Conspiracy Theories in the Lab

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(joint work with Loukas Balafoutas, Björn Vollan and Vasileios Selamis)
<table>
<thead>
<tr>
<th>Conspiracy</th>
<th>Percent believing</th>
<th>Number of Americans believing</th>
</tr>
</thead>
<tbody>
<tr>
<td>JFK was killed by conspiracy</td>
<td>51 percent</td>
<td>160,096,160</td>
</tr>
<tr>
<td>Bush intentionally misled on Iraq WMDs</td>
<td>44 percent</td>
<td>138,122,178</td>
</tr>
<tr>
<td>Global warming is a hoax</td>
<td>37 percent</td>
<td>116,148,195</td>
</tr>
<tr>
<td>Aliens exist</td>
<td>29 percent</td>
<td>91,035,072</td>
</tr>
<tr>
<td>New World Order</td>
<td>28 percent</td>
<td>87,895,931</td>
</tr>
<tr>
<td>Hussein was involved in 9/11</td>
<td>28 percent</td>
<td>87,895,931</td>
</tr>
<tr>
<td>A UFO crashed at Roswell</td>
<td>21 percent</td>
<td>65,921,948</td>
</tr>
<tr>
<td>Vaccines are linked to autism</td>
<td>20 percent</td>
<td>62,782,808</td>
</tr>
<tr>
<td>The government controls minds with TV</td>
<td>15 percent</td>
<td>47,087,106</td>
</tr>
<tr>
<td>Medical industry invents diseases</td>
<td>15 percent</td>
<td>47,087,106</td>
</tr>
<tr>
<td>CIA developed crack</td>
<td>14 percent</td>
<td>43,947,966</td>
</tr>
<tr>
<td>Bigfoot exists</td>
<td>14 percent</td>
<td>43,947,966</td>
</tr>
<tr>
<td>Obama is the Antichrist</td>
<td>13 percent</td>
<td>40,808,825</td>
</tr>
<tr>
<td>The government allowed 9/11</td>
<td>11 percent</td>
<td>34,530,544</td>
</tr>
<tr>
<td>Fluoride is dangerous</td>
<td>9 percent</td>
<td>28,252,264</td>
</tr>
<tr>
<td>The moon landing was faked</td>
<td>7 percent</td>
<td>21,973,983</td>
</tr>
<tr>
<td>Bin Laden is alive</td>
<td>6 percent</td>
<td>18,834,842</td>
</tr>
<tr>
<td>Airplane contrails are sinister chemicals</td>
<td>5 percent</td>
<td>15,695,702</td>
</tr>
<tr>
<td>McCartney died in 1966</td>
<td>5 percent</td>
<td>15,695,702</td>
</tr>
<tr>
<td>Lizard people control politics</td>
<td>4 percent</td>
<td>12,556,562</td>
</tr>
</tbody>
</table>
Motivation

“The truth is out there!”

- Three main elements of conspiracy thinking
  - Intentional action
  - Malicious intent
  - Hidden action
- Extremely widespread as the explanation for the (complex) observed characteristics of the world
- Some research on conspiracy thinking, establishing that it has an effect
  - Mostly immediate consequences of belief in specific conspiracy theories (survey experiments) or correlates between conspiracy thinking and other aspects of behavior / personality (observational data)
- Problems
  - More complex consequences of conspiracy thinking: not about belief in certain facts, but about certain way of interpreting the (social) reality
  - Conspiracy theorists believe in contradictory theories at the same time!
  - Belief in conspiracies = Belief in “weird things”??
  - Most studies: Exposure to conspiracy theories ➔ Belief in conspiracy theories ➔ Behavioral consequences. Is it really so?
Contribution

This paper

- A laboratory experiment
- Conspiracy priming
- Consequences of conspiracy priming in an environment unrelated to it
- General behavioral characteristics:
  - Trust (a frequently found correlate of belief in conspiracies)
  - Strategic sophistication
- Attempt to explicitly uncover whether effect of conspiracy treatment goes ‘through’ conspiracy beliefs

Findings

- Conspiracy priming has an effect on human behavior, but
- It does not affect trust
- It does increase strategic sophistication
- Priming increases belief in conspiracy, but its behavioral consequences are not mediated by this belief
Design

General characteristics

- \( N = 144 \)

- Student subjects, University of Innsbruck

- Two randomly assigned treatments
  - A short video with a sympathetic account of the Moon hoax (a widespread conspiracy belief in the US context, rather unimportant in the German context)
  - An equally long video on space exploration (space shuttle program)

- Incentivized responding to informational questions reveals no differences in the difficulty level across videos

- Two games played in random order
  - Trust game
  - Beauty contest game
Games

Trust game
- Pairs of A and B (no communication, no repeated interaction…)
  - A receives 5 €
  - A can transfer a portion of it to B
  - The transferred portion is multiplied by 3
  - B can transfer some of this money back to A
- How much does A transfer?

