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.

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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.
In the present research, we build on the prior findings by investigating the role of individual differences in causal attributions in the IC task by examining in detail the role of political partisanship. We hypothesized that people’s support for Hillary Clinton or Donald Trump during the 2016 U.S. Presidential Election would motivate them to attribute negative events to the opponent, and positive events to the preferred candidate. If so, this would indicate that the IC task has utility as a social psychological instrument that reveals people’s zeal and hostility toward specific targets – in addition to its capacity to reveal tendencies to attribute harmful events to victims in general when people more strongly endorse group-oriented moral values (Niemi et al., 2016; Niemi et al., under review). More broadly, as co-constructed events with coherent representations of causality are important for smooth discourse, finding opposed causal attributions in a political context would be consistent with a cognitive-linguistic mechanism supporting partisan conflict (Pickering & Garrod, 2014; Taylor, 2014).

During the 2016 U.S. Presidential Election, each side saw the other as unusually divisive: a 2016 Pew Research Centre survey showed that over half of both Democrat and Republican respondents considered the opposing political party as more close-minded than the average American (Fingerhut, 2017). The current research, carried out before and after the 2016 Election, examined how participants attributed events involving the dyad Donald Trump and Hillary Clinton, including confrontation and hostile discourse (e.g., “mocking” and “interrupting”). Trump and Clinton supporters took the IC task in a study conducted in the months before the 2016 U.S Presidential Election, and in a replication dataset collected in the days following election day1. We hypothesized an interaction between political affiliation and whether the event was positive or negative for causal attributions, such that Trump supporters would be more likely to judge Clinton as the cause of negative events and Trump as the cause of positive events, and the opposite for Clinton supporters.

**Method**

**Participants**

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

Procedure

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

Materials

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

<table>
<thead>
<tr>
<th>Positive Verbs</th>
<th>Set A Verbs</th>
<th>Set B Verbs</th>
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<tbody>
<tr>
<td></td>
<td>complimented</td>
<td>forgave</td>
</tr>
<tr>
<td></td>
<td>praised</td>
<td>thanked</td>
</tr>
<tr>
<td></td>
<td>inspired</td>
<td>impressed</td>
</tr>
<tr>
<td></td>
<td>interested</td>
<td>comforted</td>
</tr>
<tr>
<td>Negative Verbs</td>
<td>interrupted</td>
<td>criticized</td>
</tr>
<tr>
<td></td>
<td>attacked</td>
<td>mocked</td>
</tr>
<tr>
<td></td>
<td>disgusted</td>
<td>frustrated</td>
</tr>
<tr>
<td></td>
<td>intimidated</td>
<td>annoyed</td>
</tr>
<tr>
<td></td>
<td>approached</td>
<td>ran against</td>
</tr>
<tr>
<td></td>
<td>confronted</td>
<td>took on</td>
</tr>
<tr>
<td></td>
<td>crushed</td>
<td>squashed</td>
</tr>
<tr>
<td></td>
<td>outdid</td>
<td>beat</td>
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</table>

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

**Trump-as-Object**

We first analyzed participants’ responses to prompts in the form of “Clinton [verb]ed Trump because.” A response of 1 indicates that the object (Trump) was the cause of the event, whereas a response of 0 indicates that the subject (Clinton) was the cause of the event. In Step 1 of the regression model, there were no significant main effects of either event type, \( b = .03, SE = .47, Z = .07, p = .941, 95\% CI = [-.88, .95] \), or political affiliation, \( b = -.08, SE = .07, Z = -1.22, p = .222, 95\% CI = [-.21, .05] \). At Step 2, as predicted, there was a significant interaction between event type and political affiliation, \( b = -1.34, SE = .12, Z = -11.32, p < .001, 95\% CI = [-1.57, -1.11] \).

