Predicting Best Picture Nominees and Winners

A Preliminary Analysis

10/9/2015

A Best Picture nomination or win is very prestigious and can substantially increase box office revenue

About the Academy Awards

- **The Academy Awards** or **The Oscars** are an annual American awards ceremony honoring cinematic achievements in the film industry
- Awards are given in various categories, with perhaps the most prestigious being the award for **Best Picture**

Why They Matter

- The Oscars are generally regarded as the **most prestigious** awards in film
- Additionally the nominations and awards provide **tremendous exposure**
- A Best Picture nomination alone has been estimated to **increase box office revenue by ~$6.9 million***

Unfortunately, there is no "magic formula" for predicting Best Picture success

Best Picture Prediction Model

The Good	My best model is **98% accurate** at predicting Best Picture winner / nominee status
The Bad	*BUT...* does so by saying **no movies are ever nominated** (much less picking a winner) yielding a **0% true positive rate**
The Ugly	"Forcing" the model to make predictions leads to **strong overfitting**, and simply **increases the number of false positives** without any increase in true positives

There is simply **too much variability** movie to movie to accurately, and consistently predict Best Picture nominations with a single model

Osier
Enterprises

There are however some factors that *do* improve a movie's chances

Factors that are Good Predictors of Best Picture Success

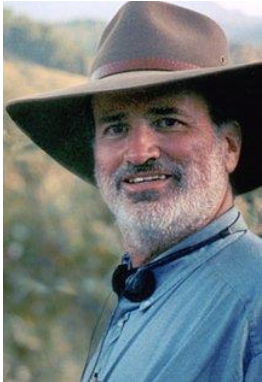|		
1. **Director(s)**		
2. **Actors / Actresses**	**Strongest**	
3. **Writer(s)**		
4. Genre		
5. Country	Decent	
6. Language		
7. Critical Opinion		
8. Public Opinion	Gatekeepers	
9. Number of nominees in year		
10. Month of release	Marginal	

People matter!

People that Most Contribute to the Likelihood of Best Picture Success

Directors	*Actors*	*Actresses*	*Writers*

Directors

1. **Terrence Malick**

2. Frank Darabont
3. Peter Jackson
4. Martin Scorsese
...

Worst:

1. Tim Burton

Actors

1. **Jack Nicholson**

2. Tom Hanks
3. Russell Crowe
4. Daniel Day-Lewis
...

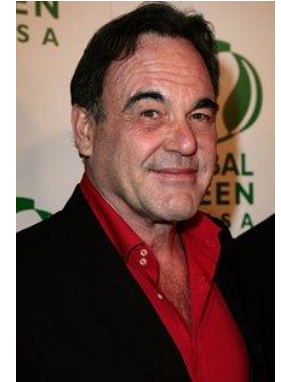**Worst:**

1. Philip Seymour Hoffman

Actresses

1. **Ellen Page**

2. Jodie Foster
3. Mila Kunis
4. Amy Adams
5. Sandra Bullock
6. Keira Knightley
...

Writers

1. **Oliver Stone**

2. James Cameron
3. Jason Reitman
4. Ben Affleck
5. Spike Jonze
6. M. Night Shyamalan

Not all genres are created equal

Best Genres for Success

1. **Western**

2. Biography

3. War

4. Romance

Worst Genres for Success

1. **Animated**

There is a clear bias towards more adult and historical topics
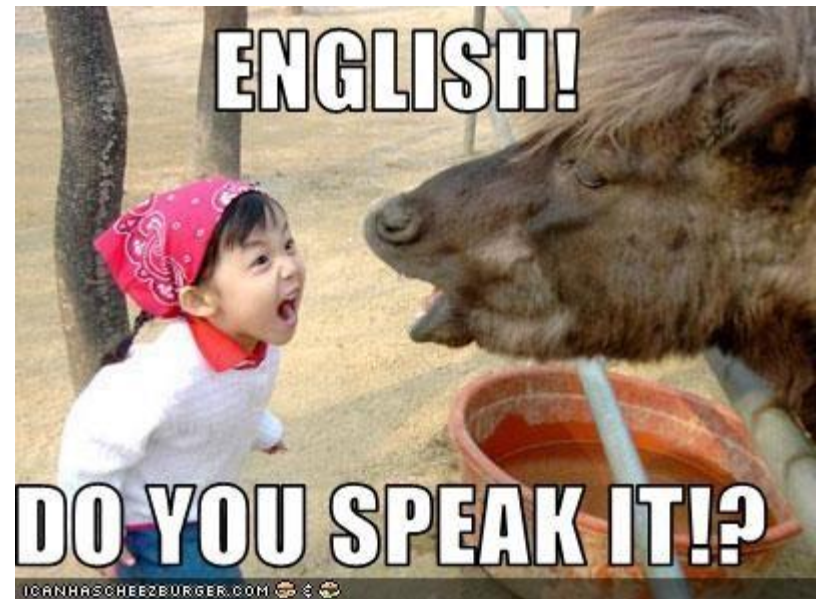
Don't be foreign

