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Political partisanship alters the causality implicit in verb meaning

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Abstract

This research adapted the implicit causality task from psycholinguistics to investigate the politics of causal attribution during the 2016 U.S. Presidential Election. Results showed that Hillary Clinton and Donald Trump supporters judged their preferred candidate as causal for positive events and their non-preferred candidate as causal for negative events, demonstrating the social psychological utility of the IC task and expanding understanding of extralinguistic influences on causal attribution.

Keywords: Social Cognition; Cognition; Causality; Psycholinguistics; Political Affiliation

Political partisanship alters the causality implicit in verb meaning

People achieve fluid conversation by establishing a shared understanding of causality (Pickering & Garrod, 2014). In the context of conflict, however, conversation is often anything but fluid, as competitive constructions of events unfold (Taylor, 2014). For example, hearing “Trump interrupted Clinton,” Trump supporters might be more likely to consider this event as caused by something about Clinton and they might reference her in an explanation. By contrast, Clinton supporters might be more likely to consider the event as caused by something about Trump, and reference him.

Prior work indicates that the causal structure of events can be shaped by on social psychological factors as people use language including moral values, the gender of the subject and object of the sentence, and the interaction of these factors with the type of verb conveying the event (Alicke, Mandel, Hilton, Gerstenberg, & Lagnado, 2015; Ferstl, Garnham, & Manouilidou, 2011; Fiedler & Krüger, 2014; LaFrance, Brownell, Hahn, 1997; Niemi, Hartshorne, Gerstenberg, & Young, 2016; Niemi, Hartshorne, Gerstenberg, Stanley, & Young, under review; Rudolph & Forsterling, 1997). For example, recent research using the implicit causality task (IC task) from psycholinguistics showed that a cluster of moral values, the group-supporting “binding” values of loyalty, obedience, and preservation of purity (Graham et al., 2011), are reliably associated with a tendency to select the sentence *object* as the causal source for harm events (e.g., selecting the referent to Person B when asked, “Person A killed Person B because...”); Niemi et al., 2016; Niemi et al., under review).

Despite effects of individual differences, other work indicates there is a reliable, lexical basis to implicit causality responses. Verbs clustered into classes by their semantic core meaning (e.g., *confront*, *judgment*; Kipper-Schuler, 2006) tend to compel similar causal attributions toward the sentential subject or object (Garvey & Caramazza, 1974; Hartshorne & Snedeker, 2012; Hartshorne, 2013). The extent to which the contribution to implicit causality varies due to individual differences versus lexical semantics across the verb classes is an ongoing project.

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3 In the present research, we build on the prior findings by investigating the role of individual
4 differences in causal attributions in the IC task by examining in detail the role of political partisanship.
5 We hypothesized that people's support for Hillary Clinton or Donald Trump during the 2016 U.S.
6 Presidential Election would motivate them to attribute negative events to the opponent, and positive
7 events to the preferred candidate. If so, this would indicate that the IC task has utility as social
8 psychological instrument that reveals people's zeal and hostility toward *specific* targets – in addition to its
9 capacity to reveal tendencies to attribute harmful events to victims in general when people more strongly
10 endorse group-oriented moral values (Niemi et al., 2016; Niemi et al., under review). More broadly, as
11 co-constructed events with coherent representations of causality are important for smooth discourse,
12 finding opposed causal attributions in a political context would be consistent with a cognitive-linguistic
13 mechanism supporting partisan conflict (Pickering & Garrod, 2014; Taylor, 2014).
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26 During the 2016 U.S. Presidential Election, each side saw the other as unusually divisive: a 2016
27 Pew Research Centre survey showed that over half of *both* Democrat and Republican respondents
28 considered the opposing political party as more close-minded than the average American (Fingerhut,
29 2017). The current research, carried out before and after the 2016 Election, examined how participants
30 attributed events involving the dyad Donald Trump and Hillary Clinton, including confrontation and
31 hostile discourse (e.g., “mocking” and “interrupting”). Trump and Clinton supporters took the IC task in a
32 study conducted in the months before the 2016 U.S Presidential Election, and in a replication dataset
33 collected in the days following election day¹. We hypothesized an interaction between political affiliation
34 and whether the event was positive or negative for causal attributions, such that Trump supporters would
35 be more likely to judge Clinton as the cause of negative events and Trump as the cause of positive events,
36 and the opposite for Clinton supporters.
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51 Method

