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2020

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### Recommended Citation

Krumrei-Mancuso, Elizabeth J. and Newman, Brian, "Intellectual humility in the sociopolitical domain" (2020). Pepperdine University, *Faculty Open Access Publications*. Paper 166.  
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Published as:

Krumrei-Mancuso, E. J. & Newman, B. (2020). Intellectual humility in the sociopolitical domain. *Self and Identity*, 19, 989-1016. <https://doi.org/10.1080/15298868.2020.1714711>

Intellectual Humility in the Sociopolitical Domain

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This publication was supported by a subaward agreement (Agreement 145506) from the University of Connecticut with funds provided by Grant 58942 from John Templeton Foundation. Its contents are solely the responsibility of the author and do not necessarily represent the official views of UConn or John Templeton Foundation.

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### Abstract

A growing body of research has demonstrated the relevance of intellectual humility to a variety of interpersonal and social attitudes and behaviors. There is a need for further replication and expansion of findings about the role of intellectual humility in the sociopolitical domain. We examined sociopolitical intellectual humility (SIH), i.e., a non-threatening awareness of the fallibility of one's views about sociopolitical topics in relation to attitudes toward specific political groups and issues in a U.S. sample of adults (N = 587). We found SIH was distinct from political apathy and indifference and unrelated to belief in under-supported political claims. SIH was associated with less affective polarization with regard to political and religious groups. In addition, SIH was related to more responsiveness to information on the topic of immigration among individuals primed to think from a defense rather than accuracy motivated perspective. Finally, for individuals primed to think about the fallibility of their knowledge specific to immigration, having higher trait levels of SIH was associated with more responsiveness to information on the topic of immigration.

*Keywords:* intellectual humility, affective polarization, accuracy motivation, defense motivation, political beliefs, political engagement, political participation, misinformation, misperceptions

### Intellectual Humility in the Sociopolitical Domain

Social science has painted a critical picture of the American public. Politics in the U.S. today are marked by incivility (e.g., Mutz, 2015), outrage (e.g., Sobieraj & Berry, 2011), and negativity (Abramowitz & Webster, 2016, 2018). In recent years, Americans have increasingly grown to distrust and dislike people who support the “other” political party (Iyengar & Westwood, 2015), even considering them less moral than supporters of their own party (Tappin & McKay, 2019). Antipathy across party lines has consequences for life beyond politics. Many Americans are prone to believe conspiratorial, unsubstantiated, and outright false claims (Oliver & Wood, 2014, 2016), even maintaining those beliefs when confronted with countervailing evidence (Nyhan & Reifler, 2010). Moreover, many Americans appear to be motivated reasoners who are more receptive to information they agree with and dismissive of evidence that challenges existing opinions (e.g., Taber & Lodge, 2006). These tendencies can reinforce antipathy across party lines, with many negative social effects, impacting romantic relationships, personal friendships, and family relationships (Chen & Rohla, 2018; Huber & Malhotra, 2017; Iyengar, Sood & Yphtach, 2012). Further, party polarization is associated with broader economic and political problems, including more economic inequality and less economic exchange, political trust, policy deliberation, willingness to compromise, and ability to govern (Davis, 2019; Druckman, Peterson, & Slothus, 2013; Hetherington, 2009; Hetherington & Rudolph, 2015; Kwon, 2015; McConnell, Margalit, Malhotra, & Levendusky, 2018).

Intellectual humility (IH), conceptualized as “a non-threatening awareness of one’s intellectual fallibility” (Krumrei-Mancuso and Rouse, 2016, p. 210), may have a positive impact in this challenging social environment. Researchers have demonstrated links between IH and several positive interpersonal benefits that might extend to the sociopolitical domain. For

example, high levels of IH tend to correlate with greater open-mindedness, empathy, prosocial values, and tolerance toward diverse ideas and people (e.g., Krumrei-Mancuso, 2017; Krumrei-Mancuso & Rouse 2016; McElroy et al., 2014). Our goal was to explore IH in the sociopolitical realm, defining sociopolitical intellectual humility (SIH) as a nonthreatening awareness of the fallibility of one's sociopolitical views. We conceptualized SIH broadly, to include a lack of ego defensiveness about sociopolitical disagreements, an openness to reconsidering one's sociopolitical viewpoints, a respect for diverse ways of thinking about sociopolitical topics, and a lack of overconfidence about one's sociopolitical views.

Research that has previously been conducted on general IH suggests that IH plays a role in people's general orientations toward the sociopolitical domain. For example, IH relates to more benevolent views of politicians who change their minds (Leary et al., 2017), greater openness to learning about opposing political views (Porter & Schumann, 2018), more political tolerance and less social dominance orientation (Krumrei-Mancuso & Newman, 2019). Although these studies show IH relates to general attitudes toward political conflict, it remains unclear whether IH predicts attitudes toward more specific political groups like Democrats and Republicans. Hoyle, Davisson, Diebels, and Leary (2016) argued that IH may have a relatively strong relationship with attitudes in the broad domain of politics whereas IH may be much less correlated with more specific topics within that domain (e.g., government surveillance) or even more specific political issues (e.g., government tracking of phone records). If we want to know how far IH reaches into political attitudes, we must examine IH's connection to more specific attitudes.

In the current study, we examined SIH in relation to specific political groups, beliefs, and attitudes. We explored whether SIH predicts political engagement, affective polarization with

respect to political and religious groups (Democrats and Republicans, conservatives and liberals, Evangelical Christians and Muslims), and beliefs in explicitly political claims (e.g., millions of illegal immigrants voted in the 2016 elections). We also investigated how SIH shapes change in the strength or direction of one's attitudes in the face of evidence on the salient and polarizing issue of immigration.

### **Sociopolitical Intellectual Humility and Politics**

We highlight two points relating to the conceptualization and measure of SIH in relation to political topics. First, SIH is conceptually and empirically distinct from political conservatism or liberalism. Conservatism and libertarianism have each been at least partly rooted in the notion that human thinking is fallible (e.g., Hayek, 1945; Oakshott, 2010; von Mises, 1981).

Conservative and libertarian thinkers have argued that the limits of human cognition preclude policymakers from making all-knowing and all-wise decisions, so the prudent course of action is to limit the power policymakers wield and maintain a small government that conserves the status quo and only changes gradually when an abundance of evidence supports change. Meanwhile, liberal and progressive thinkers have argued that limits on humans' ability to arrive at an ultimate, shared truth emphasize the need for continual experimentation and the value of pluralism and multiculturalism (e.g., Berlin, 2002; Dewey, 1935; Taylor, 1989; see also Rorty's 1989 conception of liberal irony, which calls for humility about truth claims). Moving from the theoretical realm to the rhetoric of current politics, both self-identified liberals and conservatives criticize each other for their intellectual hubris (e.g., Alexander, 2018; Domenech, 2017; Friedersdorf, 2017; Madden, 2019; Mangu-Ward, 2018). Thus, conservatives and liberals can both be intellectually humble, and according to their critics, they can both be intellectually

arrogant. Empirically, studies have found IH uncorrelated with political ideology and party identification (Leary et al., 2017; Porter & Schumann, 2018).

Although IH is conceptually distinct from political ideology, there may also be reasons that they relate to one another. Conservatives, who tend to resist change more than liberals (Jost, Glaser, Kruglanski, & Sulloway, 2003), may be associated with decreased openness to changing one's views, one factor in our broad conceptualization of SIH. Moreover, in contemporary politics, liberals/progressives have tended to champion multiculturalism and diversity, which could relate to an appreciation for diverse perspectives, another component of our broad conceptualization of SIH. For these reasons, it is important to control factors such as political party identification and political ideology in analyses.

Second, IH is not the same as apathy or diffidence and SIH is distinct from simply not caring much about politics. In fact, empirical work has supported links between IH and political engagement, measured as self-reports of the importance of politics to participants and how closely participants followed politics (Porter & Schumann, 2018). If SIH involves feeling less threatened by the inevitable disagreements that political engagement brings, people high in SIH may have more favorable experiences when they engage in politics and therefore continue to participate more than low SIH individuals who feel threatened by political disagreements. To evaluate this further, we examined links between SIH and various dimensions of political engagement: political interest, dislike of political discussion, and civic and political participation.

### **Sociopolitical Intellectual Humility and Affective Polarization**

Over the past few election cycles, the American public has increasingly exhibited affective polarization (Iyengar & Westwood, 2015). Affective polarization is the tendency, beyond policy disagreement, for Democrats and Republicans or liberals and conservatives to

distrust and dislike one another and call each other selfish, closed-minded, and hypocritical (e.g., Iyengar, Sood, & Yphtach, 2012; Iyengar, Lelkes, Levendusky, Malhotra, & Westwood, 2019; Mason, 2018). The roots of affective polarization appear to stem from partisan and ideological group identities, which propel in-group favoritism and out-group animosity (e.g., Green, Palmquist, & Schickler, 2002; Huddy, Mason, & Aarøe, 2015). In recent decades, various facets of individuals' social identities (e.g., their ideological, religious, racial/ethnic, gender, and sexual identities) have overlapped with partisanship to a greater degree than in the past, heightening the importance of partisan and ideological identities (Mason, 2015). Part of this change involved the increasing political salience of religious identities, including the reliable and widespread identification between evangelical Christians and the Republican Party (e.g., Layman, 2001). Additionally, in the post-9/11 period, anti-Muslim prejudice has been widespread and politically relevant (e.g., Kalkan, Layman, & Uslaner, 2009; Panagopoulos, 2006; Sides & Gross, 2013; Lajevardi & Oskooii, 2018), significantly predicting support for Trump in the 2016 presidential election (Lajevardi & Abrajano, 2019). In this context, Muslims have come to be an important out-group for many supporters of Donald Trump, the Republican Party, and evangelical Christians.