Country of Origin

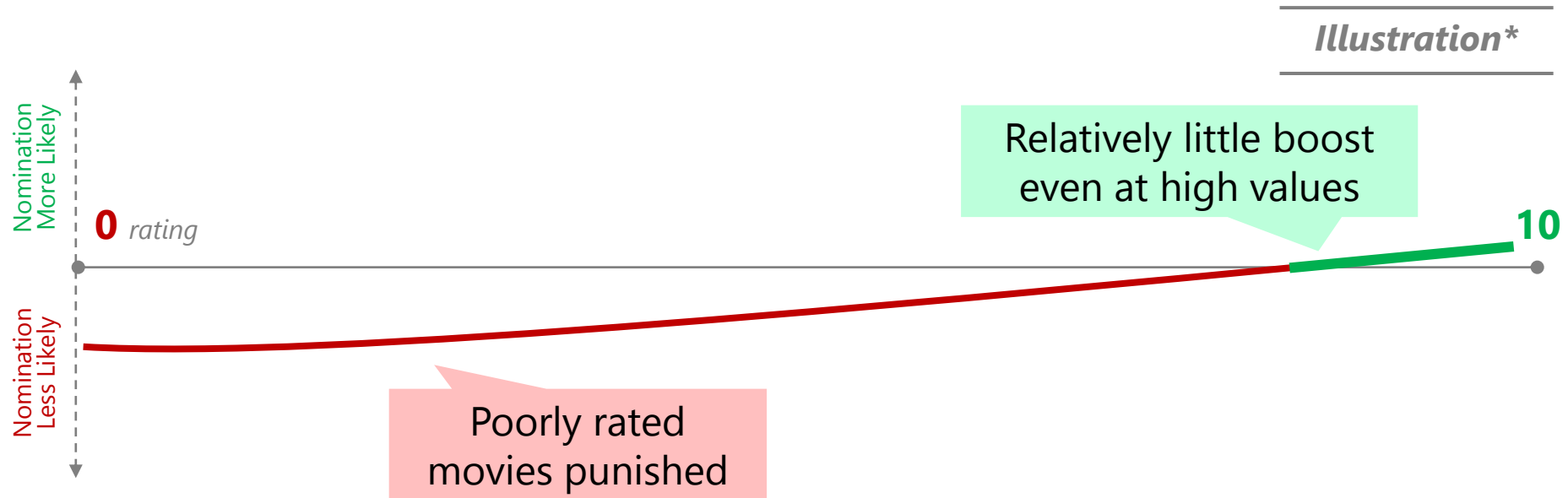- Despite their overwhelming number each US movie gets a **bump just for being American**

Language

- Similarly, English language movies also get a **bump just for being in English**

Ratings by Critics and the General Public

- Even for the very best movies, critic and public ratings **provide relatively little positive boost**

Illustration*

Nomination More Likely

0 *rating*

Relatively little boost even at high values

10

Nomination Less Likely

Poorly rated movies punished

- They act more as a "gatekeeper" and **punish movies below a certain threshold** (~7/10)

There are still areas for additional exploration that could yield further insight and improve prediction power

Data

- More directors, actors, actresses, writers, etc.?
- Composers?
- Cinematographers?
- Reach (# of screens)?
- Data on other award nominations / wins?
- More historical data?
- Etc.

Methodologies

- Logistic regression?
- Classification?
- Regression / classifications trees?
- KNN?
- Bayesian probability based approach?
- Etc.

Questions?

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