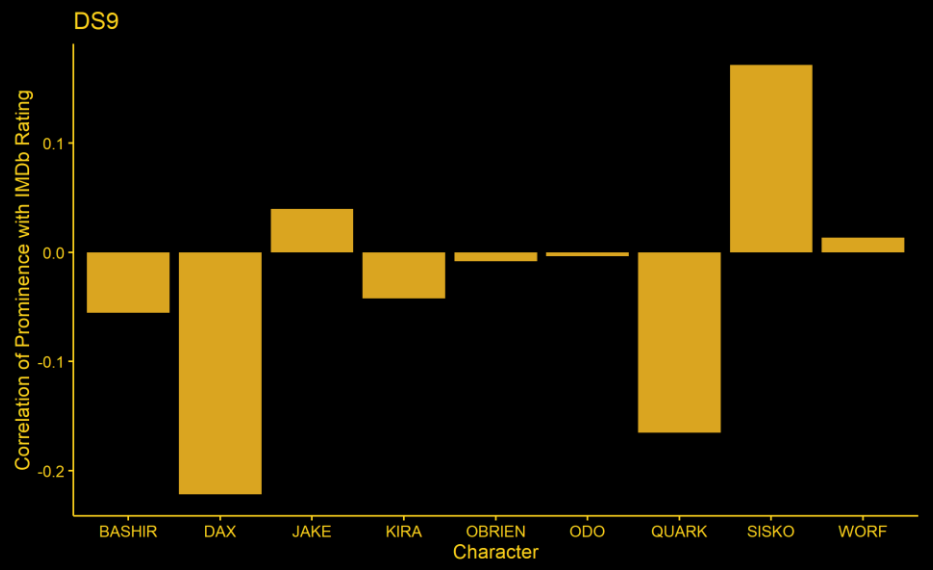


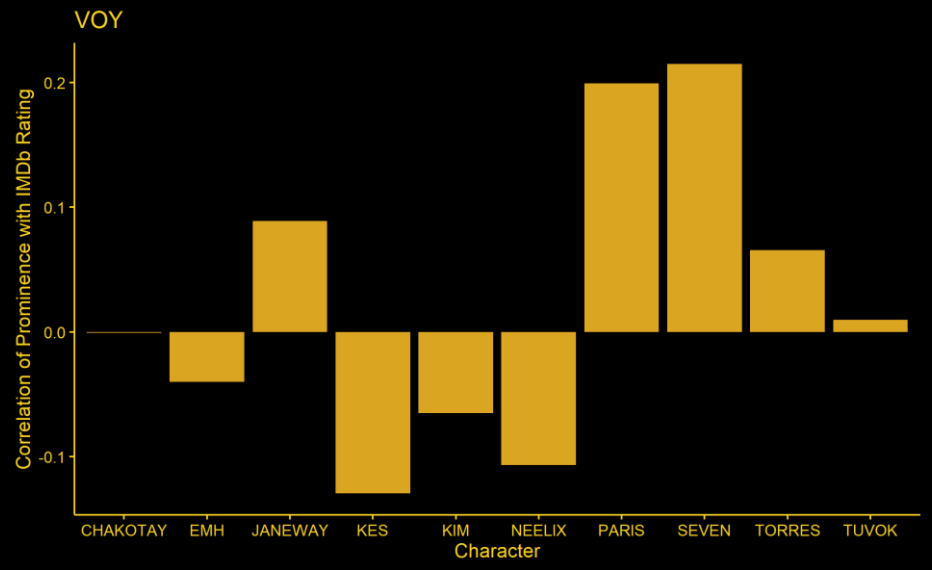


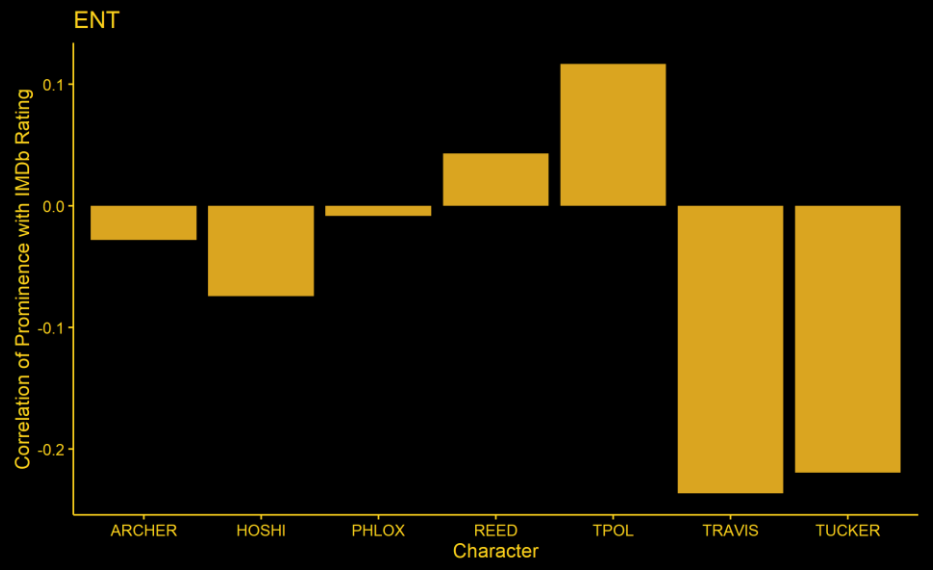


EXPLORATORY DATA ANALYSIS (cont.)