52 Participants

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3 For Study 1, Amazon Mechanical Turk workers over the age of 18 and with United States IP
4 addresses were recruited online during the first two weeks of October 2016. After exclusions², the final
5 sample was 680. This sample size approximates those in which individual differences were previously
6 found to factor into implicit causality responses for people in different groups (Niemi et al., 2016). Of the
7 680 participants, 65% planned to vote for Hillary Clinton and 35% planned to vote for Donald Trump,
8 56% were female and 42% were male, 81% were White or Caucasian, and 60% had a Bachelor's degree
9 or higher. Average age was 37 years (SD=12 years).

Procedure

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12 This study protocol was approved by an institutional review board and was carried out in
13 accordance with the APA Code of Ethics. After indicating their informed consent, participants responded
14 to items about their political attitudes and then completed the implicit causality task (Garvey &
15 Caramazza, 1974; Niemi et al., 2016), described in the following section. Lastly, participants provided
16 demographic information. Participants completed additional unrelated measures available online³ and
17 reported elsewhere (Niemi, Young, Cordes, & Woodring, 2019).

Materials

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20 To gauge voting intentions, participants were asked: "Who are you voting for in the upcoming
21 election?" with the options Donald Trump, Hillary Clinton, other, or not voting. In the implicit causality
22 task, participants were presented with 24 prompts in the form of "[Trump/Clinton] [verb]ed
23 [Clinton/Trump] because..."; for each prompt, participants were asked to predict the next word in the
24 sentence, with the options being "he" or "she." Responses were coded to indicate that the pronoun
25 referring to the object (1) vs. subject (0) of the sentence was selected. The set of 24 verbs (8 positive, 16
26 negative) was divided to make two groups, Set A and Set B (Table 1). Participants first viewed one of
27 these groups (either Set A or Set B) in the format "Clinton [verb]ed Trump," or "Trump [verb]ed
28 Clinton". The second group (the yet unseen other Set A or Set B), utilized yet unseen other prompt format
29 (e.g., "Clinton [verb]ed Trump," if a participant first saw "Trump [verb]ed Clinton"). Prompt format
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order and Set order were randomly assigned. Within each Set, the individual verbs were presented in randomized order.

Table 1.

Verbs and Sets in the Implicit Causality Task

	Set A Verbs	Set B Verbs
Positive Verbs	complimented	forgave
	praised	thanked
	inspired	impressed
	interested	comforted
Negative Verbs	interrupted	criticized
	attacked	mocked
	disgusted	frustrated
	intimidated	annoyed
	approached	ran against
	confronted	took on
	crushed	squashed
	outdid	beat

The demographic information collected included level of education, age, gender (male, female, or other), ethnicity (open-response), religiosity on a scale of 1 = not at all religious to 7 = very religious, and political ideology on a scale of 1 = very conservative to 7 = very liberal.

Results

All statistical analyses were completed using R software version 3.4.3. Because we did not make any predictions about the effects of demographic characteristics, the present analyses do not include demographic variables as covariates.⁴ Based on Niemi et al. (under review), to examine causal

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3 attributions (1=object vs. 0=subject), the analyses utilized the lme4 software package (Bates, Maechler,
4 Bolker, & Walker, 2015) to test a generalized linear mixed-effects regression model (link= “logit”) which
5 included event type (1=negative vs. 0=positive) and political affiliation (1=Trump supporter vs.
6 0=Clinton supporter), as fixed predictors, and participant ID and verb, as random effects with random
7 intercepts only, at Step 1. The interaction between event type and political affiliation was added at Step 2.
8 Because the outcome variable was binary, we used Wald to compute significance and 95% CIs around
9 beta-estimates. Because we expected responses to differ based on who was in the subject or object
10 position, this model was run separately for Trump-as-object and for Clinton-as-object prompts. Because
11 we expected attributions to differ based on whether the event was positive or negative, we broke down
12 interactions by event type, using the procedures recommended by Aiken, West, and Reno (1991).
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Trump-as-Object

