Echo Chambers: Twitter Versus Online News Exposure*

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Surveys estimate 70% (in UK) get news from online sources (about same as TV)


e.g. Majo-Vazques et al. finds visits to google news declined after introduction of link tax in Spain
## Selective Exposure - Studies Using Clickstream

<table>
<thead>
<tr>
<th>Study</th>
<th>Data</th>
</tr>
</thead>
<tbody>
<tr>
<td>Petersen et. al 2018</td>
<td>survey/click/text</td>
</tr>
<tr>
<td>Guess 2016</td>
<td>survey/click</td>
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<tr>
<td>Flaxman et al. 2016</td>
<td>survey/click/est. slant</td>
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<tr>
<td>Gentzkow and Shapiro 2011</td>
<td>click/est. slant</td>
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</table>
Partisan overlap on domains – greater isolation [All Rs accessing Fox and no Ds accessing Fox]

Slant of domain (e.g. Fox, HuffPost) measured by audience share [e.g. Gentzkow and Shapiro, Flaxman et al.]

Peterson et al. 2018 calculate isolation index for news content (by domain and topic)

Petersen et al. 2018
”..[W]hen we incorporate partisan slant [of news content] into the analysis, the partisan divide in news exposure expands.”
Objectives:

- Evaluating Selectivity Outside US [contrasting media system, cross-cutting partisan cues]
- Move from domain level to article level - Selective or crosscutting exposure (or avoidance)
- Assess usability of data for news exposure (small online sample, device coverage)
## Brexit: 3 Wave Survey with Clickstream

<table>
<thead>
<tr>
<th>Wave 2016 (ICM Unlimited)</th>
<th>Respondents</th>
</tr>
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<tbody>
<tr>
<td>Feb</td>
<td>607</td>
</tr>
<tr>
<td>Apr</td>
<td>588</td>
</tr>
<tr>
<td>Jun</td>
<td>447</td>
</tr>
<tr>
<td>ttl survey w/ clickstream data</td>
<td>959</td>
</tr>
<tr>
<td>ttl survey who accessed online news</td>
<td>673</td>
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**Survey reports of online news seeking:**

Of those in the survey who reported frequent online use for EURef news, 31% no news/info clicks compared to 24% no clicks for no freq online EURef.
Online news seeking

673 users with 39,368 (from 56,289) clicks on 332 news/info domains; 286 no news clicks

Figure 1: Avg Daily Clicks in entire sample of survey respondents
Figure 2: Share of Most Viewed Domains for Leave and Remain Voters
Survey Estimates of EURef Preferences

Figure 3: Avg. Number of News Domains Accessed
Selectivity - Topic

- From user 39,368 clicks, 25,468 unique stories;
- 1,720 Brexit themed stories (based on key word e.g. EU Ref, Brexit) and Brexit themed stories appear 3,679 times in the user-click data;
- 296 respondents clicked on Brexit themed stories;
- LDA model for 50 topics using Gensim (average topic probabilities for each article).

<table>
<thead>
<tr>
<th>Online Behavior</th>
<th>Respondents(pct)</th>
<th>Reported in Survey(pct)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Online news ”avoiders”</td>
<td>29%</td>
<td>25%</td>
</tr>
<tr>
<td>Online Brexit news ”avoiders”</td>
<td>40%</td>
<td>20%</td>
</tr>
<tr>
<td>Online Brexit news access</td>
<td>31%</td>
<td></td>
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</table>
Measuring Topic Selectivity

Unlike Peterson et. al 2018 who used an isolation index for each topic, we calculate a selectivity measure at the level of the user.

If no topic selectivity, each topic has equal probability of being accessed by user (.02)

Use topic probability across clicked stories for a user:

\[ y_{[i]} = \sum_{n=1}^{N} x_{j[i]}^{total} - 0.02 \times N_{[i]} \]

for user i and topic j
Distribution of selectivity score:

Figure 4: Selectivity (lo score = balanced across topics)
Selectivity by Leave/Remain Vote

Figure 5: Selectivity

Io score = balanced across topics w/nclicks r=.1
Conclusions

- Very little (est. lt 3%) online activity devoted to news and info
- Clickstream does not capture all news exposure
- Limited agreement with self reports
- High degree over overlap at the domain level even with partisan press – consistent with findings from US
- Selectivity across topics?
The End

Last Slide!