One of our goals was to examine links between SIH and affective polarization. In previous research, IH has been linked to greater open-mindedness, empathy, and tolerance of diversity among people and ideas (McElroy et al., 2014; Krumrei-Mancuso & Rouse, 2016; Krumrei-Mancuso, 2017) and SIH has been linked to less social dominance orientation and a greater willingness to protect the political rights of groups one dislikes (Krumrei-Mancuso & Newman, 2019). Each of these findings suggests that SIH may depress in-group favoritism and out-group animosity. We theorized that, given our definition of SIH as a non-threatening

awareness of the fallibility of one's views, and our broad conceptualization that this includes a lack of ego threat in the face of disagreements and an appreciation for diverse ways of thinking, people with high SIH would feel less threatened by out-groups. In addition, lack of overconfidence in one's own perspective may encourage a more moderate view of the goodness of one's in-groups and the badness of out-groups. For these reasons, we expected SIH to be associated with less affective polarization.

### **Sociopolitical Intellectual Humility and Belief in Under-Supported Claims**

Anyone who pays even minimal attention to politics encounters truth claims. For example, politicians, candidates, activists, columnists, bloggers, cable news personalities, and personal acquaintances make claims about the state of the economy, relations between ethnic/racial groups, the economic and social impact of immigration, the extent of crime, and whether or not there is a "crisis" in health care, education, housing, or any number of other issues. They also make claims about the likely consequences of various proposed policy changes (e.g., increased taxes, tariffs, or gun control). Such claims about what has happened, what is happening, and what might happen vary in terms of the support provided for their veracity. Sometimes people make claims and provide evidence for them (e.g., official statistics, video or photographic evidence of an event, expert analyses) and sometimes people make claims without providing much or any evidence. Given that IH is associated with characteristics such as reflective thinking, need for cognition, intellectual engagement, curiosity, cognitive flexibility, and intelligence (Krumrei-Mancuso, Haggard, LaBouff, & Rowatt, 2019; Zmigrod, Zmigrod, Rentfrow, & Robbins, 2019), individuals high in IH may be more likely to think about the claims they encounter. Indeed, SIH seems to be associated with paying attention to the evidentiary basis of one's views (Hoyle, Davisson, Diebels, & Leary, 2016) and is even associated with more

recognition memory, meaning that those higher in IH are better at judging what they do and don't know (Deffler, Leary, & Hoyle, 2016). For these reasons, we wondered if those high in SIH would be more skeptical of under-supported political claims, even when those claims would benefit their in-group(s) or undermine their out-group(s).

### **Sociopolitical Intellectual Humility and Change in Attitudes in Response to Factual Information**

When evaluating and processing arguments, information, or claims, it is possible for people to work from an accuracy motivation, i.e., to seek to form correct appraisals, or to work from a defense motivation, i.e., the desire to defend and maintain their existing views (e.g., Canon, 1964; Chaiken, Liberman, & Eagly, 1989; Chen & Chaiken, 1999; Freedman, 1965; Hart et al., 2009). A defense motivation encourages individuals to ignore, dismiss, or argue against information or arguments that are incompatible with one's existing views, while an accuracy motivation leads individuals to process information thoroughly, tending to the strength of arguments (e.g., Freund, Kruglanski, & Shpitzajzen, 1985; Clarke, Wegener, & Fabrigar, 2008). In the political domain, many people respond to information and arguments in ways that defend, maintain, or further support their existing views (e.g., Taber & Lodge, 2006). For example, people's views of economic conditions relate to their party identification such that copartisans, who share the party identification of the president, view the economy as significantly stronger than outpartisans (e.g., Bartels, 2002; Dickerson, 2018; Evans & Pickup, 2010; Gerber & Huber, 2010). When partisans encounter news coverage that runs counter to their views on an issue, they sometimes argue against the message, and as a consequence, become even stronger or more extreme in their existing view (e.g., Levendusky, 2013). In general, as one review put it, "when it comes to politics, scholars have found that accuracy is often sacrificed at the expense of partisan

concerns [defense motivation]” (Donovan, Kellstedt, Key, & Lebo, 2019, 5; see also Jerit & Barabas, 2012; Lebo and Cassino, 2007; Taber, Cann, & Kucsova, 2009).

Since we conceptualized SIH broadly as including a lack of overconfidence and ego defensiveness about one's views, a respect for alternative ways of thinking, and an openness to revising one's views, we anticipated these qualities would be compatible with individuals being guided less by defense motives and more by accuracy motives. Individuals high in SIH may be less likely than people lower in SIH to dismiss information and arguments that are incompatible with their existing views or to accept compatible arguments automatically without considering the strength of the argument. Research has found people with higher IH to be more open to new ideas and experiences in general (Krumrei-Mancuso & Rouse, 2016; Leary et al., 2017; McElroy et al., 2014; Meagher, Leman, Bias, Latendresse, & Rowatt, 2015) and more open to hearing new political arguments, in particular (Porter & Schumann, 2018). On these bases, we expected SIH may enhance the effects of an accuracy motivation manipulation and depress the impact of a defense motivation manipulation when it comes to adjusting beliefs on a political topic.

### **Sociopolitical Intellectual Humility and Specific Political Views**

Thus far, most studies of specific IH have focused on the domain of religion (e.g., Hook et al., 2017; Hopkin, Hoyle, & Toner, 2014; Van Tongeren et al., 2016; Zhang et al., 2015; Zhang et al., 2016), with research in the political domain starting to catch up. Extant research on IH and politics has found that IH is relevant to political attitudes, having focused primarily on topics such as evaluations of political candidates who changed their stance on an issue (Leary et al., 2017), openness to new arguments about issues like gun control (Porter & Schumann, 2018), or the degree to which someone thinks his/her group should be dominant in society (Krumrei-Mancuso & Newman, 2019). Some of this work has examined connections between general IH

and political outcomes (Leary et al., 2017; Porter & Schumann, 2018), whereas other studies have framed assessments of IH in terms of knowledge specific to the political domain (Hoyle et al., 2016; Krumrei-Mancuso & Newman, 2019).

Hoyle et al. (2016) have argued that IH is a general disposition and can be applied to increasingly specific domains (e.g., politics or religion), topics (e.g., government surveillance or immigration), and issues (e.g., providing for a pathway to citizenship for children brought to the U.S. illegally). According to Hoyle et al. (2014), an individual's IH toward a specific view is a function of the individual's general intellectual humility as well as characteristics of the person's view and the basis for the view. Thus, one's general dispositional IH may not provide a full picture of one's IH on a specific view. For this reason, one of our goals was to examine how trait-level SIH might interact with IH specific to a particular political topic in predicting change in the strength or direction of people's attitudes when presented with information.

Specifically, we were interested in examining the effects of calling attention to the fallibility of people's knowledge on a particular political topic on the degree to which individuals adjusted the strength or direction of their beliefs on the topic in response to being exposed to factual information on the topic. We hypothesized that individuals who are asked to reflect on the fallibility of their knowledge of a specific issue, and the possibility that they may be overlooking important evidence, would be more willing to revise their views based on new information. Further, we were interested in exploring whether this effect would be intensified or muted on the basis of pre-existing levels of general SIH.

### **Summary of Goals and Hypotheses**

Previous studies have suggested that IH should affect people's attitudes, beliefs, and behavior in the sociopolitical sphere, though the systematic study of IH's role in this domain is in

its infancy. We aimed to contribute to the IH literature by examining the links between a context-specific, sociopolitical assessment of IH and several specific and explicitly political views.

Our first goal was to rule out potential misconceptions regarding SIH, including that SIH may reflect sociopolitical apathy, diffidence, or gullibility. We hypothesized that SIH, like IH (Porter & Schumann, 2018), would differentiate from political disengagement or a lack of political interest. In addition, we hypothesized SIH would not increase, and may even decrease, the likelihood that individuals would believe in political claims that lack evidentiary support.

Our second goal was to examine SIH in relation to attitudes toward politically relevant outgroups. We hypothesized SIH would attenuate affective polarization of groups based on party, ideology, and religion.

Our final goal was to examine SIH in relation to two experimental manipulations. We expected SIH to enhance the effects of an accuracy motivation manipulation and depress the impact of a defense motivation manipulation on participants' responsiveness to reading factual information on a controversial political topic. In addition, we expected having participants reflect on their specific IH on a particular political topic would increase their responsiveness to factual information on a controversial political topic, and that this effect would be enhanced by higher levels of general SIH.

## **Method**

### **Participants**

The sample consisted of 587 U.S. adults recruited through Amazon Mechanical Turk (Mturk) as a follow-up study to previous work with a politically nationally representative sample (Krumrei-Mancuso & Newman, 2019). The sample was 48.2% female and 51.4% male and ranged in age from 19 to 83 years old ( $M = 40.09$ ,  $SD = 11.70$ ). Racially, 79.7% of the sample

identified as Caucasian, 9.7% identified as Black or African American, 6.5% identified as Asian, 3.1% identified as multi-racial, and less than 1% each identified as American Indian/Alaska Native or Other. In addition, 6% of the sample identified as Hispanic or Latino.

The sample's median annual household income was \$52,000. In terms of highest level of education completed, less than 1% identified elementary school, 39% identified high school, 44.5% identified college, and 16.2% of the sample identified graduate school.

In terms of religious affiliation, 39.2% identified as Christian, not Catholic (of these, 49.3% identified as a "born-again Christian," 42.4% did not, and 8.3% were unsure), 18.1% identified as Catholic, 14.7% identified as Agnostic, 13.1% identified as Atheist, 6.6% identified as none, 4.8% identified as spiritual but not religious, 1% each identified as Jewish, Buddhist, and Other, and less than 1% each identified as Hindu or Muslim.