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28 We first analyzed participants’ responses to prompts in the form of “Clinton [verb]ed Trump
29 because.” A response of 1 indicates that the object (Trump) was the cause of the event, whereas a
30 response of 0 indicates that the subject (Clinton) was the cause of the event. In Step 1 of the regression
31 model, there were no significant main effects of either event type, $b = .03$, $SE = .47$, $Z = .07$, $p = .941$,
32 95% CI = [-.88, .95], or political affiliation, $b = -.08$, $SE = .07$, $Z = -1.22$, $p = .222$, 95% CI = [-.21, .05].
33 At Step 2, as predicted, there was a significant interaction between event type and political affiliation, $b =$
34 -1.34 , $SE = .12$, $Z = -11.32$, $p < .001$, 95% CI = [-1.57, -1.11].
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43 Within positive events, Trump supporters were more likely than Clinton supporters to identify
44 Trump as the causal factor (see Top Left panel of Figure 1), $b = .82$, $SE = .11$, $Z = 7.74$, $p < .001$, 95% CI
45 = [.61, 1.02]. By contrast, for negative events, Trump supporters were less likely than Clinton supporters
46 to identify Trump as the causal factor (see Top Left panel, Figure 1), $b = -0.52$, $SE = .08$, $Z = -6.60$, $p <$
47 $.001$, 95% CI = [-.68, -.37]. In general, attributions for negative versus positive events did not
48 significantly differ among Trump supporters, $b = -0.83$, $SE = .49$, $Z = -1.70$, $p = .088$, 95% CI = [-1.78,
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.12]; or Clinton supporters, $b = .51$, $SE = .48$, $Z = 1.06$, $p = .291$, 95% CI = [-.43, 1.45]. This same pattern of results was found in the replication dataset, see Top Right panel, Figure 1.

- FIGURE 1 -

Clinton-as-Object

We next analyzed participants' responses to prompts in the form of "Trump [verb]ed Clinton because." In this case, a response of 1 indicates that Clinton was the cause of the event, whereas response of 0 indicates that Trump was the cause of the event. At Step 1 of the model, there was no effect of event type, $b = -.73$, $SE = .40$, $Z = -1.81$, $p = .071$, 95% CI = [-1.52, .06]. Differing from the Trump-as-Object condition, there was a significant effect of political affiliation, $b = .32$, $SE = .06$, $Z = 4.98$, $p < .001$, 95% CI = [.19, .44], such that regardless of event type, Trump supporters were significantly more likely than Clinton supporters to indicate Clinton as the causal factor. This effect was qualified by the predicted significant interaction between event type and political affiliation, $b = 1.28$, $SE = .11$, $Z = 11.23$, $p < .001$, 95% CI = [1.05, 1.50], which we broke down by event type.

Analogous to Clinton supporters' attributions to Trump in the Trump-as-Object condition (see Top Panel, Figure 1), within positive events, Trump supporters were less likely than Clinton supporters to indicate Clinton as the causal factor (see Bottom Left Panel, Figure 1), $b = -0.53$, $SE = .10$, $Z = -5.34$, $p < .001$, 95% CI = [-.73, -.34]. By contrast, for negative events, Trump supporters were more likely than Clinton supporters to identify Clinton as the cause (see Bottom Left Panel, Figure 1), $b = .74$, $SE = .08$, $Z = 9.88$, $p < .001$, 95% CI = [.60, .89]. Analogous to the lack of an effect for event type on Clinton supporters' causal attributions for Trump, Trump supporters did not attribute negative events to Clinton significantly differently than positive events by, $b = .08$, $SE = .42$, $Z = 0.20$, $p = .846$, 95% CI = [-.74, .90]. By contrast, Clinton supporters were significantly less likely to identify Clinton as the cause if the event was negative compared to positive, $b = -1.19$, $SE = .41$, $Z = -2.89$, $p = .004$, 95% CI = [-2.00, -.38]. A similar pattern of results was found in the replication dataset, see Bottom Right panel, Figure 1.

Discussion

The present research demonstrates that participants' preferences for Hillary Clinton versus Donald Trump during the 2016 U.S. Presidential Election influenced their causal judgments of events involving the two candidates. As hypothesized, for positive events (e.g., he or she "thanked", "interested," "praised"), both Trump and Clinton supporters were more likely to choose their preferred candidate as the causal factor, regardless of whether that candidate occupied the sentence subject or object position. For negative events (e.g., "mocked," "attacked," "criticized"), Trump and Clinton supporters were more likely to choose their non-preferred candidate as the causal factor, again regardless of that candidate's position in the sentence. Comparing causal attributions across event type, in general, Trump and Clinton supporters' causal attributions for positive versus negative events did not differ.

