On Kinks and Candidates: Geo-Variation in Escort Ads and Electoral Outcomes

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Introduction

Motivation:

- Past literature, relying primarily on survey data, has supported the idea that political conservatives are also sexually more conservative
- However, we are all aware of the stories of the pastor having multiple affairs, secret abortions in conservative families, etc.
- Furthermore, there are reports like the one from Harvard Business school that found through credit card data that Utah had the highest per capita rate of porn subscription than other states

Approach:

- Using online escort ad data, investigate geo-variation in ad characteristics to see if they covary with geo-variation in political ideology

Existing Work + Motivation

- **Well-Established Link Between Political and Sexual Preferences**
  - · Dates to work in the 1970s
  - · Mechanism: Underlying personality traits (risk aversion, essentialism, etc.)

- **Bias in Existing Work**
  - · Due to volunteer bias, nonresponse, and veracity effects / misrepresentation
  - · Result of social desirability + self-reporting

- **Overcoming Bias: Escort Service Advertisements**
  - · Ubiquitous, increasingly tolerated / decriminalized, largely reflect local demand
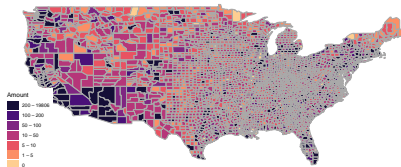 - · *Overcome self-report-related biases*, at the cost of allowing only aggregate-level inferences

Escort Ad Data

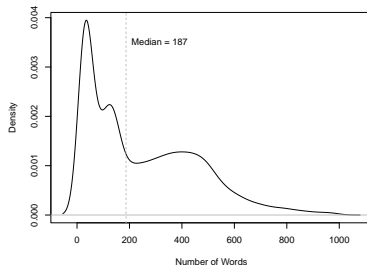**Data**: 2.3 million online escort ads from 2013-2018

- Pre-processing: Length, duplicates, and missing location
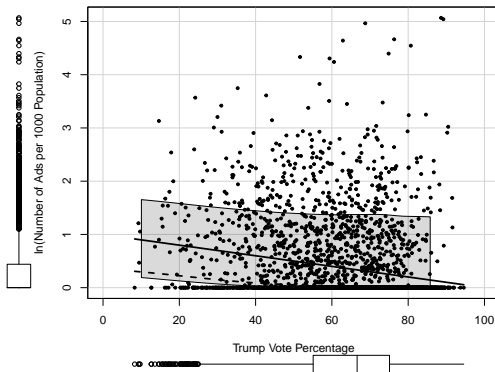- $\rightarrow$ analysis of $\approx$ 552,000 ads

Geographic Distribution

Ad Length

- Correlation is low ($r = -0.21$)
- Even lower among counties with at least one ad ($r = 0.009$)

Extracting Ad *Content*

Research Design:

- Part One:
    - · SVMs →
    - · GloVe →
    - · Manual Categorization and Cosine similarity of similar words ×
      county-level presidential election outcome (Unigram and Bigram)

- Part Two:
    - · Baseline Topic Modeling →
    - · Zero-shot topic modeling →
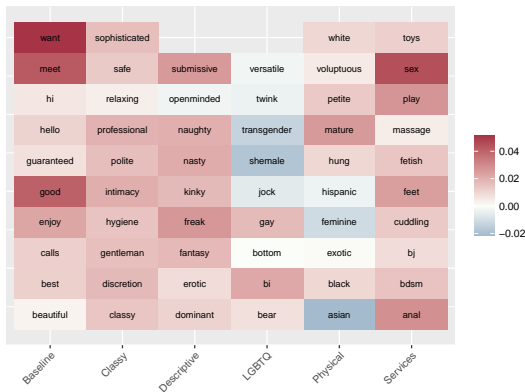   - · Pearson Correlation with county-level presidential election outcome

Figure: Escort ad word scores for 2016 election results.
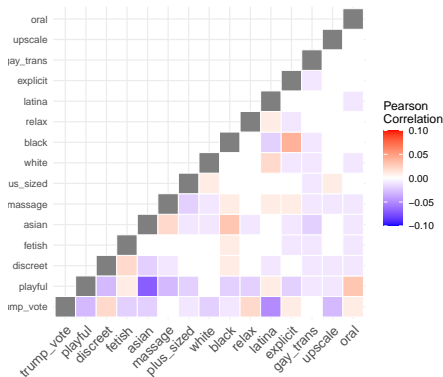
Results: Zero-shot Topic Modeling

Figure: Topic Modeling and 2016 election results Cross Correlation
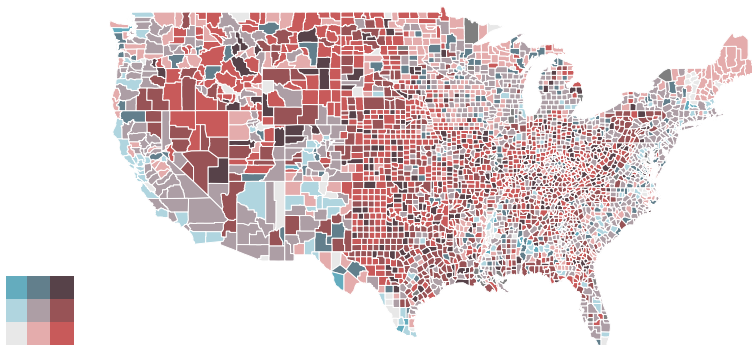
Results: Bivariate Choropleth

Figure: Bivariate choropleth of "Playful" escort ads and 2016 election results. Blue is the percentage of ads that are classified as "playful;" red is Trump's county vote share. Bins were divided by equal number of observations.

Conclusion and Future Research

Conclusions:

- Relationships between categories and political outcomes are too small to be substantively meaningful or considered different from noise
- Among the sample of the population that uses escort services, preferences seem consistent across local political ideologies.

Next Steps:

- Further investigate topic modeling approaches
- Combine with other dependent variables, such as pornography searches