# Celebrity Media Influence and Sociocultural Dynamics: An Empirical Analysis of Conan O'Brien's Impact on the Richard Gere Gerbil Rumor through Interrupted Time Series Analysis of Google Trends Data

Lucy D'Agostino McGowan Department of Statistical Sciences, Wake Forest University

September 6, 2023

#### Abstract

The persistence of the Richard Gere gerbil rumor in celebrity folklore has intrigued scholars and sociocultural observers. This paper employs interrupted time series analysis to explore the influence of former late-night television host, current podcaster Conan O'Brien on the propagation and perpetuation of this salacious gossip. Contrary to initial hypotheses, our analysis suggests that Conan O'Brien's impact on the discourse surrounding this rumor is negligible, and in some cases, potentially negative. In contrast, other late-night hosts like James "Jimmy" Fallon and John Oliver exhibit more noticeable but short-lived effects on public interest in the rumor. This study sheds light on the complex dynamics of media, celebrity, and rumor within contemporary culture and highlights the need for further research to validate these findings.

Keywords: there, was, talk, of, gerbils

### 1 Introduction

The narrative surrounding the Richard Gere gerbil rumor has endured as a captivating and enigmatic facet of contemporary celebrity folklore. Originating from the annals of urban legend and gossip, this rumor has been the subject of countless discussions and conjectures within popular culture. Its emergence as a persistent and perplexing narrative within the celebrity sphere has intrigued scholars and sociocultural observers alike (Koven 2017, Boese 2006, Young 2002, Dreben et al. 2011, McGee 2005, Baranick 2014). While this rumor's precise origins remain shrouded in mystery, it has, over time, gained remarkable resilience, firmly embedding itself in the annals of celebrity rumors. The rumor's unique capacity to persist within the collective consciousness, despite a paucity of substantive evidence, raises compelling questions regarding the dynamics of rumor propagation and the interplay of media, public perception, and celebrity identity. Consequently, it serves as an intriguing focal point for scholarly inquiry, inviting a nuanced examination of the sociocultural forces that contribute to the genesis and persistence of celebrity rumors in the contemporary landscape.

This paper consists of a meticulous exploration of the potential influence wielded by the fomer late-night television host, current podcaster, Conan O'Brien, upon the infamous rumor circulating about the actor Richard Gere and a purported gerbil incident, aspiring to elucidate the potential repercussions of Mr. O'Brien's involvement in the propagation and perpetuation of this salacious gossip. It was hypothesized by Talin "Sona" Movsesian that O'Brien was causing this rumor to recirculate among the general public – we seek to test whether this hypothesis is true. Additionally, we explore whether other late-night television hosts may have contributed to the discourse in a similar or perhaps greater extent. As such, we include an analysis examining the impact of discussion of the gerbil incident

on shows hosted by James "Jimmy" Fallon and John Oliver.

Between 2010 and 2023, the author is aware of two instances where Conan O'Brien brought the Richard Gere rumor to the attention of his fans. The first was in his monologue on September 19, 2018 in Conan on TBS (Conan on TBS 2018). The second, on his podcast Conan O'Brien Needs a Friend in the episode titled "Javier Bardem" released on May 15, 2023 (Conan O'Brien Needs a Friend 2023a), where O'Brien brought up a discussion with Joseph Yule Jr., commonly known as "Mickey Rooney", where the phrase "There was talk of gerbils" was stated in reference to Gere. During this period, comedian Ricky Gervais brought up the rumor while interviewed by the late-night talk show host James "Jimmy" Fallon on June 2, 2014 (Simone 2014). The gerbil rumor also came up on Last Week Tonight on February 12, 2017, where host John Oliver reminded folks how vicious rumors can be by simply holding up a photo of Richard Gere (Merry 2017). Using these dates, we fit an interrupted time series, analyzing both the acute effects, i.e., the immediate consequences of discussions surrounding this scandalous rumor, and long-term trends, thereby ensuring a comprehensive investigation into this intricate sociocultural phenomenon. This approach allows us to extract insights into the temporal dynamics that have governed the ebb and flow of public interest in this captivating narrative.