On a political scale ranging from 1 (extremely liberal) to 7 (extremely conservative), the average score was 3.68 ( $SD = 1.84$ ). In terms of party identification, 42.9% identified as Democrat, 27.6% identified as Republican, and 26.7% identified as Independent. Two percent indicated no preference/don't know and less than 1% identified with another party. When prompted, 40% of those who identified as Independent indicated they leaned more toward the Democratic Party and 23% indicated they leaned more toward the Republican Party.

## Measures

**Sociopolitical Intellectual Humility.** We used the 22-item Comprehensive Intellectual Humility Scale (CIHS; Krumrei-Mancuso & Rouse, 2016), which includes a higher order factor consisting of four factors: (1) a healthy independence between intellect and ego, such that intellectual disagreements do not feel threatening to a person's sense of self (e.g. "When someone contradicts my most important beliefs, it feels like a personal attack," reverse scored), (2)

openness to reconsidering one's viewpoint and revising it, if warranted (e.g. "I'm willing to change my mind once it's made up about an important topic"), (3) respect for diverse ways of thinking (e.g. "I welcome different ways of thinking about important topics"), and (4) lack of overconfidence in one's knowledge (e.g. "When I am really confident in a belief, there is very little chance that belief is wrong," reverse scored). In the current study, the scale instructions were adapted to instruct participants to think about their "beliefs and ideas about topics relevant to society and politics (e.g. immigration, economic policy, the environment, gun control, abortion, gender disparities, rights of sexual minorities, religious freedom, foreign policy, and so forth)" and to use this as the context for indicating their level of agreement with each scale item ( $\alpha = .88$ ). Items were rated on a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*.

Although some have raised serious and important concerns about the validity of self-report measures of IH (e.g., Davis, Worthington, & Hook, 2010; Davis et al., 2011; Davis, Worthington, Jr., & Hook, 2010; Peterson & Seligman, 2004; Rowatt et al., 2006; Tangney, 2000), measurement advances in recent years have attenuated these concerns to some degree (e.g., Davis & Hook, 2014; Worthington & Allison, 2018). Studies have demonstrated the construct, convergent, discriminant, and predictive validity of self-report measures of humility and intellectual humility and shown that these self-report measures are not problematically contaminated by socially desirable responding (Ashton, Lee, and de Vries, 2014; Haggard et al., 2018; Hoyle et al., 2016; Krumrei-Mancuso & Rouse, 2016; Leary et al., 2017; Porter & Schumann, 2018). Despite this, given the possibility of social desirability contamination, we took a conservative approach in our analyses and controlled for social desirability.

**Specific Intellectual Humility.** We used the 3-item ( $\alpha = .90$ ), abbreviated version of the Specific Intellectual Humility Scale (Hoyle et al., 2016) to assess participants' levels of IH about their specific beliefs about crime rates among immigrants in the U.S. These items were phrased as: "My views about crime among immigrants may turn out to be wrong," "When it comes to my views on crime among immigrants, I may be overlooking evidence," and "My views about crime among immigrants may change with additional evidence or information." Items were rated on a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*.

**Political interest.** We assessed participants' political interest using a single item: "Some people seem to follow what's going on in government and public affairs most of the time. Others aren't that interested. How often do you follow what's going on in government and public affairs?" (Delli Carpini & Keeter, 1996). The item was rated on a 5-point Likert scale from (1) *not at all* to (5) *most of the time*.

**Dislike of political discussion.** We used three items ( $\alpha = .85$ ) to assess dislike and avoidance of political discussion (Krumrei-Mancuso & Newman, 2019). The items included "I avoid discussing my views about political topics with other people," "I dislike talking about political topics," and "I dislike other people questioning my views about political topics." Items were rated on a 5-point Likert scale ranging from (1) *strongly disagree* to (5) *strongly agree*.

**Civic and political activities.** We used eight items ( $\alpha = .80$ ) to assess civic and political activities engaged in over the past five months, including attending public meetings to discuss community affairs, working to improve a community condition, serving on a nonprofit board, submitting a letter to a magazine, newspaper, or online publication, posting on social media about a political issue, joining in a political event, contributing financially to a candidate or political organization, or contacting a member of the Senate or U.S. House of Representatives.

Items were derived from three sources, including the Census Current Population Survey of the U.S. Census Bureau, the Civic Health Index Survey of the National Conference on Citizenship, and the American National Election Studies (ANES). All items were rated on a 5-point Likert scale ranging from (1) *never* to (5) *a great deal*.

**Voting.** We used an item from the ANES to assess whether people voted: “In talking to people about elections, we often find that a lot of people were not able to vote because they weren't registered, they were sick, or they just didn't have time. Which of the following statements best describes you: (1) I did not vote in the 2018 congressional elections, (2) I thought about voting this time, but didn't, (3) I usually vote, but this time I didn't, (4) I am sure I voted in the 2018 congressional elections” (American National Election Studies, 2017). We recoded the variable such that participants saying they voted was coded 1 and all others were coded 0.

**Political Beliefs with Limited Evidence.** We asked participants to indicate their level of agreement with two statements about the 2016 election that lacked significant evidence. One statement was favorable toward Donald Trump and the other was unfavorable. On November 27, 2016, Trump tweeted “In addition to winning the Electoral College in a landslide, I won the popular vote if you deduct the millions of people who voted illegally.” Around the same time, InfoWars, a website run by conspiracy theorist Alex Jones, ran an article entitled “Report: Three Million Votes in Presidential Election Cast by Illegal Aliens” (Watson, 2016). These claims received considerable media attention, but were not accompanied by much evidence. Further, these claims were described as false or without evidence in major news outlets (e.g., Jacobson, 2016; Kessler, 2016; Pearce, 2016; Shear & Huetteman, 2017). We asked participants to say whether they believed the following statement was true: “Millions of immigrants voted illegally in the 2016 election between Donald Trump and Hillary Clinton.”

The second under-supported statement related to Russian tampering during the 2016 election. Although various investigations into potential Russian interference in the election have differed on a number of points, virtually all concluded that there was no evidence of any Russian agent tampering with vote totals (e.g., Kelly, 2018; Office of the Director of National Intelligence, 2017; Sanger, 2017). We asked participants whether they believed the following statement was true: “Agents acting on behalf of the Russian government tampered with vote totals in the 2016 presidential election.”

**Affective Polarization.** We employed a common measure of affective polarization, which uses feeling thermometer scores (Henry & Napier, 2007; Iyengar et al. 2012, 2019). Participants were given the following instructions: “I'd like you to rate the following groups using something called the feeling thermometer. You can choose any number between 0 and 100. The higher the number, the warmer or more favorable you feel toward the group, the lower the number, the colder or less favorable. You would rate this group at the 50-degree mark if you feel neither warm nor cold toward them.” Participants were asked to rate “Conservatives,” “Liberals,” “Republicans,” “Democrats,” “Evangelical Christians,” and “Muslims.” Affective polarization is measured as the difference between an individual’s ratings of two opposing groups (i.e., rating for Republicans minus rating for Democrats; rating for conservatives minus rating for liberals; rating for evangelical Christians minus rating for Muslims). Each of these difference variables can range from -100 to 100.

**Social desirability.** We used the 5-item Socially Desirable Response Set-5 (Hays, Hayashi, & Stewart, 1989) to assess participants’ tendency to respond to survey items in a way deemed favorable by society ( $\alpha = .78$ ). Items were rated on a 5-point Likert scale ranging from (1) *definitely false* to (5) *definitely true*.

## Procedure

**General procedure.** The current paper is specific to outcomes of interest that were collected cross-sectionally as part of a larger project on SIH (Krumrei-Mancuso & Newman, 2019). We collected data after receiving Institutional Review Board approval and participant informed consent. To participate, Mturk workers had to be adults living in the U.S., fluent in English, and have a worker approval rating of 98% or higher. Participants completed the survey online and were paid commensurate with the length of the survey.

We used G\*Power 3.1 to conduct an a priori power analysis to determine the sample size for the associated, larger project. For the current analyses, the number of participants was more than sufficient to detect a small to moderate effect with .8 power and a .05 probability of a Type I error.

After data were collected, we deleted 4 cases listwise for participants who spent less than 5 minutes completing the survey, failed an attention check, or indicated at the end of the survey that they had not paid attention to what they were answering. Subsequently, we conducted study analyses using SPSS Statistics 23.

**Procedure for examination of change in strength or direction of views.** We examined the extent to which participants changed in the strength or direction of their opinions on the topic of crime rates among immigrants in the U.S. on the basis of reading factual information about this topic. Participants were instructed that they would be asked questions about people who had *legally* immigrated to the U.S. They were then asked to rate their level of agreement with the statement: "In general, immigrants are more likely to commit crimes than those born in the U.S." on a 7-point Likert scale ranging from (1) *Strongly disagree that this statement is true* to (7)

*Strongly agree that this statement is true.* Participants were then randomly assigned for two distinct manipulations.

First, participants were assigned to either complete or not complete the abbreviated specific intellectual humility scale about their beliefs about crime among immigrants (Hoyle et al., 2016). The goal of this prime was to bring IH to mind for participants.

Next, all participants were instructed that they would be provided with information from the website Factcheck.org. Participants were then randomly assigned to an accuracy or defense motivation condition (see procedure by Canon, 1964). In the accuracy motivation condition, participants were told they would be asked later in the study to write an argument for or against the idea that immigrants are more likely to commit crimes than those born in the U.S. They were instructed that they would be told later whether to write an argument for or against this idea, so they should be prepared to do either on the basis of the information presented. The rationale was that this would encourage participants to attend to information that was uncongenial, given that accurate knowledge of the opposition's arguments is useful for planning a counterargument.

