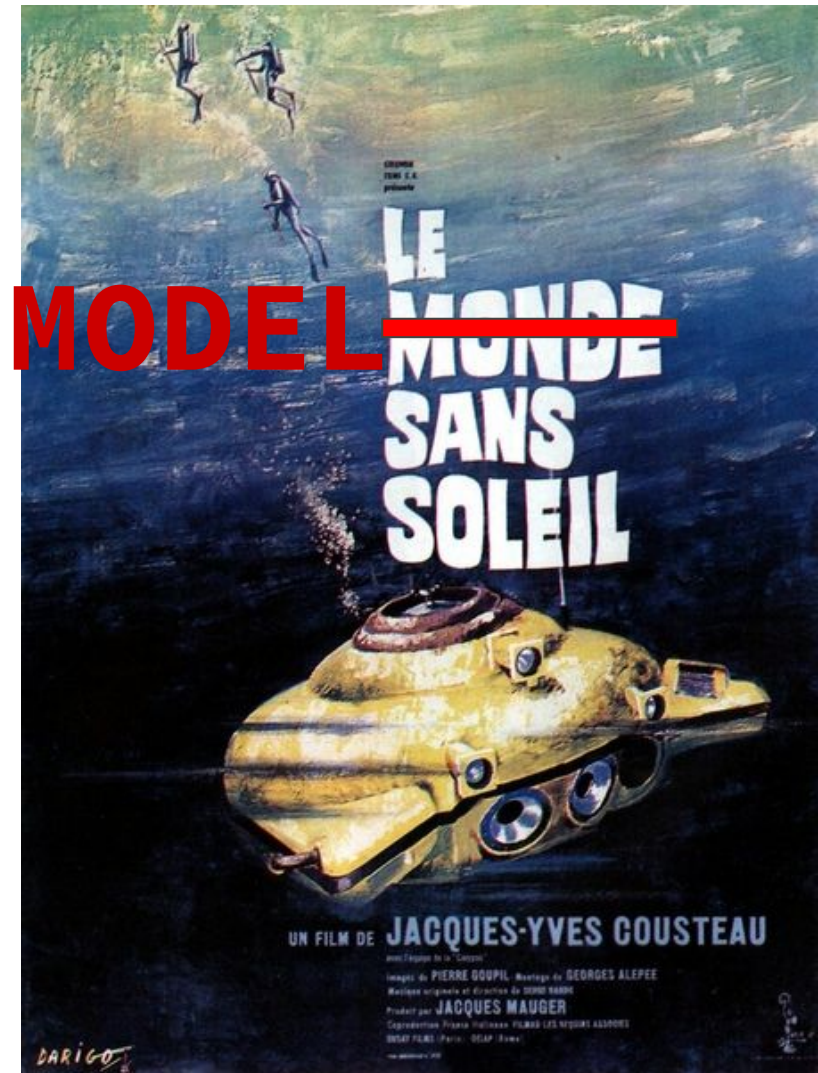


Project Luther

Jessica Cox



The question

What makes a documentary popular amongst critics?

- Smaller budgets
- Small release
- Lack of celebrity

The ultimate prize is a film festival award!



Outcome - Metacritic Score



Scraped metacritic score
from all documentaries on
metacritic.com

Restrepo

[National Geographic Entertainment](#)

Release Date: Jun 25, 2010

Summary

Critic Reviews

User Reviews

De



85

Metascore

Universal acclaim
based on [33 Critics](#)

[What's this?](#)

Summary: A feature-length documentary that chronicles the deployment of a platoon of U.S. soldiers in Afghanistan's Korengal Valley. The movie focuses on a remote 15-man outpost, Restrepo, named after a platoon medic who was killed in action. It was considered one of the most dangerous postings in... [Expand ▾](#)

Features - Box Office Mojo Data

- Domestic total gross
- Distributor
- Rating
- Release date
- Runtime
- Budget
- Worldwide gross
- Total theaters

Box Office Mojo

Adjuster: Actu

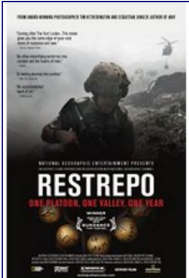
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RESTREPO
ONE PLATON. ONE VALLEY. ONE YEAR.