#### 2 Methods

#### 2.1 Data

The data were obtained from Google Trends (Google Trends 2023), offering a robust and contemporaneous representation of the public's engagement with this scandal. Daily, weekly, and monthly datasets are meticulously collated and aggregated, using the Chow-Lin

methodology (Chow & Lin 1971, Becerra et al. 2023). Due to limitations when extracting Google Trends data, our renormalized values may fall outside the typical maximum (100) and minumum (0), however we expect them to remain comparable. We extracted data from January 1, 2010 through September 2, 2023 using the search term "Richard Gere gerbil".

#### 2.2 Statistical Analysis

We identified four possible interventions: (1) June 2, 2014 (Ricky Gervais on The Tonight Show Starring Jimmy Fallon) (2) February 12, 2017 (John Oliver on Last Week Tonight) (3) September 19, 2018 (Conan on TBS) (4) May 15, 2023 (Conan on Conan O'Brien Needs a Friend). Our outcome of interest is the normalized "Google Trend" value, where higher values indicate higher relative interest in Google Search and lower values indicate lower interest. We first calculate a 90-day rolling average and standard deviation to identify highly unusual observations, defined as observations that fall greater than 6 standard deviations above the mean. We then consider "acute" effects as the immediate effect of the intervention in question in the following ten days. We consider "long term" effects as the effect over a year post-intervention. We fit an interrupted time series model with four interventions. We then build counterfactual contrasts to assess the acute and long term effects of each intervention. We also consider a sensitivity analysis where we vary the podcast intervention date, as the rumor was re-referenced on other episodes.

#### 3 Results

Google Trends data was extracted from January 1, 2010 through September 2, 2023, resulting in 4,993 observations (Figure 1). We identify three observations as strong outliers, defined as days where the estimated Google Trends value is greater than 6 standard deviations above the rolling 90-day average. One of these observations fall on a date associated with intervention (1), when Ricky Gervais mentions the rumor on The Late Night Show with Jimmy Fallon, and the remaining two are associated with intervention (2), when John Oliver displays a photograph of Gere while mentioning the damaging impact of rumors on Last Week Tonight, suggesting that each of these events had a strong impact on our outcome of interest. Figure 1 does suggest a discontinuity in Spring of 2021. Upon further investigation, we discovered a BuzzFeed article titled 11 Wild Pop Culture Conspiracy Theories Vs. What Actually Happened that was published at this time mentioning the Gere rumor, likely driving this sustained change (Yandoli 2021). We then fit an interrupted time series, accounting for each of the four interventions as well as the 2021 BuzzFeed article. Figure 2 displays the acute results; each figure shows the estimated Google Trends value that was observed under the realized intervention over the following 10 days as well as the counterfactual, what we predict would have occurred in those 10 days had the intervention not taken place. Examining Figure 2a, we see that the Ricky Gervais mentioning the incident on The Late Night Show with Jimmy Fallon resulted in a noticeable acute effect, significantly larger than the estimated counterfactual should the mention have not taken place (i.e. the orange line, predicted from the observed data, is very different from the predicted counterfactual red dashed line had the intervention not taken place). Likewise, Figure 2b shows that John Oliver holding up the photo of Richard Gere while mentioning the effects of rumors also had a noticeable acute effect compared to the estimated counterfactual. Figure 2c and Figure 2d, on the other hand, tell a different story. Both interventions by Conan do not seem to have a noticeable effect that differs from the counterfactual. In other words, the amount of Google Trends buzz appears to be the same whether or not Conan had mentioned Richard Gere on this television show or podcast, suggesting he has little influence on the decimation of this rumor. In fact, Figure 2d suggests that perhaps the podcast effect is even negative, suggesting that the mention of "there was talk of gerbils" actually caused fewer people to Google this rumor than would have previously been predicted, although this is not a statistically significant effect. Figure 3 shows the predicted long term effect of each intervention. Interventions (1) and (3) do not appear to have meaningfully different long term effects compared the the counterfactual. Intervention (2) (John Oliver holding up the photograph of Richard Gere), does seem to have a slightly increased effect compared to the counterfactual and Conan O'Brien's podcast (4) appears to have actually led to less interest in the topic, on average, although a full year of data is not currently available.

