INSERT TITLE

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Theoretical hypothesis

Recent movies by Dreamworks are as good as recent movies by 20th Century Fox.

Dependent variable

IMDB score. Via the advanced title search, search for feature films with a release date to set to max 2019. Search once for Dreamworks and once for 20th Century Fox. For each, sort the titles starting with the most recent release date.

Sample size justification

I will use an alpha of 0.05. I will perform a two-sided test. I will not be performing a sequential analysis. I am aiming for 90% power. I aim to exclude an effect of a Cohen's d of 0.8, assuming the true effect is 0. Using the `powerTOSTtwo` function from the `TOSTER` R package, I find that I need a sample size of 34 in each group.

Statistical test specification

I will calculate a 90% CI around the effect size. If the 90% CI falls below and excludes a Cohen's d of 0.8, recent movies from the two companies will be considered equally good.

One observation was excluded

One movie was found to have no ratings on IMDB (Thomas and The 2 Brothers). This observation was removed from the analysis, leaving 20th Century Fox with 33 instead of 34 observations.

Statistical test suggests that recent Dreamworks and 20th Century Fox movies are equally good

For each company, the mean and standard deviation were computed (Dreamworks: mean = 6.83, sd = 0.71; 20th Century Fox: mean = 6.58, sd = 0.99). These were used to perform an equivalence test (Figure 1). The null hypothesis of a mean difference equal or greater than a Cohen's d of 0.8 (equivalent to a raw difference

of 0.6888) was rejected at the 5% level (mean difference = 0.248, 90% CI: [-0.103, 0.599], $t_{60.05} = -2.1$, $p = 0.020$).

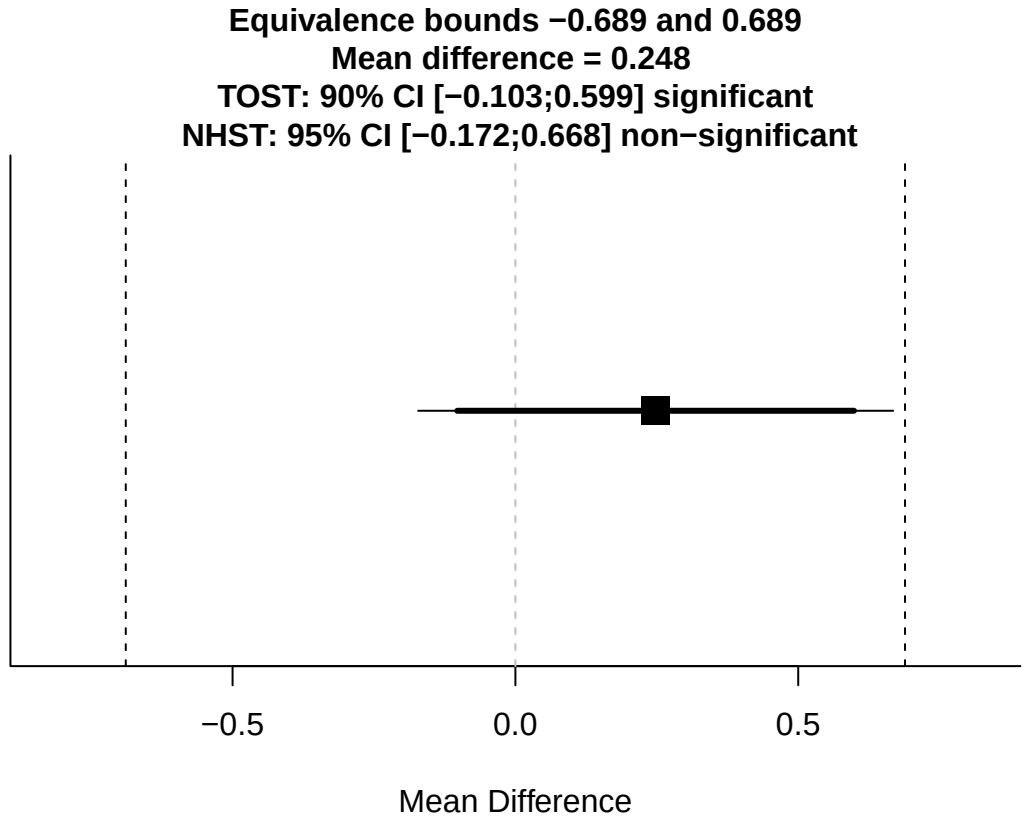

Figure 1: The null hypothesis that the Cohen's d effect size is 0.8 is rejected.