Behavioral Responses to Fact-Checking Interventions in Online Social Networks

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Motivation

• Prevalence of misinformation in online conversations
• Ideal of fact-checking sources preventing misinformation from spreading
• Fact-checking is not actually that effective
Facebook Closure

Claim: Facebook will be closing down for good on 15 May 2013.

FALSE

Examples:

[Weekly World News, October 2012]

Mark Zuckerberg announced that Facebook will be shut down in May. Managing the site has become too stressful.

"Facebook has gotten out of control," said Zuckerberg in a press conference outside his Palo Alto office, "and the stress of managing this company has ruined my life. I need to put an end to all the madness."
Terminology

Dr Veronica Anderson @DrVeronicaEyeMD · 20 Dec 2012
If the facts don’t fit the theory, change the facts.
Albert Einstein

Chuck Pell @ChuckPellCAP · 20 Dec 2012
@DrVeronicaEyeMD Sorry, he didn’t say that. No scientist ever would. Data rules, failed hypotheses drool.

Chuck Pell @ChuckPellCAP · 20 Dec 2012
@DrVeronicaEyeMD The wooly, poorly researched sites have all kinds of things Einstein supposedly said. It’s an old trick snopes.com/quotes/einstein...

Dr Veronica Anderson @DrVeronicaEyeMD · 20 Dec 2012
@ChuckPellCAP Oh well. You can feel good being right. Do you have a scientific method for proving it though?
Background –
Ineffectiveness of fact-checking

- Presentation of “correct” information has limited effects in change in individual attitudes (Nyhan & Reifler, 2010; Garrett, 2011)

- Difficulty of dislodging “stick” misinformation arises from consistency with attitudes, beliefs, and worldviews (Ecker, Lewandowsky, & Tang, 2010)

- Friends more likely to share worldviews, thus fact-checks from friends more likely to be worthy of consideration than from strangers (Garrett, Nisbet, & Lynch, 2013)
Research Questions

1. Who snopes whom?
   • What is the relative status of snopers & snopees?

2. Do snopes matter?
   • Do people respond to being snoped?

3. Where do snopes happen?
   • Do these occur within or between subcommunities?
Data

• Tweets between January 2012 and August 2013
• Conversational
• Link to a fact-checking website

• History of snopers and snopees
• ~1600 fact-checking events
• Post-hoc (January 2014) crawl of followers’ networks
Snoping types

Fact-checked by “friend”

Fact-checked by followee

Fact-checked by follower

Fact-checked by “stranger”
Differences in structural position

![Box plot showing differences in followers by relationship and fact-checking intervention type (Snoper vs. Snoopee).]
Differences in structural position

![Box plot showing differences in followers' average followers across different positions (Friend, Follower, Stranger) with data split by Snopers and Snopees.](image-url)
Recognition of snoping events

- @-mentions before and after snoping
- Conversational vs Out-of-the-blue snopes
- Most snoping events are out-of-the-blue

<table>
<thead>
<tr>
<th>Acknowledged</th>
<th>Followee</th>
<th>Follower</th>
<th>Friend</th>
<th>Stranger</th>
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</thead>
<tbody>
<tr>
<td>Not ack.</td>
<td>4%</td>
<td>4.9%</td>
<td>12.3%</td>
<td>3.9%</td>
</tr>
<tr>
<td></td>
<td>96%</td>
<td>95%</td>
<td>88%</td>
<td>96%</td>
</tr>
</tbody>
</table>

In out-of-the-blue snoping events the snoper is more likely to be acknowledged among friends
Challenging Snopes

Challenge: Snoper contradicting the snopee
Hand coding tweet pairs where snoper acknowledged snopee

- Challenges are less likely between friends
- Challenges are more likely to be accepted by friends
LCC of follower graph

- Liberals
- Conservatives
- Celebrities

Colors:
- Red: Snopers
- Blue: Snopees
- Green: Both

Legend:
Snoping edges

Liberals

Conservatives

Celebrities

Strangers
Friends
Discussion and future work

- Social contexts of snopes are important for understanding their intent and impact
- Snopes by friends 3x more likely to promote discussion
- Snoping activity on Twitter is largely “sniping” between political activists in different camps rather than policing claims made by fellow group members
- Clustering algorithm on network
- Focus on politics
- Baseline dataset of simple replies
Thank you!