In the defense motivation condition, participants were told they would be asked later in the study to write an argument to defend their own viewpoint about whether or not immigrants are more likely to commit crimes than people born in the U.S., so they should be prepared to do this in response to the information presented. The rationale was that this would encourage participants to attend to congenial information supporting their pre-existing beliefs.

All participants were provided with the same paragraph edited from an entry of Factcheck.org that described current knowledge about crime rates among immigrants. The paragraph acknowledged that contradictory findings exist within the literature (with relevant examples) as well as the limits to the available data, but offered a clear conclusion that the

majority of studies have found that immigration is associated with lower crime rates. After reading the information, all participants again rated their level of agreement with the statement that immigrants are more likely to commit crime than those born in the U.S. We calculated difference scores for change in opinion by subtracting the initial level of agreement with the statement about crime among immigrants from the final level of agreement with this statement.

## Results

### Preliminary Analyses

We conducted Pearson and Point-Biserial correlation analyses to examine the need to control demographic characteristics in the primary analyses. SIH correlated negatively with identifying with a particular religion ( $r_{pb} = -.16, p < .001$ ) and identifying as Latino or Hispanic ( $r_{pb} = -.08, p = .05$ ). Therefore, these variables were controlled in subsequent analyses. We had made an a priori decision to control party identification and political ideology (liberal to conservative) as these variables have often been associated with our outcomes of interest in previous research. SIH correlated negatively with identifying as Republican ( $r_{pb} = -.13, p = .002$ ) and identifying as conservative rather than liberal ( $r = -.11, p = .01$ ), and was unrelated to identifying as Democrat ( $r_{pb} = .01, p = .76$ ). We also made an a priori decision to control socially desirable responding. In the current data, links between SIH and socially desirable responding approached significance ( $r = .08, p = .06$ ). We also made an a priori decision to control education when examining outcomes related to political interest and engagement, given that education is frequently a predictor of political activity (e.g., Verba, Schlozman, & Brady, 1995). However, SIH was not correlated with education ( $r = .02, p = .57$ ).

Level of SIH did not differ on the basis of other demographic factors, including age ( $r = -.04, p = .38$ ), gender ( $r_{pb} = .04, p = .31$ ), household income ( $r = .03, p = .56$ ), identifying as

Asian ( $r_{pb} = .03, p = .52$ ), identifying as Black or African American ( $r_{pb} = -.04, p = .37$ ), or identifying as Caucasian ( $r_{pb} = .00, p = .95$ ).

Because select analyses made use of political ideology (7 point range from extremely liberal to extremely conservative) and party identification (7 point range from strong Democrat to strong Republican) as predictors, we also examined correlations between these variables and demographic factors. Political ideology correlated with age ( $r = .15, p < .001$ ) and residing in the South ( $r_{pb} = .09, p = .03$ ). Party identification correlated with age ( $r = .14, p < .01$ ) and gender ( $r_{pb} = .09, p = .04$ ). Therefore, these variables were controlled in the analyses making use of these respective predictors.

### **Links Between Sociopolitical Intellectual Humility and Political Engagement**

We conducted hierarchical linear regressions to examine SIH as a predictor of a few indicators of political engagement, after accounting for control variables (see Table 1). SIH was associated with slightly more interest in following politics (accounting for 1.3% of the variance), was associated with less of a dislike of political discussions (accounting for 7.9% of the variance), and was unrelated to levels of civic engagement.

We conducted logistic regression analyses to examine SIH as a predictor of voting in the 2018 congressional elections. When including only SIH as a predictor without controls, the model was not significant,  $\chi^2(1) = .14, p = .71$ . When including the control variables of religiosity, ethnicity, party identification, political conservatism, and socially desirable responding, SIH was still not a significant predictor of voting behavior ( $p = .65$ ), but the overall model was significant,  $\chi^2(7) = 39.59, p < .001$  and explained 9.5% of the variance in voting behavior (Nagelkerke  $R^2$ ). Significant predictors of reporting having voted included identifying

as Democrat ( $p < .01$ ), identifying as Republican ( $p = .02$ ), and scoring higher for socially desirable responding ( $p < .01$ ).

### **Links Between Sociopolitical Intellectual Humility and Affective Polarization**

We conducted hierarchical regressions to examine whether SIH would moderate links between party identification or political ideology and affective polarization with regard to politically relevant groups (see Table 2).

We first examined affective polarization of political parties by subtracting participants' felt warmth toward Democrats from their felt warmth toward Republicans. On this outcome, positive scores indicate favoring Republicans over Democrats and negative scores indicate favoring Democrats over Republicans. In Step 1, we entered control variables. Being more educated was associated with a decrease in favoring Republicans over Democrats and being religious and female were both associated with an increase in favoring Republicans over Democrats. Party identification (Step 2) was the strongest predictor, accounting for 64% of the variance in affective polarization, in the expected direction. SIH (Step 3) was not predictive of favoring one political party over the other, supporting the independence of the SIH construct and political party favoritism. Finally, in Step 4, SIH moderated links between party identification and affective polarization, accounting for 0.4% of the variance in affective polarization. Post hoc probing of this interaction (see Aiken & West, 1991) indicated that, for both those high and low in SIH, participants had warmer feelings toward their own political party than toward the opposing political party. However, this relationship was stronger among those low in SIH (1 SD below the mean;  $B = 23.45$ ,  $S.E. = 1.19$ , 95% C.I. [21.10, 25.79],  $p < .001$ ) than those high in SIH (1 SD above the mean;  $B = 17.44$ ,  $S.E. = 1.28$ , 95% C.I. [14.92, 19.95],  $p < .001$ ). As can be seen in Figure 1, among those low in SIH, strong Democrats and strong Republicans rated their

warmth toward the two parties further apart (approximately 140 points) than did those high in SIH (approximately 105 points).

A similar pattern was observed for affective polarization of conservatives and liberals. Here, the outcome variable was based on subtracting participants' felt warmth toward liberals from their felt warmth toward conservatives. Positive scores indicate favoring conservatives over liberals and negative scores indicate favoring liberals over conservatives. In Step 1, we entered control variables. Being more educated was associated with a decrease in favoring conservatives over liberals and being religious was associated with an increase in favoring conservatives over liberals. Political ideology (Step 2) was the strongest predictor, accounting for 67% of the variance in affective polarization, in the expected direction. SIH (Step 3) was not predictive of favoring liberals or conservatives. Finally, in Step 4, SIH moderated links between political ideology and affective polarization, accounting for 0.2% of the variance in affective polarization. Post hoc probing of this interaction indicated that, for both those high and low in SIH, participants had warmer feelings toward those who shared their political ideology than those who did not. However, this relationship was stronger among those low in SIH (1 SD below the mean;  $B = 28.69$ ,  $S.E. = 1.35$ , 95% C.I. [26.05, 31.33],  $p < .001$ ) than those high in SIH (1 SD above the mean;  $B = 23.73$ ,  $S.E. = 1.51$ , 95% C.I. [20.76, 26.69],  $p < .001$ ). As can be seen in Figure 2, among those low in SIH, extreme liberals and extreme conservatives were further apart in their thermometer ratings (approximately 153 points) than were those high in SIH (approximately 127 points).

Finally, we examined whether SIH would moderate links between political ideology and affective polarization with regard to two religious groups relevant to politics in the U.S.: Evangelical Christians and Muslims. In this case, the outcome variable was based on subtracting

participants' felt warmth toward Muslims from their felt warmth toward Evangelical Christians. Positive scores indicate favoring Evangelical Christians over Muslims and negative scores indicate favoring Muslims over Evangelical Christians. In Step 1, we entered control variables. Being more educated was associated with a decrease in favoring Evangelical Christians over Muslims and identifying as religious in this predominantly Christian sample was associated with an increase in favoring Evangelical Christians over Muslims. In Step 2, being more politically conservative was associated with favoring Evangelical Christians over Muslims to a greater extent. In Step 3, we observed a main effect for SIH, which was predictive of a decrease in favoring Evangelical Christians over Muslims, accounting for .08% of the variance in affective polarization. Finally, in Step 4, SIH moderated links between political ideology and affective polarization, accounting for .09% of the variance in affective polarization. Post hoc probing of this interaction indicated that, for both those high and low in SIH, being more liberal was associated with favoring Muslims over Evangelicals and being more conservative was associated with favoring Evangelicals over Muslims. However, this relationship was much stronger among those low in SIH (1 SD below the mean;  $B = 18.99$ ,  $S.E. = 1.66$ , 95% C.I. [15.72, 22.25],  $p < .001$ ) than those high in SIH (1 SD above the mean;  $B = 9.69$ ,  $S.E. = 1.87$ , 95% C.I. [6.03, 13.36],  $p < .001$ ). As can be seen in Figure 3, among those low in SIH, extreme liberals and extreme conservatives were further apart in their ratings of warmth toward these two religious groups (approximately 111 points) than were those high in SIH (approximately 58 points).

### **Links Between Sociopolitical Intellectual Humility and Believing Under-Supported Political Statements**

We used multinomial logistic regressions to examine whether SIH was associated with the likelihood of believing, not believing, or being unsure about two controversial and under-

supported political statements. In predicting responses to the statement: "Millions of immigrants voted illegally in the 2016 election between Donald Trump and Hillary Clinton," a model with SIH as a predictor without control variables fit the data significantly better than a model with only the intercept,  $\chi^2(2) = 12.71, p < .01$ , Nagelkerke  $R^2 = .03$ . Higher SIH was associated with being less likely to believe (OR = .97, 95% CI: .95, .99) or be unsure (OR = .98, 95% CI: .96, .99) about the statement compared to not believing the statement. The model accounted for 59.6% correct predictions.