The finding that participants were generally biased to see their preferred candidate as the cause of positive events and the non-preferred candidate as the cause of negative events is striking from a psycholinguistic standpoint -- political bias swamped robust and well-documented lexical biases. Many of the verbs for which we observed this effect typically have strong casual biases in a particular direction. For example, verbs we used from the *judgment* verb class, "thanked", "praised", "complimented", "forgave", compel selection of the object upwards of 75% of the time in neutral contexts (Hartshorne, 2013; Ferstl et al., 2011). It's also notable that, broadly, effects extended to judging the non-preferred object candidate as the cause when they were affected by negative events such as being "disgusted", "annoyed", "frustrated", and "attacked"; these are typically subject-biased verbs (Ferstl et al., 2011). Such attributions to the object represent, in effect, "victim-blaming." Some previous work suggests that blaming the victim is more likely among political conservatives and might be less prevalent among political liberals (Lambert & Raichle, 2000; cf. Niemi & Young, 2016). The present data suggest that in a polarizing environment, shifting causation – and by extension, blame – in order to protect one's preferred candidate is as likely for liberals as it is for conservatives.

The finding that Trump and Clinton supporters attributed positive and negative events to their preferred and non-preferred candidates roughly equivalently may be due to the commonly held view that

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3 politicians are dishonest (Gallup, 2017). Participants may have understood the non-preferred candidate as
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5 having not only malicious intentions for negative acts, but also disingenuous reasons for positive acts.
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7 Indeed, news media characterized both Trump and Clinton this way (Greenberg, 2016). Future research
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9 might test this hypothesis by eliciting and coding open-ended responses to IC prompts for whether event
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11 valence matches reasoning valence (i.e., a positive reason for a positive act and vice-versa).
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14 The present research holds practical implications. It contributes to an understanding of social-
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16 cognitive-linguistic factors at play in the 2016 U.S. Presidential Election (Azevedo, Jost, & Rothmund,
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18 2017; Bock, Byrd-Craven, & Burkley, 2017; Choma & Hanoch, 2017) by highlighting how support for
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20 presidential candidates likely involved distinct causal perceptions about events involving the candidates,
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22 such as debates. Moreover, the findings show that the implicit causality task is a methodologically lean
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24 way to study how political alliances shape causal attributions for political events. In ongoing work, it will
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26 be important to investigate the extent to which lexical semantics and political allegiances interact in
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28 causal cognition when political media are produced and consumed.
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31 Ultimately, we propose that the observed pattern of responses reflect participants' investment in a
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33 fraught political contest. Their competitive constructions of events, and non-matching causal attributions
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35 effectively convey their support for their preferred candidate. What are the chances for alignment of
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37 causal event models? People can shift their causal understanding of events, given more context or finer-
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39 grain semantic information (Fiedler & Krüger, 2014; Mayrhofer & Waldmann, 2015; Rudolph &
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41 Forsterling, 1997; Niemi et al., under review; Niemi et al., 2016). However, the nature of political
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43 allegiances, and the fact that both sides reliably demonstrated competitive attributions, suggest people
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45 would resist consensus even given extra explanatory detail (Rubini, Menegatti, & Moscatelli, 2014).
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47 Aligning causal language with the opposition – for example, by neglecting the political context and
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49 defaulting to an interpretation of causation suggested by context-free verb semantics – is likely
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51 complicated by a sense that the alternate pronoun choice is not just *inaccurate* but *morally wrong*.
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54 Indeed, the causal selections participants make are representation of moral judgments, they reflect
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56 people's values and have high stakes. While moral judgments are effectively conveyed in language
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3 through adjectives that describe character (e.g., *honest*; Fiedler & Krüger, 2014), people withhold explicit
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5 negative character labels for a number of reasons, e.g., to protect the ingroup (linguistic ingroup bias,
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7 Maass, Ceccarelli, Rudin, 1996), to reach a politically mixed audience (Rubini et al., 2014), out of
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9 politeness norms (Holtgraves, 2002). Moral judgment is often less than overt. The recent findings using
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11 the IC task that demonstrated that individual differences in moral values reliably map onto patterns in
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13 people's causal selections for verbs of harm and force demonstrate this: values connect with how people
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15 interpret the causal structure of harm events broadly (Niemi et al., 2016; Niemi et al., under review), not
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17 only abstract character judgments about situations. Relevant to the present political context, overt attacks
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19 of political opponents are typically considered inappropriate (Carraro, Gawronski, Castelli, 2010; Nau &
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21 Stewart, 2014). The present results represent evidence of a language-based attribution process that is well-
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23 suited to support political partisanship. By overriding the causality implicit in verb meaning and re-
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25 interpreting the causal structures of events to favor the preferred candidate, language can serve as a covert
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27 vehicle for moral judgments of praise and blame, allowing people to uphold political allegiances while
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29 evading the costs of overtly aggressive speech (Fiedler & Krüger, 2014, Taylor, 2014).
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33 We note that not all politically invested people find explicit negative labeling to be costly and
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35 aversive. Nau and Stewart (2014) found that Republicans in their sample did not consider putatively
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37 Republican politicians delivering messages with aggressive linguistic features to be rude or lacking in
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39 tact. Following the time of our study and since, the sentiment has generally been that U.S. President
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41 Donald Trump's rhetoric has been unusually hostile, transforming the norms of political discourse
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43 (Martin, 2017). We found symmetrical IC biases, across the political divide, in 2016. Whether ongoing
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45 changes in the rhetorical landscape will have asymmetrical effects on implicit causal attributions in the
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47 coming political contests is a topic for future investigation.
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References