Restrepo

Domestic Total Gross: **\$1,330,894**

Distributor: National Geographic Entertainment	Release Date: June 25, 2010
Genre: Documentary	Runtime: 1 hrs. 34 min.
MPAA Rating: R	Production Budget: N/A

Summary | Weekend | Weekly | Foreign | Similar Movies

Total Lifetime Grosses
Domestic: **\$1,330,894** **92.7%**
+ Foreign: **\$105,497** **7.3%**
= Worldwide: \$1,436,391

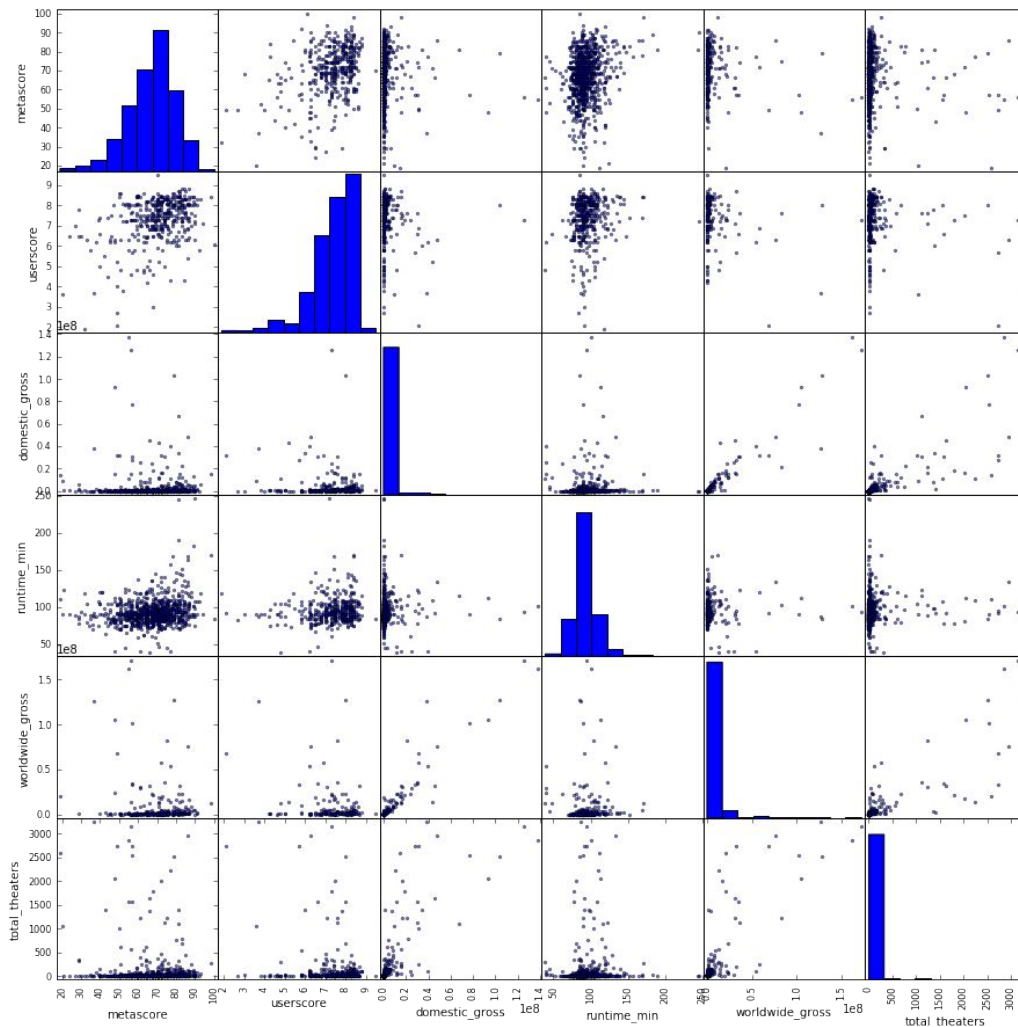
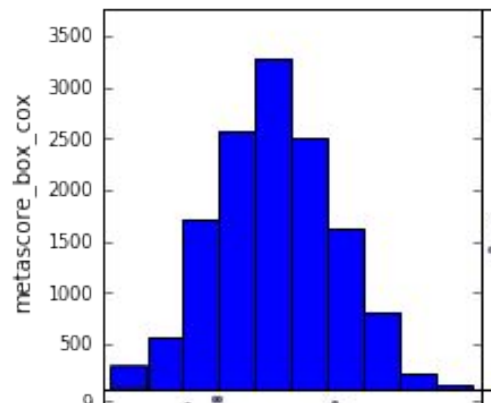
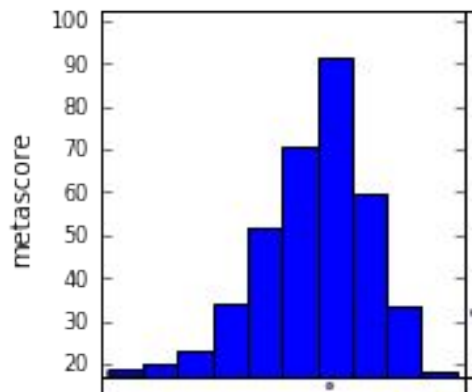
Domestic Summary
Opening Weekend: \$35,581
(#49 rank, 2 theaters, \$17,791 average)
% of Total Gross: 2.7%