A model including the control variables of religiosity, ethnicity, party identification, political conservatism, and socially desirable responding along with SIH also fit the data significantly better than a model with only the intercept,  $\chi^2(14) = 158.23, p < .001$ , Nagelkerke  $R^2 = .28$ . However, SIH no longer made a unique contribution ( $p = .07$ ). Significant contributions were made by being politically conservative ( $p < .001$ ) and very nearly by socially desirable responding tendencies ( $p = .05$ ). Identifying as politically conservative was associated with a greater likelihood of believing the statement (OR = 2.45, 95% CI: 1.87, 3.22) or being unsure (OR = 1.73, 95% CI: 1.42, 2.11) in comparison to not believing the statement. Higher socially desirable responding was associated with a lower likelihood of indicating belief in the statement compared to not believing the statement (OR = .68, 95% CI: .48, .97). The model accounted for 62.5% correct predictions.

In predicting responses to the statement: "Agents acting on behalf of the Russian government tampered with vote totals in the 2016 presidential election," a model with SIH as predictor without control variables did not fit the data significantly better than a model with only the intercept,  $\chi^2(2) = 1.07, p = .59$ . When adding the control variables of religiosity, ethnicity, party identification, political conservatism, and socially desirable responding along with SIH, the

model fit the data significantly better than a model with only the intercept,  $\chi^2(14) = 185.12, p < .001$ , Nagelkerke  $R^2 = .31$ . SIH did not make a unique contribution ( $p = .94$ ). Significant contributions were made by socially desirable responding ( $p = .02$ ), being politically conservative ( $p < .001$ ), being religious ( $p = .01$ ), identifying as Democrat ( $p < .001$ ), and identifying as Republican ( $p = .02$ ). Being politically conservative was associated with a greater likelihood of indicating "I do not believe this" than "I do believe this" (OR = 1.52, 95% CI: 1.24, 1.87). Identifying as Democrat was associated with a lower likelihood (OR = .37, 95% CI: .21, .67) and identifying as Republican was associated with a greater likelihood (OR = 3.17, 95% CI: 1.30, 7.72) of indicating "I do not believe this" than "I do believe this." In addition, being religious was associated with a greater likelihood (OR = 1.74, 95% CI: 1.08, 2.79) and identifying as Democrat was associated with a lower likelihood (OR = .37, 95% CI: .21, .66) of indicating "I'm not sure" compared to "I believe this." The model accounted for 53.8% correct predictions.

### **Sociopolitical Intellectual Humility in Relation to Change in the Strength or Direction of Political Views**

Participants were told they would be asked to think about their views about crime rates among those who had legally immigrated to the U.S. Prior to exposure to information about crime rates among immigrants adapted from Factcheck.org, participants rated their level of agreement with the statement: "In general, immigrants are more likely to commit crimes than those born in the U.S." on a scale from (1) *strongly disagree that this statement is true* to (7) *strongly agree that this statement is true*. The average response was 2.54, indicating that, on average, the sample fell between moderately and slightly disagreeing with this statement at the outset of the study.

We used a hierarchical regression to examine three potential predictors of change in participants levels of agreement with this item on the basis of exposure to information about this topic (see Table 3). We centered all continuous control, predictor, and moderator variables prior to conducting the analyses. In Step 1, we entered the general control variables. In step 2, we entered three additional controls, including (1) whether participants initially disagreed, were neutral, or agreed with the statement that immigrants commit more crimes than U.S. born individuals (dummy coded on the basis of participants' Likert responses), (2) how important the topic of immigration was to participants, (3) a measure of attitude extremity, which was based on absolute distance from the midpoint of participants' initial Likert response regarding their level of agreement that immigrants commit more crimes than U.S. born individuals. In Step 3, we entered whether participants were assigned to an accuracy or defense motivation. In Step 4, we entered whether or not participants received the specific IH self-rating items. In Step 5, we entered participants scores for SIH. Finally, in Steps 6 and 7, we entered interaction terms for SIH with the two manipulations (accuracy versus defense motivation and receiving specific IH prime or not).

There were no main effects for the motivation manipulation, specific IH prime, or general levels of SIH in predicting change in opinions about crime rates among immigrants on the basis of reading factual information on this topic. However, there were two significant interactions between SIH and the two interventions in predicting change in opinions, each accounting for very small amounts of variance.

Probing the interaction between SIH and the accuracy versus defense motivation manipulation indicated that there was a significant relationship between SIH and change in level of agreement for individuals assigned to the defense motivation ( $t(574) = -2.60, p = .01$ ). Among

this group, higher levels of SIH were associated with less agreement with the statement that immigrants are more likely to commit crimes than nonimmigrants, after being exposed to information on this topic, compared to levels of agreement prior to being exposed to the information ( $B = -.02$ ,  $S.E. = .01$ ,  $95\%$  C.I.  $[-.04, -.01]$ ). In contrast, for those assigned to the accuracy motivation, there was no significant relationship between SIH and change in level of agreement from before to after exposure to information on the topic ( $t(574) = .38$ ,  $p = .70$ ). On average, individuals in the accuracy motivation group showed a shift to less agreement with the statement that immigrants are more likely to commit crimes than nonimmigrants after being exposed to information on this topic, compared to levels of agreement prior to being exposed to information, *regardless* of their levels of SIH ( $B = .00$ ,  $S.E. = .01$ ,  $95\%$  C.I.  $[-.01, .02]$ ). These findings are displayed in Figure 4.

A similar pattern emerged when probing the interaction between SIH and the specific IH prime. There was a significant relationship between SIH and change in level of agreement for individuals exposed to the specific IH prime ( $t(574) = -2.48$ ,  $p = .01$ ). Among this group, higher levels of SIH were associated with less agreement with the statement that immigrants are more likely to commit crimes than nonimmigrants, after being exposed to information on this topic, compared to levels of agreement prior to being exposed to information ( $B = -.02$ ,  $S.E. = .01$ ,  $95\%$  C.I.  $[-.04, -.00]$ ). In contrast, those who were not exposed to a specific IH prime did not show evidence of links between SIH and change in level of agreement from before to after exposure to the information ( $t(574) = .27$ ,  $p = .79$ ). On average, participants who were not exposed to the specific IH prime showed a shift to less agreement with the statement that immigrants are more likely to commit crimes than nonimmigrants, after being exposed to factual information on this topic compared to levels of agreement prior to being exposed to this information, which was

unrelated to their levels of SIH ( $B = .00$ ,  $S.E. = .01$ , 95% C.I. [-.01, .02]). These findings are displayed in Figure 5.

### **Discussion**

Our analysis of the links between SIH and political engagement confirm that SIH is distinct from political disengagement or not caring about politics, a finding consistent with Porter and Schumann (2018). All else equal, people with higher SIH were actually a bit more interested in politics, less likely to avoid political discussions, and no more or less likely to report voting in the 2018 elections or otherwise participate in political life. Future research might examine whether these findings can be explained on the basis of people with different levels of SIH having different experiences in civic and political life. There is also room for future research to explore whether people with different levels of SIH are mobilized into political action on the basis of different motivations or via different routes (e.g., calls to action on behalf of positive values or on behalf of values threatened by opponents).

Consistent with previous research (e.g., Iyengar et al., 2012; Iyengar & Westwood, 2015), we observed evidence of substantial affective polarization within our sample. Republicans and Democrats, and conservatives and liberals, gave strongly diverging feeling thermometer ratings. We found support for our hypothesis that SIH depresses such affective polarization. The differences in feeling thermometer ratings of politically relevant target groups between strong Democrats and strong Republicans and between extreme liberals and extreme conservatives were smaller among participants with higher levels of SIH. Since affective polarization has negative effects on important and diverse outcomes such as personal and family relationships, political governance, and economic exchange (e.g., Hetherington & Rudolph, 2015; Iyengar et al., 2012; McConnell et al., 2018), finding that SIH can mitigate affective polarization points toward the

importance of SIH. This suggests there may be value in exploring whether and how SIH can be cultivated.

SIH was mostly unrelated to belief in under-supported claims. SIH was unrelated to the belief that agents acting on behalf of the Russian government tampered with vote totals in the 2016 presidential election. Higher SIH initially predicted less belief in the claim that millions of immigrants voted illegally in the 2016 presidential election. However, the effect was no longer significant when controls were included (though the  $p$ -value remained somewhat close to statistical significance,  $p = .07$ ). Based on these data, SIH approached significance in predicting more skepticism about under-supported claims, but did not reach a level of significance in predicting skepticism (or gullibility) with regard to under-supported political claims. These findings may have been the result of the particular claims assessed and the extent to which they were asserted in news and social media. Therefore, future research seems warranted regarding the links between SIH and belief in a variety of types of truth claims.

Finally, we examined two potential manipulations with regard to change in the strength or direction of people's views on a specific political topic (crime rates among immigrants), observing significant, but small, effects. The lack of robust findings may have related to the fact that the sample, on average, already disagreed at the outset of the study with the statement that crime rates were higher among immigrants than nonimmigrants, which concurred with the factual information provided.

SIH played some role, albeit small, in motivated reasoning. When participants were exposed to an accuracy motivation condition, their levels of SIH were not predictive of change in levels of agreement after being exposed to factual information. In contrast, for participants assigned to a defense motivation condition, SIH was linked to change in levels of agreement.

Low SIH participants in this condition did not change from their original view much at all, whereas high SIH participants shifted by about 0.6 points consistent with the content of the information they were exposed to. This suggests that SIH may provide a buffer against the effects of defense motivated thinking. That is, SIH seems to make a difference for individuals who are placed in a position of defending their own viewpoint, as may happen frequently in American society, particularly in public discourse and social media.