- Aiken, L. S., West, S. G., & Reno, R. R. (2018). *Multiple regression: Testing and interpreting interactions*. Newbury Park: SAGE Publications.
- Alicke, M., Mandel, D. R., Hilton, D. J., Gerstenberg, T., Lagnado, D. A. (2015). Causal conceptions in social explanations and moral evaluations: A historical tour. *Perspectives on Psychological Science, 10*(6), 790-812.
- Azevedo, F., Jost, J. T., & Rothmund, T. (2017). "Making America great again": System justification in the U.S. Presidential Election of 2016. *Translational Issues in Psychological Science, 3*(3), 231–240.
- Bates, D., Mächler, M., Bolker, B., & Walker, S. (2015). Fitting linear mixed-effects models using lme4. *Journal of Statistical Software, 67*(1).
- Bromwich, J. E. (2017, December 22). Protests of Trump's election continue into third day. *The New York Times*. Retrieved from: <https://www.nytimes.com/2016/11/12/us/trump-election-protests.html>
- Bock, J., Byrd-Craven, J., & Burkley, M. (2017). The role of sexism in voting in the 2016 presidential election. *Personality and Individual Differences, 119*, 189–193.
- Carraro, L., Gawronski, B., Castelli, L. (2010). Losing on all fronts: The effects of negative versus positive person-based campaigns on implicit and explicit evaluations of political candidates. *The British Journal of Social Psychology, 49*, 453-470.
- Choma, B. L., & Hanoch, Y. (2017). Cognitive ability and authoritarianism: Understanding support for Trump and Clinton. *Personality and Individual Differences, 106*, 287–291.
- Ferstl, E. C., Garnham, A., & Manouilidou, C. (2011). Implicit causality bias in English: A corpus of 300 verbs. *Behavior Research Methods, 43*(1), 124-135.
- Fiedler, K., & Krüger, T. (2014). Language and attribution: Implicit causal and dispositional information contained in words. In T. M. Holtgraves (Ed.), *The Oxford Handbook of Language and Social Psychology*. New York, NY: Oxford University Press.

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1
2
3 Fingerhut, H. (2017, December). Partisanship and political animosity in 2016. *Pew Research Centre*.

4 Retrieved from: <http://www.people-press.org/2016/06/22/partisanship-and-political-animosity-in-2016/>

9 Gallup. (2017, December). *Honesty/Ethics in professions*. Retrieved from:

10 <https://news.gallup.com/poll/1654/honesty-ethics-professions.aspx>

13 Garvey, C., & Caramazzo, A. (1974). Implicit causality in verbs. *Linguistic Inquiry*, 5(3), 459-464.

16 Graham, J., Haidt, J., & Nosek, B. A. (2009). Liberals and conservatives rely on different sets of moral foundations. *Journal of Personality and Social Psychology*, 96, 1029-1046.

20 Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, 101, 366-385.