Within positive events, Trump supporters were more likely than Clinton supporters to identify Trump as the causal factor (see Top Left panel of Figure 1), \( b = .82, SE = .11, Z = 7.74, p < .001, 95\% CI = [.61, 1.02] \). By contrast, for negative events, Trump supporters were less likely than Clinton supporters to identify Trump as the causal factor (see Top Left panel, Figure 1), \( b = -0.52, SE = .08, Z = -6.60, p < .001, 95\% CI = [-.68, -.37] \). In general, attributions for negative versus positive events did not significantly differ among Trump supporters, \( b = -0.83, SE = .49, Z = -1.70, p = .088, 95\% CI = [-1.78,
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
politicians are dishonest (Gallup, 2017). Participants may have understood the non-preferred candidate as having not only malicious intentions for negative acts, but also disingenuous reasons for positive acts. Indeed, news media characterized both Trump and Clinton this way (Greenberg, 2016). Future research might test this hypothesis by eliciting and coding open-ended responses to IC prompts for whether event valence matches reasoning valence (i.e., a positive reason for a positive act and vice-versa).

The present research holds practical implications. It contributes to an understanding of social-cognitive-linguistic factors at play in the 2016 U.S. Presidential Election (Azevedo, Jost, & Rothmund, 2017; Bock, Byrd-Craven, & Burkley, 2017; Choma & Hanoch, 2017) by highlighting how support for presidential candidates likely involved distinct causal perceptions about events involving the candidates, such as debates. Moreover, the findings show that the implicit causality task is a methodologically lean way to study how political alliances shape causal attributions for political events. In ongoing work, it will be important to investigate the extent to which lexical semantics and political allegiances interact in causal cognition when political media are produced and consumed.

Ultimately, we propose that the observed pattern of responses reflect participants’ investment in a fraught political contest. Their competitive constructions of events, and non-matching causal attributions effectively convey their support for their preferred candidate. What are the chances for alignment of causal event models? People can shift their causal understanding of events, given more context or finer-grain semantic information (Fiedler & Krüger, 2014; Mayrhofer & Waldmann, 2015; Rudolph & Forsterling, 1997; Niemi et al., under review; Niemi et al., 2016). However, the nature of political allegiances, and the fact that both sides reliably demonstrated competitive attributions, suggest people would resist consensus even given extra explanatory detail (Rubini, Menegatti, & Moscatelli, 2014). Aligning causal language with the opposition – for example, by neglecting the political context and defaulting to an interpretation of causation suggested by context-free verb semantics – is likely complicated by a sense that the alternate pronoun choice is not just inaccurate but morally wrong.

Indeed, the causal selections participants make are representation of moral judgments, they reflect people’s values and have high stakes. While moral judgments are effectively conveyed in language
through adjectives that describe character (e.g., *honest*; Fiedler & Krüger, 2014), people withhold explicit negative character labels for a number of reasons, e.g., to protect the ingroup (linguistic ingroup bias, Maass, Ceccarelli, Rudin, 1996), to reach a politically mixed audience (Rubini et al., 2014), out of politeness norms (Holtgraves, 2002). Moral judgment is often less than overt. The recent findings using the IC task that demonstrated that individual differences in moral values reliably map onto patterns in people’s causal selections for verbs of harm and force demonstrate this: values connect with how people interpret the causal structure of harm events broadly (Niemi et al., 2016; Niemi et al., under review), not only abstract character judgments about situations. Relevant to the present political context, overt attacks of political opponents are typically considered inappropriate (Carraro, Gawronski, Castelli, 2010; Nau & Stewart, 2014). The present results represent evidence of a language-based attribution process that is well-suited to support political partisanship. By overriding the causality implicit in verb meaning and re-interpreting the causal structures of events to favor the preferred candidate, language can serve as a covert vehicle for moral judgments of praise and blame, allowing people to uphold political allegiances while evading the costs of overtly aggressive speech (Fiedler & Krüger, 2014, Taylor, 2014).

We note that not all politically invested people find explicit negative labeling to be costly and aversive. Nau and Stewart (2014) found that Republicans in their sample did not consider putatively Republican politicians delivering messages with aggressive linguistic features to be rude or lacking in tact. Following the time of our study and since, the sentiment has generally been that U.S. President Donald Trump’s rhetoric has been unusually hostile, transforming the norms of political discourse (Martin, 2017). We found symmetrical IC biases, across the political divide, in 2016. Whether ongoing changes in the rhetorical landscape will have asymmetrical effects on implicit causal attributions in the coming political contests is a topic for future investigation.
References


RUNNING HEAD: POLITICS ALTERS IMPLICIT CAUSALITY


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
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.