Related Stories
6/28/10 Arthouse Audit: 'Solitary Man' Alone on Top

Related Products

- Restrepo
- Restrepo [Blu-ray]

Cleaning the data



Data transformations

- Imputed missing values with the median
- Transformations
 - Box-Cox transformation : Metascore
 - Log transformation : Runtime
- Bins
 - Years - decades
 - Months - seasons
 - Number of theaters: less than 10, 10-100, 100+
 - Studio size: made 1 film, 2-10, more than 10

Model

```
metascore_box_cox ~ tdg_box_cox +  
runtime_log + rating + season + year  
+ studio_size + theater_cat
```

OLS and Model Fitting

- Total N = 883
- Split into a 20% training set

R-squared:	0.132
Adj. R-squared:	0.115
F-statistic:	7.723
Prob (F-statistic):	3.65e-18
Log-Likelihood:	-6800.4
AIC:	1.364e+04
BIC:	1.372e+04

Omnibus:	2.683	Durbin-Watson:	2.018
Prob(Omnibus):	0.261	Jarque-Bera (JB):	2.559
Skew:	-0.098	Prob(JB):	0.278
Kurtosis:	3.177	Cond. No.	8.41e+05

Significant Coefficients of OLS

— — —

	coef	std err	t	P> t	[95.0% Conf. Int.]
rating[T.PG]	-322.1749	126.533	-2.546	0.011	-570.523 -73.827
season[T.Spring]	-103.4704	48.539	-2.132	0.033	-198.739 -8.202
studio_size[T.medium]	-130.3118	41.789	-3.118	0.002	-212.332 -48.292
studio_size[T.small]	-138.2918	54.882	-2.520	0.012	-246.010 -30.574
gross_box_cox	183.5040	38.757	4.735	0.000	107.435 259.573
runtime_log	722.3034	112.656	6.412	0.000	501.192 943.415

OLS and Regularization

Model	MSE
OLS	Train = 325991 Test = 337066
Ridge	Train = 28306 Test = 288169 Alpha = 0.0001
Lasso	Train = 288074 Test = 283389 Alpha = 0.003

Conclusions

- It's difficult to predict the critical acclaim of documentaries!
- Documentary makers should consider:
 - Size of distribution company
 - Number of theaters
 - Time of year of release
- Next steps
 - More data points!
 - Subgenres
 - Film festival wins
 - Other critic scores
 - Marketing