24 Greenberg, D. (2016, August/July). Are Clinton and Trump the biggest liars ever to run for

25 President?: A short history of White House fabulists. *Politico*. Retrieved from:

26 <https://www.politico.com/magazine/story/2016/07/2016-donald-trump-hillary-clinton-us-history-presidents-liars-dishonest-fabulists-214024>

32 Hartshorne, J. K. (2013). What is implicit causality? *Language, Cognition and Neuroscience*, 29, 804-824.

37 Hartshorne, J. K. & Snedeker, J. (2012). Verb argument structure predicts implicit causality: The advantages of finer-grained semantics. *Language and Cognitive Processes*, 28(10), 1474-1508.

43 Holtgraves, T. M. (2002). *Language as Social Action: Social Psychology and Language Use*.

44 Mahwah, NJ: Lawrence Erlbaum Associates.

47 Kipper-Schuler, K. (2006). *VerbNet: A broad-coverage, comprehensive verb lexicon*. Ph.D. thesis, University of Pennsylvania.

51 LaFrance, M., Brownell, H., & Hahn, E. (1997). Interpersonal verbs, gender, and implicit causality. *Social Psychology Quarterly*, 60, 138-152.

RUNNING HEAD: POLITICS ALTERS IMPLICIT CAUSALITY

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2
3 Lambert, A. J., & Raichle, K. (2000). The role of political ideology in mediating judgments of blame
4 in rape victims and their assailants: A test of the Just World, Personal Responsibility, and
5 Legitimization hypotheses. *Personality and Social Psychology Bulletin*, 26(7), 853–863.
6
7
8
9 Maass, A., Ceccarelli, R., Rudin, S. (1996). Linguistic intergroup bias: Evidence for in-group-
10 protective motivation. *Journal of Personality and Social Psychology*, 71(3)512-526.
11
12
13
14 Martin, J. (2017, December 21). Donald Trump's barrage of heated rhetoric has little precedent. *The*
15 *New York Times*. Retrieved from [https://www.nytimes.com/2016/10/15/us/politics/trump-](https://www.nytimes.com/2016/10/15/us/politics/trump-speech-highlights.html)
16 [speech-highlights.html](https://www.nytimes.com/2016/10/15/us/politics/trump-speech-highlights.html)
17
18
19
20 Mayrhofer, R., & Waldmann, M. R. (2015). Agents and Causes: Dispositional intuitions as a guide to
21 causal structure. *Cognitive Science*, 39, 65-95.
22
23
24 Nau, C. & Stewart, C. O. (2014). Effects of verbal aggression and party identification bias on
25 perceptions of political speakers. *Journal of Language and Social Psychology*, 33(5), 526-
26
27
28
29 536.
30
31 Niemi, L., Hartshorne, J. K., Gerstenberg, T., Stanley, M., & Young, L. (under review). Moral values
32 in causal attribution: Evidence from the implicit verb causality task and explicit judgments.
33
34
35 Niemi, L., Hartshorne, J. K., Gerstenberg, T., & Young, L. (2016). Implicit measurement of
36 motivated causal attribution. *Cognitive Science Society Proceedings*.
37
38
39 Niemi, L., Woodring, M., Young, L. & Cordes, S. (2019). Partisan mathematical processing of
40 political polling statistics: It's the expectations that count. *Cognition*, 186, 95-107.
41
42
43 Niemi, L. & Young, L. (2016). When and why we see victims as responsible: The impact of ideology
44 on attitudes toward victims. *Personality and Social Psychology Bulletin*, 42(9), 1227-1242.
45
46
47 Pickering, M. J. & Garrod, S. (2014). Interactive alignment and language use. In T. M. Holtgraves
48 (Ed.), *The Oxford Handbook of Language and Social Psychology*. New York, NY: Oxford
49 University Press.
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1.

Rubini, M., Menegatti, M., Moscatelli, S. (2014). The strategic role of language abstraction in achieving symbolic and practical goals. *European Review of Social Psychology*, 25(1), 263-313.

Rudolph, U., & Forsterling, F. (1997). The psychological causality implicit in verbs: A review. *Psychological Bulletin*, 121, 192-218.

Taylor, P. L. (2014). The role of language in conflict and conflict resolution. In T. M. Holtgraves (Ed.), *The Oxford Handbook of Language and Social Psychology*. New York, NY: Oxford University Press.