Here again, SIH may prove beneficial to the body politic. The consequences of motivated reasoning are often challenging for the democratic system and corrosive of the social fabric. Motivated reasoning makes it difficult for Republicans and Democrats to agree on the current state of the world (e.g., economic conditions are good or bad, immigration causes harms and/or benefits, climate change is happening or not happening) much less the best policies for making improvements. Moreover, motivated reasoning can undermine accountability and the doling out of punishment and reward for a political job done poorly or well, when such responses may be appropriate. Some have argued American politics is in this state now, with compromised accountability (e.g., Achen & Bartels, 2016; Donovan et al., 2019). Moreover, motivated reasoning can further polarize the public when people encounter information that challenges their existing views and they are motivated to argue against the new information. When this happens, the original views can be strengthened and may become more extreme (Levendusky, 2013). SIH may mitigate these effects by encouraging people to attend more to the conflicting or inconclusive nature of evidence and consider their conclusions as provisional and open to revision, rather than fixed and in need of reaffirmation. To the degree that SIH dampens motivated reasoning, interventions that can boost SIH may reap important benefits. Although the

effect sizes in this study are quite small, any positive impact in the often toxic domain of sociopolitical discussion could be important, and at least encourages further research.

Finally, this study examined a second potential, simple intervention: calling explicit attention to the fallibility of one's knowledge on a particular topic. We did this by having participants complete a brief self-assessment of specific IH about the topic being assessed (Hoyle et al., 2016). The results indicated that priming participants to think about the fallibility of their knowledge about a topic was an effective method of making them more responsive to information for participants with high trait-levels of SIH, but not for those with low trait-levels of SIH. In fact, individuals with low SIH seemed more resistant to change on the basis of information when they were asked to assess the level of fallibility of their knowledge of the issue compared to those with similar levels of SIH who had not been asked to reflect on the fallibility of their knowledge. Presumably, the self-assessment resulted in these individuals reflecting on their assumed *lack* of fallibility of thinking on the topic. Although some individuals will have gained substantial expertise in an area that may minimize the fallibility of their knowledge within the particular domain, the current findings suggest that for those who falsely presume a lack of fallibility, educating them about common cognitive fallacies and biases may be a first step in helping them to recognize their IH on a particular topic. On the basis of the current findings, it seems that high characteristic levels of SIH relate to responsiveness to information particularly when IH is made salient to the person in the moment, on the topic in which the person is engaged. The findings were very small in magnitude, yet provide an incentive to replicate. Future research would be required to establish whether a general IH prime, rather than a specific IH prime, would also have demonstrated an effect. Given that IH intervention work is at its

beginning stages, the current findings provide some hints about when and how IH primes may function as interventions.

Notable limitations of the current research include that the findings are based on mostly cross-sectional data from one sample. In addition, SIH was assessed on the basis of a measure of general IH that was adapted to instruct participants to answer specifically within the context of their sociopolitical views. As levels of IH may depend both on a person's trait levels of IH and on the particular domain that is being assessed (Hoyle et al., 2014), ongoing work should continue to tease apart how assessments of general IH and specific IH function differently within the literature. To date, the specific intellectual humility scale (Hoyle et al., 2016) has successfully been applied to multiple, diverse domains. Certainly, the potential of IH in general and SIH in particular to mitigate some of the most pressing problems in the political domain encourage additional work on this topic.

### **Conclusions**

Our results expand on the small number of studies exploring IH's role in the political domain. Previous studies have demonstrated connections between general IH and a handful of political outcomes like openness to new arguments (Porter & Schumann, 2018) and leniency toward politicians who changed their issue positions (Leary et al., 2017). A small number of studies have explored the links between IH in the specific context of the sociopolitical domain and a small set of broad sociopolitical outcomes, like social dominance orientation and social justice values (Hoyle et al., 2016; Krumrei-Mancuso & Newman, 2019). Here we presented evidence that SIH is distinct from political disengagement and is unrelated to believing in under-supported claims. Further, SIH may have significant, positive sociopolitical consequences, since it was linked to less affective polarization and seems to buffer against defense motivated

thinking. Our findings suggest that SIH may be most impactful when individuals are provided an opportunity to reflect on the fallibility of their thinking on a particular topic. Future research should continue to build on these findings given their potential to reshape the public square, even if only in circumscribed ways.

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Table 1

*Hierarchical Regressions of Sociopolitical Intellectual Humility (SIH) Predicting Political Engagement (N = 586)*

	<i>B</i> ( <i>SE</i> )	95% CI	$\beta$	$\Delta R^2$
<b>Political Interest</b>				
<b>Step 1</b>				.039**
Democrat (0 = not Democrat, 1 = Democrat)	.22 (.11)	-.00, .45	.11	
Republican (0 = not Republican, 1 = Republican)	.12 (.13)	-.14, .38	.05	
Politically conservative	-.01 (.04)	-.08 (.07)	-.01	
Religiously affiliated (0 = not religious, 1 = religious)	.02 (.09)	-.16, .20	.01	
Latino/Hispanic (0 = not Latino/Hispanic, 1 = Latino/Hispanic)	-.28 (.17)	-.62, .06	-.07	
Education	.10 (.05)	.01, .18	.09*	
Social desirability	.13 (.04)	.05, .21	.13**	
<b>Step 2</b>				.013**
SIH	.01 (.00)	.00, .02	.12**	
<b>Dislike of political discussion</b>				
<b>Step 1</b>				.019
Democrat (0= not Democrat, 1 = Democrat)	-.35 (.37)	-1.07, .37	-.06	
Republican (0= not Republican, 1 = Republican)	-.25 (.43)	-1.09, .59	-.04	
Politically conservative	.10 (.12)	-.14, .33	.06	
Religiously affiliated (0 = not religious, 1 = religious)	.07 (.29)	-.51, .64	.01	
Latino/Hispanic (0 = not Latino/Hispanic, 1 = Latino/Hispanic)	.46 (.56)	-.64, 1.56	.03	
Education	-.15 (.15)	-.43, .14	-.04	
Social desirability	-.28 (.13)	-.54, -.02	-.09*	
<b>Step 2</b>				.079***
SIH	-.08 (.01)	-.11, -.06	-.29***	
<b>Civic and political activities</b>				
<b>Step 1</b>				.072***
Democrat (0= not Democrat, 1 = Democrat)	.42 (.51)	-.58, 1.41	.05	
Republican (0= not Republican, 1 = Republican)	.02 (.59)	-1.15, 1.18	.00	
Politically conservative	-.37 (.17)	-.70, -.05	-.15*	
Religiously affiliated (0 = not religious, 1 = religious)	1.13 (.41)	.33, 1.93	.12**	
Latino/Hispanic (0 = not Latino/Hispanic, 1 = Latino/Hispanic)	-.28 (.78)	-1.81, 1.24	-.02	
Education	.80 (.20)	.40, 1.20	.16***	
Social desirability	.05 (.18)	-.30, .41	.01	
<b>Step 2</b>				.005
SIH	-.03 (.02)	-.07, .00	-.08	

\*\*\*  $p < .001$     \*\*  $p < .01$     \*  $p < .05$

Table 2

*Hierarchical Regressions of Sociopolitical Intellectual Humility (SIH) Predicting Affective Polarization (N = 570)*

	<i>B</i> ( <i>SE</i> )	95% CI	$\beta$	$\Delta R^2$
<b>Republicans – Democrats Feeling Thermometer</b>				
<b>Step 1</b>				.082***
Age	0.35 (0.19)	-0.02, 0.72	.08	
Latino/Hispanic (0 = not Latino/Hispanic, 1 = Latino/Hispanic)	-16.41 (8.97)	-34.02, 1.20	-.08	
Education	-7.44 (2.32)	-12.00, -2.88	-.13**	
Religiously affiliated (0 = not religious, 1 = religious)	24.91 (4.50)	16.06, 33.75	.23***	
Sex (0 = man, 1 = woman)	14.81 (4.32)	6.20, 23.41	.14**	
Social desirability	-1.53 (2.08)	-5.62, 2.56	-.03	
<b>Step 2</b>				.636***
Party Identification (7-point range from strong Democrat to strong Republican)	20.59 (0.58)	19.46, 21.73	.84***	
<b>Step 3</b>				.000
SIH	-0.06 (0.11)	-0.28, 0.15	-.01	
<b>Step 4</b>				.004**
Party Identification * SIH	-0.14 (0.05)	-0.24, -0.04	-0.06**	
<b>Conservative – Liberal Feeling Thermometer</b>				
<b>Step 1</b>				.082***
Age	0.31 (0.19)	-0.08, 0.69	.06	
Latino/Hispanic (0 = not Latino/Hispanic, 1 = Latino/Hispanic)	-15.84 (9.46)	-34.42, 2.74	-.07	
Education	-8.13 (2.47)	-12.97, -3.28	-.13**	
Religiously affiliated (0 = not religious, 1 = religious)	26.47 (4.69)	17.25, 35.69	.23***	
Southern residency (0 = other region, 1 = south)	6.22 (4.60)	-2.81, 15.24	.05	
Social desirability	-0.94 (2.02)	-5.27, 3.38	-.02	
<b>Step 2</b>				.669***
Political ideology (7-point range from extremely liberal to extremely conservative)	26.38 (0.67)	25.07, 27.70	.87***	
<b>Step 3</b>				.000
SIH	0.02 (0.11)	-0.19, 0.24	.00	
<b>Step 4</b>				.002*
Political ideology * SIH	-0.11 (0.06)	-0.23, 0.00	-.04*	
<b>Evangelical Christians – Muslims Feeling Thermometer</b>				
<b>Step 1</b>				.104***
Age	0.00 (0.16)	-0.31, 0.31	.000	
Latino/Hispanic (0 = not Latino/Hispanic, 1 = Latino/Hispanic)	-1.76 (7.65)	-16.78, 13.27	-.009	
Education	-5.49 (2.00)	-9.41, -1.57	-.110**	
Religiously affiliated (0 = not religious, 1 = religious)	29.03 (3.79)	21.58, 36.48	.310***	
Southern residency (0 = other region, 1 = south)	3.91 (3.72)	-3.39, 11.20	.042	
Social desirability	-0.86 (1.78)	-4.36, 2.64	-.019	
<b>Step 2</b>				.316***
Political ideology (7-point range from extremely liberal to extremely conservative)	14.85 (0.84)	13.21, 16.49	.597***	
<b>Step 3</b>				.008**
SIH	-0.38 (0.14)	-0.64, -0.11	-.090**	
<b>Step 4</b>				.009**
Political ideology * SIH	-0.21 (0.07)	-0.35, -0.07	-.095**	