### 3.1 Sensitivity Analysis

As a sensitivity analysis, we consider a different date for the fourth intervention: May 29, 2023. This is the date of the Sebastian Maniscalco episode. At the end of this episode, Conan mentions the first time someone said "there was talk of gerbils" to him on the street rather than the previous exclamation, "Kedakai!" (Conan O'Brien Needs a Friend 2023b). Figure 4 displays this acute effect – while smaller than the effects seen by the Fallon (Figure 2a) and Oliver (Figure 2b) interventions, it does appear to slightly differ from the estimated counterfactual, however this effect is not statistically significant at the  $\alpha = 0.05$  level.

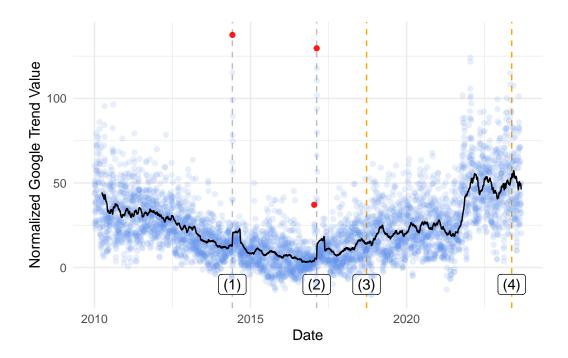
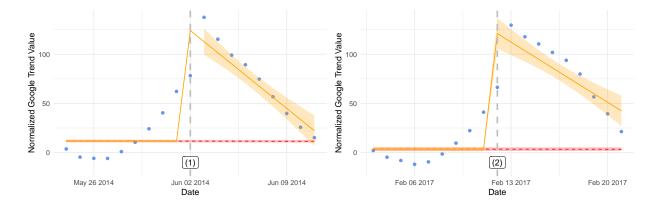
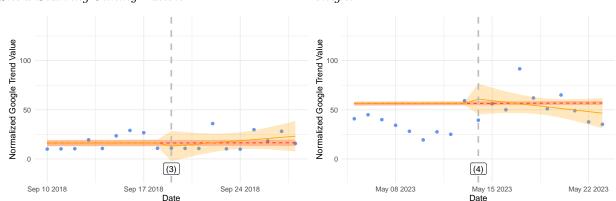


Figure 1: Distribution of Google Trends values over time for "Richard Gere gerbil" searches from 2010 through 2023. The dashed lines represent the four interventions: (1) June 2, 2014 (Ricky Gervais on *The Tonight Show Starring Jimmy Fallon*) (2) February 12, 2017 (John Oliver on *Last Week Tonight*) (3) September 19, 2018 (*Conan* on TBS) (4) May 15, 2023 (Conan on *Conan O'Brien Needs a Friend*). The blue points represent estimated daily values. The red points represent the three outlier points, defined as observations that fell more than six standard deviations above the 90-day rolling average, shown in black. Noticeably, no red points fall near either of O'Brien's interventions (3 and 4).



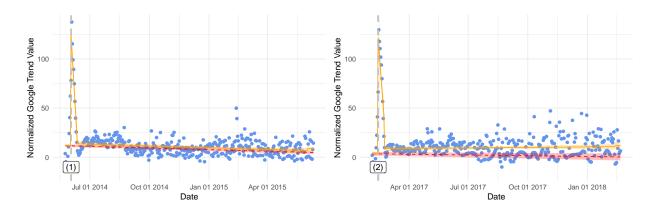
(a) Intervention: Ricky Gervais on The Tonight(b) Intervention: John Oliver on Last Week