For Peer Review

Footnotes

1. The replication dataset and methods are available online at the data repository:
https://github.com/NOTBLINDED/ImplicitVerbCausality_and_Politics
2. Excluded participants reported they did not plan to vote for either Hillary Clinton or Donald Trump in the 2016 United States Presidential Election (N=189), did not complete the primary measures of interest (N=133), or indicated disagreement or only somewhat agreement with the statement “The United States is geographically north of Central America” (N=150) – i.e., failed the attention check.
3. The additional measures are available online at the data repository:
https://github.com/NOTBLINDED/ImplicitVerbCausality_and_Politics
4. The results remain the same when demographic variables are included in the model.
Documentation available: https://github.com/NOTBLINDED/ImplicitVerbCausality_and_Politics

RUNNING HEAD: POLITICS ALTERS IMPLICIT CAUSALITY

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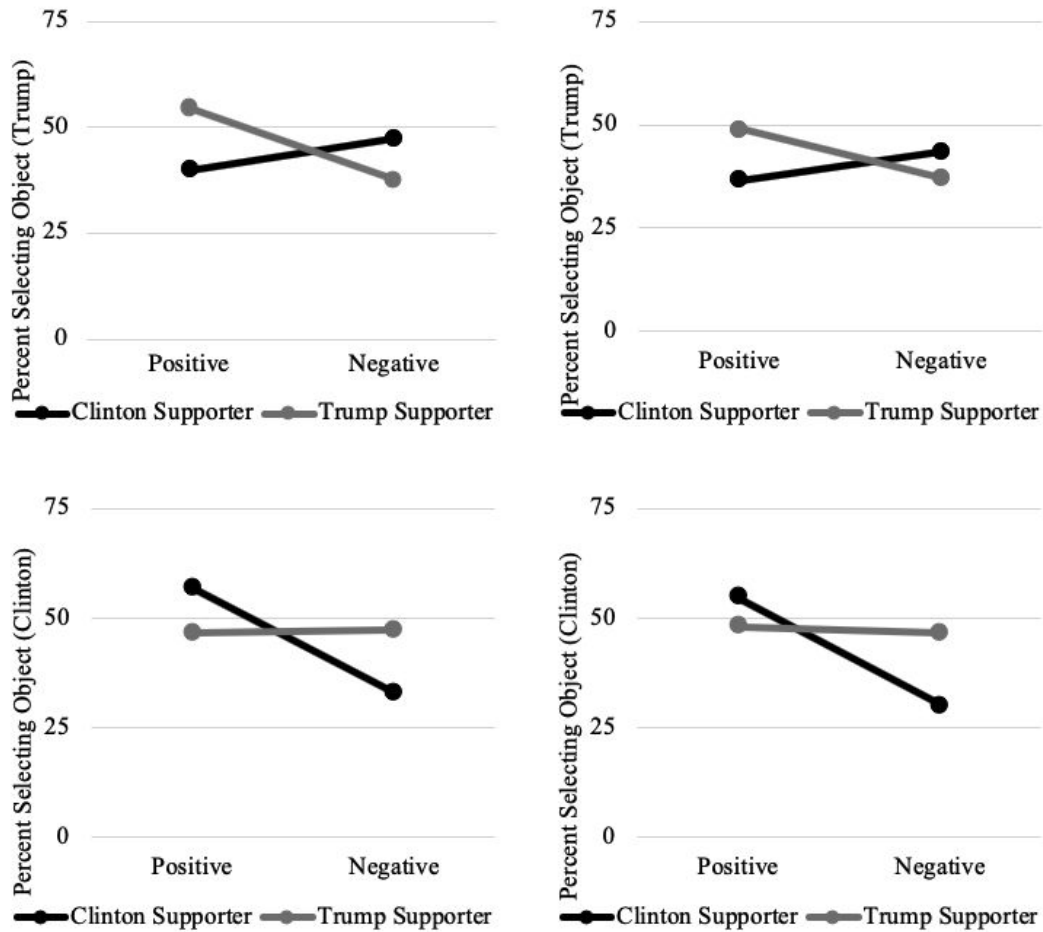


Figure 1. Percent of participants who indicated the object of the sentence as the cause of the event. The left-side panels display data from Study 1; the right-side panels display data from the replication dataset conducted in the days after the election.