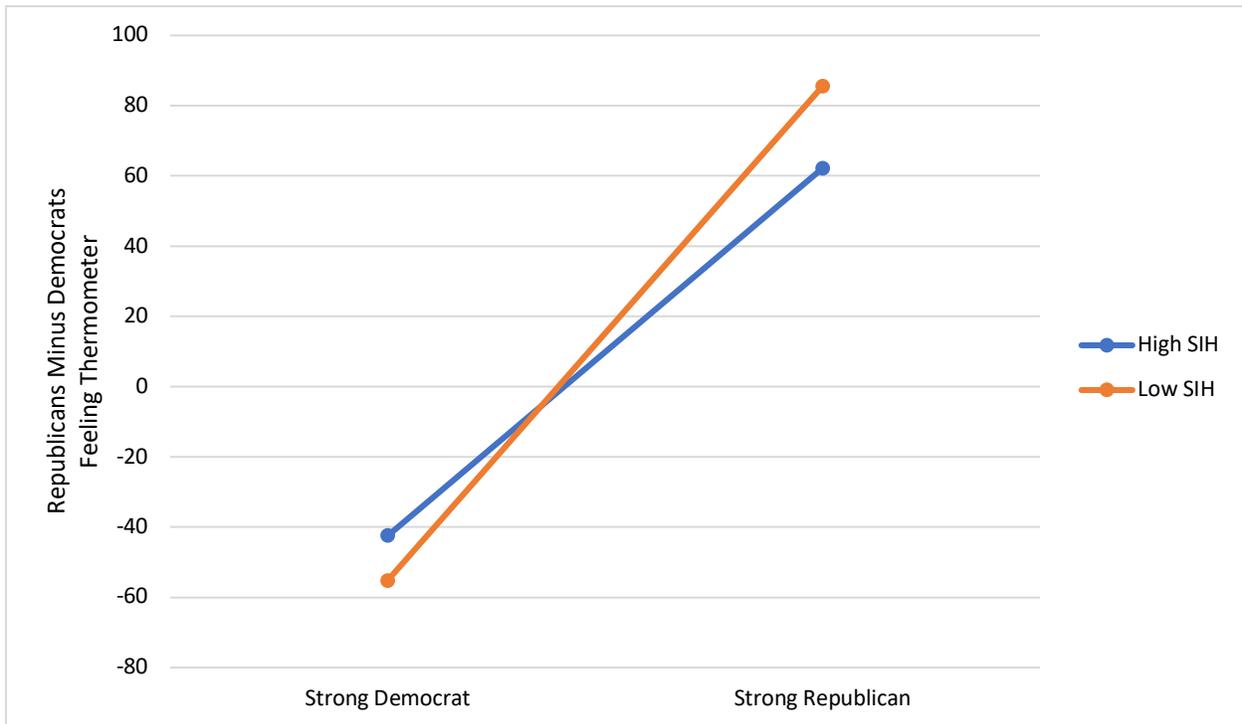
\*\*\*  $p < .001$  \*\*  $p < .01$  \*  $p < .05$

Table 3

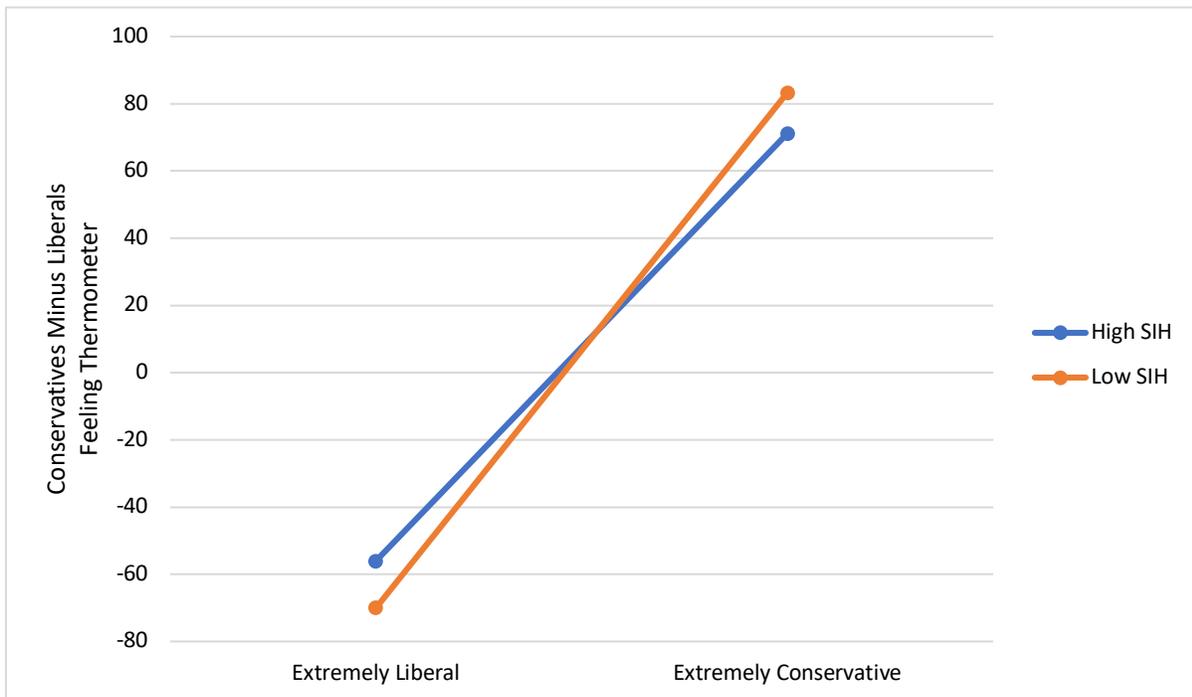
*Hierarchical Regression Predicting Opinion Change (N = 586)*

	Opinion Change			
	<i>B</i> ( <i>SE</i> )	95% CI	$\beta$	$\Delta R^2$
<b>Step 1</b>				.005
Democrat (0 = not Democrat, 1 = Democrat)	-.10 (.19)	-.46, .27	-.03	
Republican (0 = not Republican, 1 = Republican)	-.34 (.22)	-.77, .08	-.10	
Politically conservative	.03 (.06)	-.09, .15	.03	
Religiously affiliated (0 = not religious, 1 = religious)	.05 (.15)	-.24, .34	.02	
Latino/Hispanic (0 = not Latino/Hispanic, 1 = Latino/Hispanic)	.00 (.28)	-.56, .56	.00	
Social desirability	-.01 (.07)	-.14, .12	-.00	
<b>Step 2</b>				.145***
Initial level of agreement	-.68 (.10)	-.87, -.49	-.31***	
Importance of issue	.04 (.06)	-.07, .16	.03	
Attitude extremity	.30 (.07)	.16, .43	.19***	
<b>Step 3</b>				.000
Motivation manipulation	.04 (.13)	-.21, .28	.01	
<b>Step 4</b>				.000
Specific intellectual humility prime	.01 (.13)	-.23, .26	.00	
<b>Step 5</b>				.003
Sociopolitical Intellectual Humility	-.01 (.01)	-.02, .00	-.06	
<b>Step 6</b>				.007*
Motivation manipulation x sociopolitical intellectual humility	.03 (.01)	.00, .05	.12*	
<b>Step 7</b>				.006*
Specific IH prime x sociopolitical intellectual humility	-.02 (.01)	-.05, -.00	-.11*	

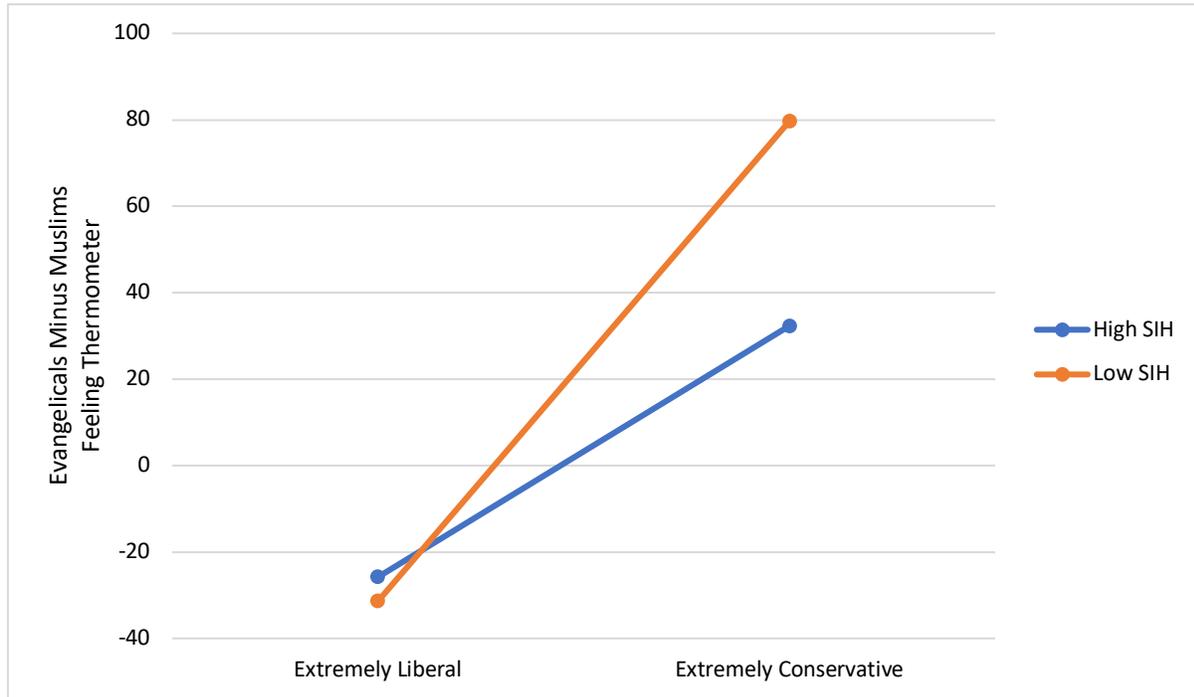
\*\*\*  $p < .001$     \*\*  $p < .01$     \*  $p < .05$