Show Starring Jimmy Fallon Tonight

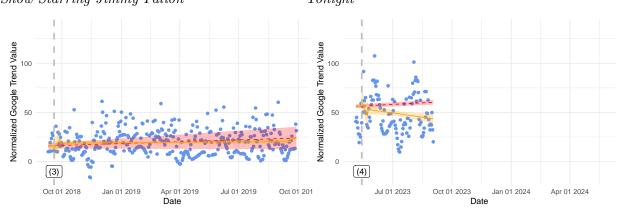


(c) Intervention: Conan on TBS  $\qquad \qquad \text{(d) Intervention: Conan on $Conan O'Brien Needs}$   $a \ Friend$ 

Figure 2: Acute effect: Predicted values from interrupted time series, zoomed in on 20 days surrounding the given intervention. The blue points represent the observed Google Trends data for a given date, the orange line represents the predicted line from the interrupted time series, and the orange band the confidence interval. The red dashed line shows the predicted counterfactual, should the intervention had not occurred. The grey dashed line denotes the given intervention (1-4).



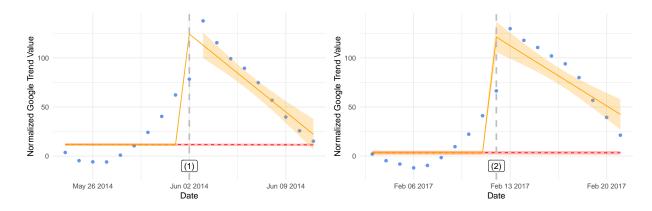
(a) Intervention: Ricky Gervais on *The Tonight*(b) Intervention: John Oliver on *Last Week*Show Starring Jimmy Fallon Tonight



- (c) Intervention: Conan on TBS
- (d) Intervention: Conan on Conan O'Brien Needs

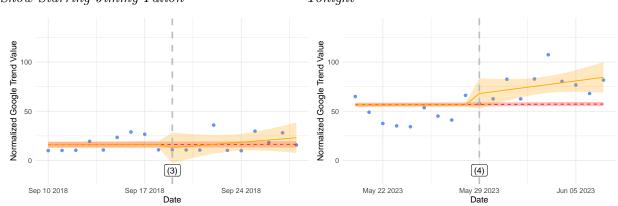
  a Friend (Note a portion of the chart is blank
  as these dates were in the future at the time of
  analysis)

Figure 3: Long term effect: Predicted values from interrupted time series, zoomed in on 10 days pre-intervention and 365 days post-intervention. The blue points represent the observed Google Trends data for a given date, the orange line represents the predicted line from the interrupted time series, and the orange band the confidence interval. The red dashed line shows the predicted counterfactual, should the intervention had not occured. The grey dashed line denotes the given intervention (1-4).



(a) Intervention: Ricky Gervais on The Tonight(b) Intervention: John Oliver on Last Week

Show Starring Jimmy Fallon Tonight



- (c) Intervention: Conan on TBS
- (d) Intervention: Conan on Conan O'Brien Needsa Friend (Note the date has shifted from Figure2d as a sensitivity analysis)

Figure 4: Sensitivity analysis – Acute effect: Predicted values from interrupted time series, zoomed in on 20 days surrounding the given intervention. The blue points represent the observed Google Trends data for a given date, the orange line represents the predicted line from the interrupted time series, and the orange band the confidence interval. The red dashed line shows the predicted counterfactual, should the intervention had not occurred. The grey dashed line denotes the given intervention, (1-4), with the fourth (4) intervention the updated date when Conan (re)-mentions the gerbil incident on his podcast.