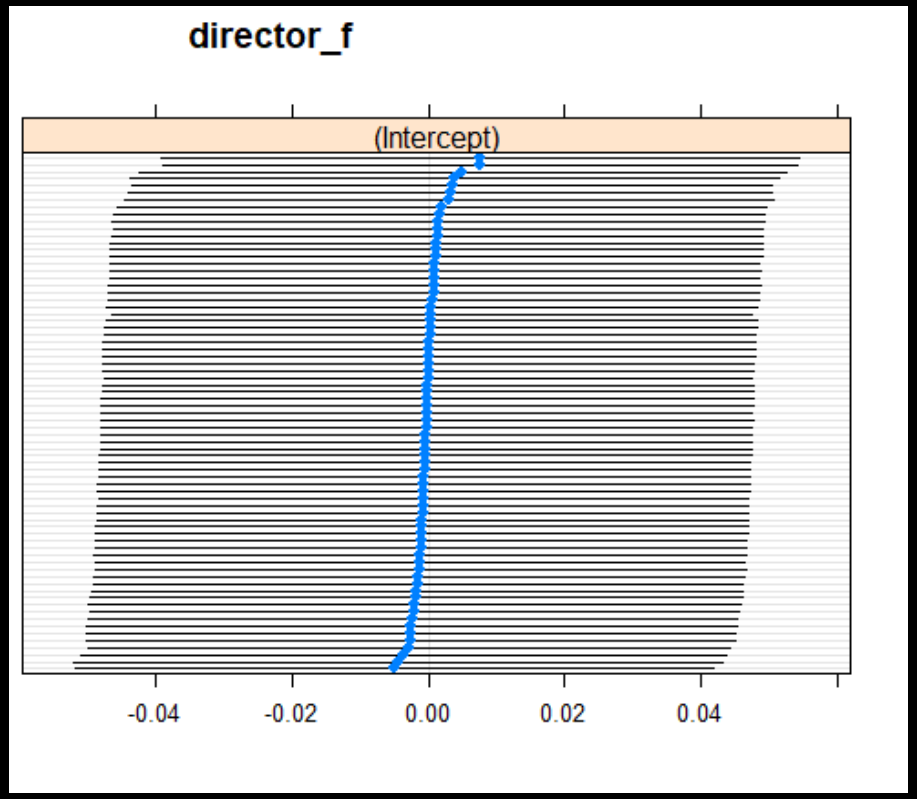


FINAL MODEL

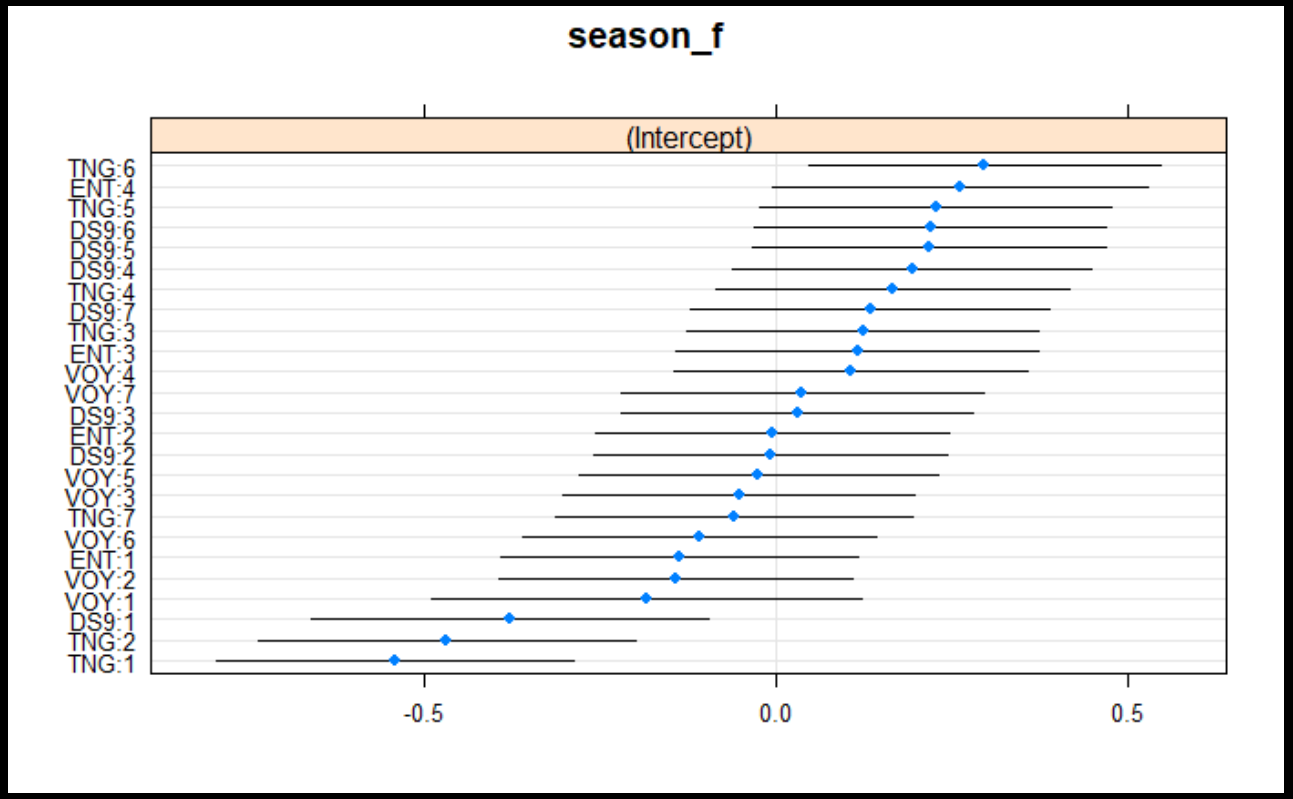
- Linear Hierarchical Model with levels as Show:Season and Director. The fixed effect covariates were the character prominence variables (33 in number)
- $y_{ijk} = \beta_0 + \beta_{0,j} + \beta_{0,k} + \sum_{p=1}^{33} \beta_p x_{p,i} + \epsilon_i$