Beauty contest
- Pairs of A and B (no communication, no repeated interaction…)
  - A and B are asked to bid an integer between 5 and 14 €
  - The participant with the smaller bid receives the bid plus 10 €
  - The participant with the larger bid receives just the bid
  - Ask respondents why did they select a certain bid
- Proxy of strategic sophistication (k-level thinking)
## Main results

<table>
<thead>
<tr>
<th></th>
<th>Primed group</th>
<th>Control group</th>
<th>Δ</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Moon landing</strong></td>
<td>2.736 (0.148)</td>
<td>1.972 (0.140)</td>
<td>0.764*** (0.204)</td>
</tr>
<tr>
<td><strong>Princess Diana</strong></td>
<td>1.958 (0.123)</td>
<td>1.861 (0.118)</td>
<td>0.097 (0.170)</td>
</tr>
<tr>
<td><strong>Pharmaceuticals</strong></td>
<td>3.361 (0.146)</td>
<td>3.125 (0.149)</td>
<td>0.236 (0.209)</td>
</tr>
<tr>
<td><strong>Roswell</strong></td>
<td>1.444 (0.103)</td>
<td>1.361 (0.089)</td>
<td>0.083 (0.136)</td>
</tr>
<tr>
<td><strong>9/11</strong></td>
<td>2.472 (0.163)</td>
<td>2.333 (0.147)</td>
<td>0.139 (0.219)</td>
</tr>
<tr>
<td><strong>k-level reasoning</strong></td>
<td>1.738 (0.117)</td>
<td>1.281 (0.136)</td>
<td>0.456** (0.180)</td>
</tr>
<tr>
<td><strong>Trust level</strong></td>
<td>3.278 (0.332)</td>
<td>2.944 (0.333)</td>
<td>-0.334 (0.471)</td>
</tr>
</tbody>
</table>
Causal mediation analysis

Conspiracy priming

- Increases beliefs in conspiracy thinking
- Increases strategic sophistication
- How does the causal structure look like?

Causal mediation analysis

<table>
<thead>
<tr>
<th></th>
<th>Effect</th>
<th>[95% Confidence Interval]</th>
</tr>
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<tbody>
<tr>
<td>Indirect effect</td>
<td>-0.002</td>
<td>-0.140 0.127</td>
</tr>
<tr>
<td>Direct effect</td>
<td>0.460</td>
<td>0.076 0.813</td>
</tr>
<tr>
<td>Total effect</td>
<td>0.458</td>
<td>0.077 0.814</td>
</tr>
</tbody>
</table>

Essentially, not the effect of conspiracy beliefs, but of mere exposure to conspiracy ideas!
Mediators

Effects could be conditional on subjects’ characteristics

- Not so much in our sample
  - A variation of the frequently criticized WEIRD sample
- One variable, which matters, is potentially religiosity
  - Also relies on hidden intentional explanations (but less on malicious intent)
    - Substitute or a strengthening factor?
  - Affects interest to the topic we prime
    - We cannot ask about it explicitly before experiment, or we will bias our results!!
- Findings (dif-in-dif)
  - Belief in Moon hoax increases in particular for less religious subjects
  - K-level thinking increases in particular for more religious subjects
    - In any case, effects significant for a sufficiently large portion of the sample
    - Effects on beliefs: religion as a substitute?
    - Effects on k-level thinking: lower familiarity with the subject promoting stronger response?
Summary

Main findings

- Exposure to conspiracy theories
  - Does increase beliefs in conspiracies
  - But also has other important effects
- Exposure to conspiracy theories increases strategic sophistication
  - What does it mean for human interaction?
  - At least not a simple 'negative' effect often posited by the literature
- Effect on trust reported in many observational studies not causal

Limitations

- Very short-term exposure to a conspiracy theory: we need more time to really elicit beliefs
- Maybe other conspiracy theories could work differently in Austrian samples?
  - But, again, our study is about conspiracy thinking, not about (specific) conspiracy theories
One slide on the second study

Experimental game instead of an experiment

- Chinese and Russian subjects in Moscow and in Beijing
- Explicitly asking them whether they believe in certain types of conspiracies (in particular, Western-induced conspiracies)
  - No causal identification
  - Experimental game to elicit incentive-induced behavior
- Game: do people expect others to cooperate against them
  - Three-person games: two subjects bid for a good offered by the third subject
  - Communication: bidders can form a coalition against the seller
  - Seller can invite one or two bidders (for a fee): expectation of collusion → save the fee and invite only one bidder
    - Russians: coalitions rarely formed, promises frequently disregarded
    - Chinese: more coalition formation, subjects rarely break promises
    - In the Chinese sample: anti-Western conspiracy beliefs correlated (!) with lower expectation of collusion by the seller
    - In-group thinking!
    - Conspiracy thinking has more complex implications than frequently believed!