#### 4 Conclusions

This paper aims to unravel the intricate tapestry of media, celebrity, and rumor dynamics that have shaped the trajectory of this captivating sociocultural phenomenon. Contrary to what was hypothesized by Talin "Sona" Movsesian, it does not appear that Conan O'Brien has a significant impact on the cultural discussion of the Richard Gere rumor. In fact, his influence may be negative, as evidenced by Figure 2d. Other late-night hosts, i.e. James "Jimmy" Fallon and John Oliver, do appear to have a noticeable acute effect on the discourse regarding Richard Gere and gerbils (Figure 2a, Figure 2b), though these effects appear to be short lived. A few theories may explain these findings. For example, it is possible that Conan O'Brien's fans are already aware of this rumor due to him mentioning several times in the 90s, prior to when Google Trends data is available, as Google did not exist. Alternatively, it is possible that O'Brien's fans do not know how to use Google or perhaps prefer another search engine, such as Bing. More research is needed to further quantify these effects, determine the causal mechanism, and validate these findings. Additionally, it is possible as the rumor continues to be mentioned on the Conan O'Brien Needs a Friend, that the effect may change, as suggested by the trend in the sensitivity analysis seen in Figure 4d. Further study is warranted as new data become available.

## 5 Acknowledgements

We would like to gratefully acknowledge the contributions of several members of the Department of Statistical Sciences at Wake Forest University, including Robert Erhardt, Staci Hepler, and Sarah Lotspeich, for their keen insights throughout the analytic process.

### References

Baranick, J. (2014), Kiss My Asterisk: A Feisty Guide to Punctuation and Grammar, Simon and Schuster.

Becerra, A., Mühlebach, N., Sax, C., Thoeni, S., Thuemmel, U. & Koncevičius, K. (2023), trendecon: Create Daily Series from Google Trends. R package version 0.2.8.

**URL:** https://www.trendecon.org

Boese, A. (2006), Hippo eats dwarf: A field guide to hoaxes and other BS, Houghton Mifflin Harcourt.

Chow, G. C. & Lin, A.-l. (1971), 'Best linear unbiased interpolation, distribution, and extrapolation of time series by related series', *The review of Economics and Statistics* pp. 372–375.

Conan O'Brien Needs a Friend (2023a), 'Javier Bardem'. Released on May 15, 2023.

URL: https://teamcoco.com/podcasts/conan-obrien-needs-a-friend/episodes/javier-bardem

Conan O'Brien Needs a Friend (2023b), 'Sebastian Maniscalco'. Released on May 29, 2023.

URL: https://listen.teamcoco.com/talkofqerbils

Conan on TBS (2018), 'Conan jokes about Trump's penis & Richard Gere's butt', YouTube video. Published on September 19, 2018.

URL: https://www.youtube.com/watch?v=n7KUQoQkRPo

Dreben, R. E., Knight, M. & Sindhian, M. A. (2011), Stuck Up!: 100 Objects Inserted and Ingested in Places They Shouldn't Be, St. Martin's Griffin.

Google Trends (2023), 'Richard Gere gerbil', Accessed September 5, 2023.

- Koven, M. J. (2017), Adapting legends: Urban legends and their adaptation in horror cinema, *in* 'Monstrous adaptations', Manchester University Press, pp. 157–171.
- McGee, J. (2005), A Real Man: Gender and Sexuality in the United States' 2004 Public Election, PhD thesis, Aichi Shukutoku University.
- Merry, S. (2017), 'John Oliver returns with 'Last Week Tonight' and a clever plan to get through to Donald Trump', *The Washington Post*. Published on February 13, 2017.

URL: https://www.washingtonpost.com/news/arts-and-entertainment/wp/2017/02/13/john-oliver-returns-with-last-week-tonight-and-a-clever-plan-to-get-through-to-donald-trump/

Simone, C. (2014), 'Ricky Gervais Plays "word sneak" with Jimmy Fallon on The Tonight Show—watch the hilarity ensue!', E! News . Published on June 3, 2014.

URL: https://www.eonline.com/news/547972/ricky-gervais-plays-word-sneak-with-jimmy-fallon-on-the-tonight-show-watch-the-hilarity-ensue

Yandoli, K. (2021), '11 wild pop culture conspiracy theories vs. what actually happened', BuzzFeed. Published on May 13, 2021.

 $\textbf{URL:}\ https://www.buzzfeed.com/kaylayandoli/pop-culture-rumors$ 

Young, P. (2002), LA exposed: Strange myths and curious legends in the City of Angels, Macmillan.