- Where *y* is the IMDb rating, *j* is show:season, *k* is director, *p* is the index for cast prominence, β are the linear coffiecients, x is the covariate for cast prominence, and ϵ is the residual

RESULTS: RANDOM EFFECTS

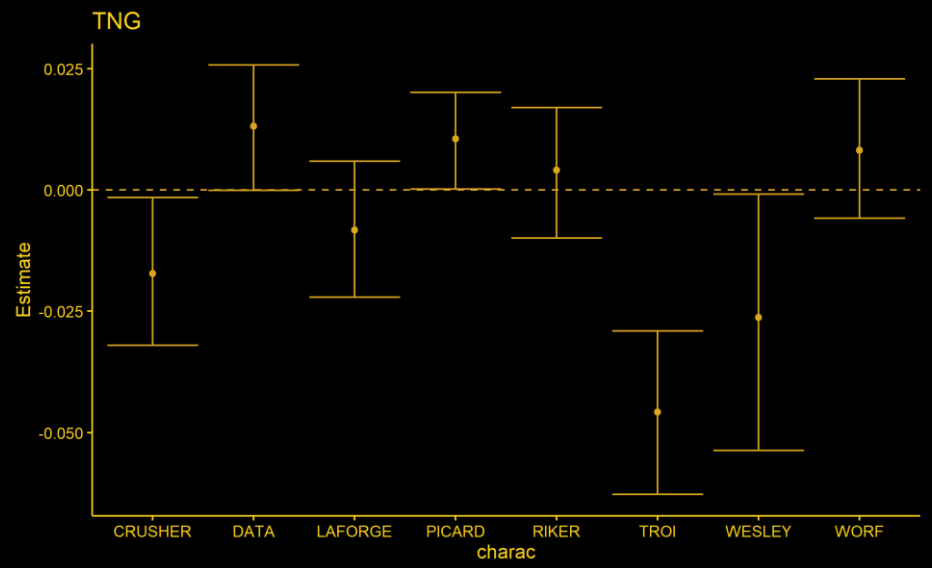


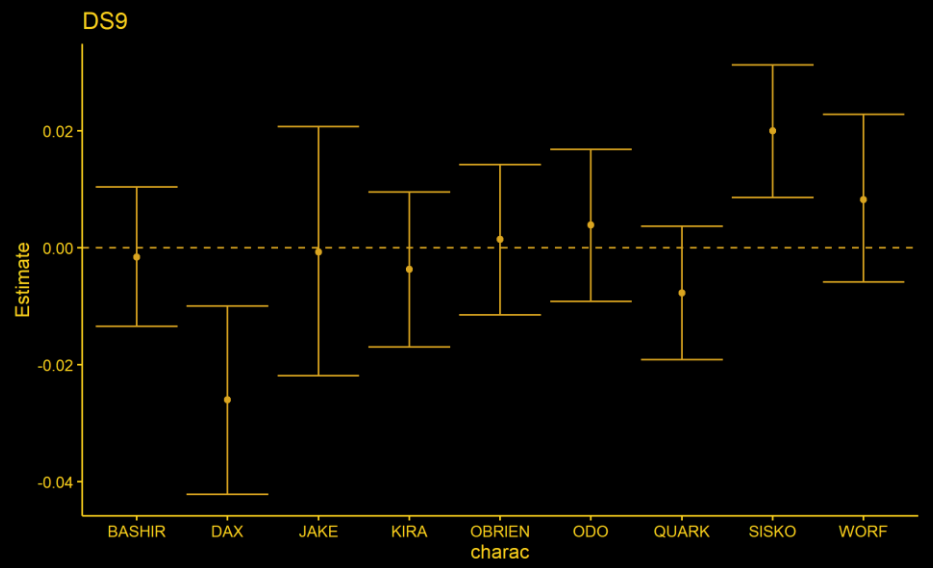
Variability Explained: 0.1%

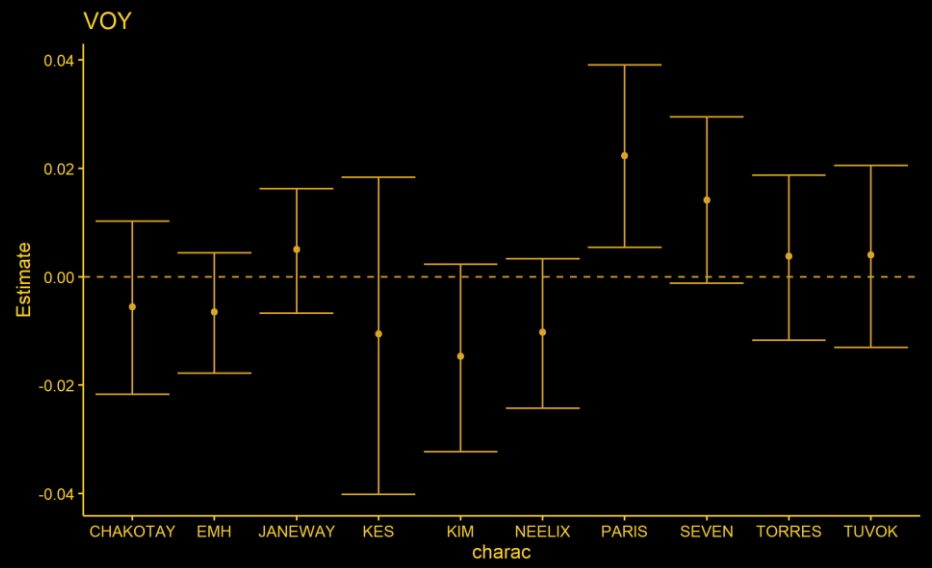


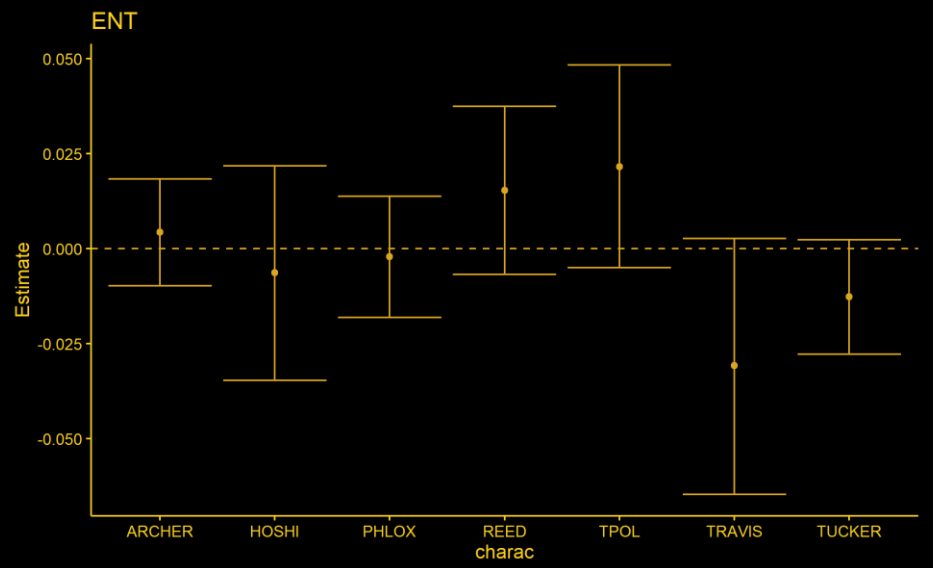
Variability Explained: 11.75%

RESULTS: FIXED EFFECTS









CONCLUSIONS

- No significant difference in quality across directors was observed
- There are significant differences across seasons across shows
- Character prominence plays a large role in reception of the episodes

LIMTATIONS

- Not enough data to observe differences in directors
- Unable to include writers in the analysis due to the nature of the data