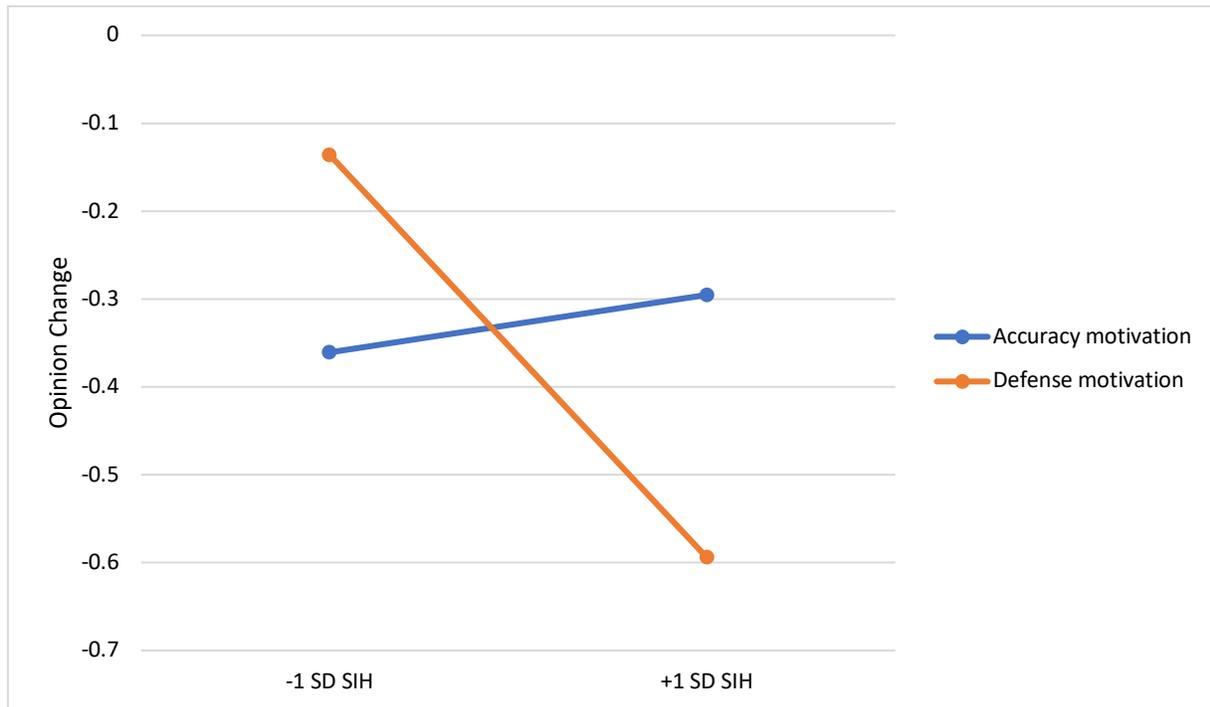
*Figure 1.* The relationship between party identification and affective polarization displayed for individuals high and low in sociopolitical intellectual humility (SIH). Party identification represents a 7-point range from strong Democrat to strong Republican. Stronger identification with either the Democrat party or the Republican party was associated with having warmer feelings toward one's own political party than toward one's opposing political party, however, this relationship was stronger for participants with low SIH than for participants with high SIH. That is, higher levels of SIH seem to temper the extent to which individuals have warmer feelings toward their political in-group compared to their political out-group.



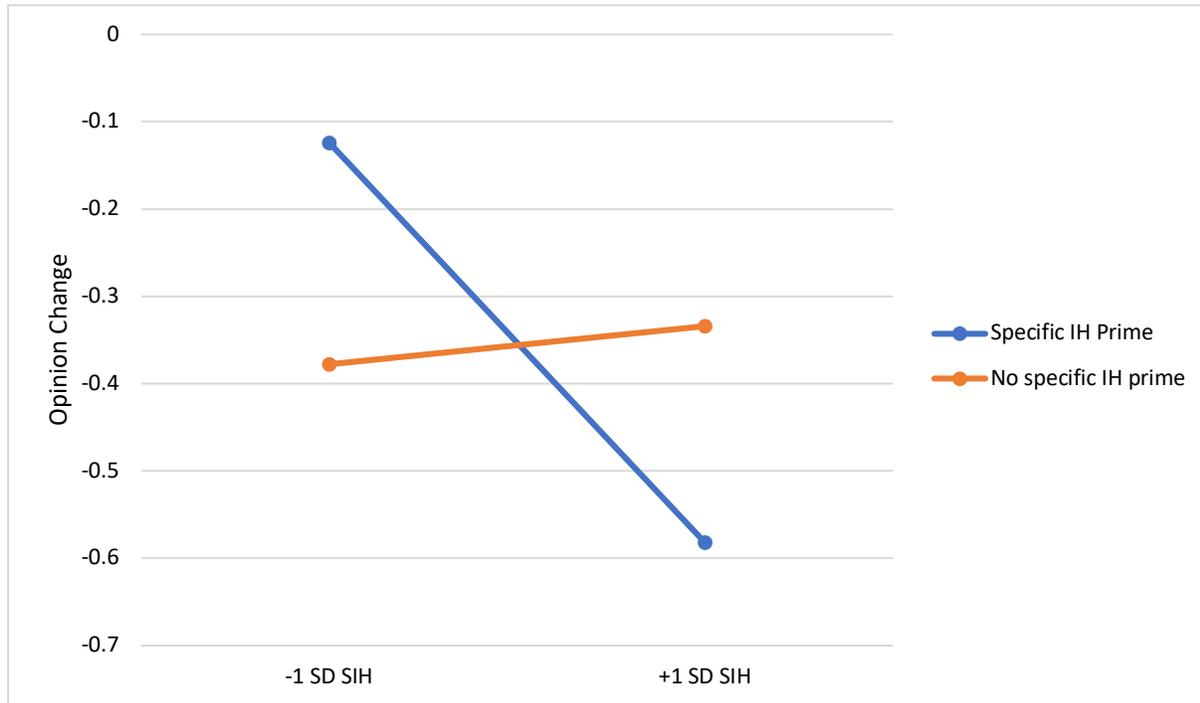
*Figure 2.* The relationship between political ideology and affective polarization displayed for individuals high and low in sociopolitical intellectual humility (SIH). Political ideology represents a 7-point range from extremely liberal to extremely conservative. Stronger identification as either liberal or conservative was associated with having warmer feelings toward those who identify in the same way than toward those who identify differently, however, this relationship was stronger for participants with low SIH than for participants with high SIH. That is, higher levels of SIH seem to temper the extent to which individuals have warmer feelings toward those who are politically similar compared to those who are politically different.



*Figure 3.* The relationship between political ideology and affective polarization with regard to two politically relevant religious groups, displayed for individuals high and low in sociopolitical intellectual humility (SIH). Political ideology represents a 7-point range from extremely liberal to extremely conservative. Stronger identification as conservative was associated with having warmer feelings toward evangelical Christians than toward Muslims, however, this relationship was stronger for participants with low SIH than for participants with high SIH. That is, higher levels of SIH seem to temper the extent to which conservatives have warmer feelings toward evangelical Christians than toward Muslims.



*Figure 4.* The relationship between sociopolitical intellectual humility (SIH) and change in agreement with the statement that immigrants are more likely to commit crime than nonimmigrants, displayed for individuals exposed to an accuracy or defense motivation manipulation. The x-axis represents SIH along the range from low (-1 *SD*) to high (+1 *SD*). The y-axis represents change in agreement from before to after being exposed to factual information about crime among immigrants (level of agreement after being exposed to information minus level of agreement before being exposed to information). The more negative the value of the y-axis, the more participants decreased in their levels of agreement with the statement that immigrants are more likely to commit crime than nonimmigrants on the basis of exposure to information. SIH was predictive of opinion change for those assigned to a defense motivation condition, but not for those assigned to an accuracy motivation condition.



*Figure 5.* The relationship between sociopolitical intellectual humility (SIH) and change in agreement with the statement that immigrants are more likely to commit crime than nonimmigrants displayed for individuals exposed to a specific IH prime and those not exposed to a specific IH prime. The x-axis represents SIH along the range from low (-1 *SD*) to high (+1 *SD*). The y-axis represents change in agreement from before to after being exposed to factual information about crime among immigrants (level of agreement after being exposed to information minus level of agreement before being exposed to information). The more negative the value of the y-axis, the more participants decreased in their levels of agreement with the statement that immigrants are more likely to commit crime than nonimmigrants on the basis of exposure to information. SIH was predictive of opinion change among those who received the specific IH prime, but not among those who did not receive the prime.