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Pathways to News Sharing:

Issue Frame Perceptions and the Likelihood of Sharing

by

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Abstract

Online news sharing has become an important process through which contemporary citizens experience news. Sharing is not only a behavioral outcome of news consumption but also an essential form of political engagement that reshapes the online information environment. This study offers empirical evidence regarding important article perceptions that drive online news sharing. Specifically, we examine how issue frame perceptions shape user-directed dissemination of news information. Using an online survey that exposes respondents to multiple news articles on a given public issue, this study found that perceptions of issue frame believability, bias, importance and influence significantly affected audience intention to share a news article. However, perceiving an issue frame to be believable alone is not sufficient for readers to forward that article. Moreover, these frame perceptions are formed through the lens of one's political ideology. The relationship between issue frame perceptions

and the likelihood of sharing is more pronounced for value-based frames and among partisans.

Implications for online political participation and news exposure are discussed.

Keywords: news sharing; framing; social media; political ideology

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1 Introduction

Social media provide an important platform for online news consumption where news articles come to individuals through user-directed sharing (Bode, 2016). Pew Research suggests that news sharing has become one of the most important ways through which people experience news ("Navigating news online," 2011). Given the expanded scope of how people encounter and interact with news information online and its potential impact on society, research attention to this area has grown considerably.

Past research has typically approached the effects of exposure to news articles from a cognitive perspective, focusing on the resulting attitude change while largely overlooking behavioral intentions to interact with the message. While a few recent studies have examined expressive behaviors initiated by online news exposure, such as commenting (Hsueh, Yogeeswaran, & Malinen, 2015), tagging (Oeldorf-Hirsch & Sundar, 2015), and political talk (Shah, Cho, Eveland, & Kwak, 2005), news sharing has received relatively little attention.

However, understanding news consumers' sharing intentions is particularly important in the digital age where professional journalists are no longer the sole gatekeepers in news distribution; now audience members have become active participants in disseminating news-related information online. Viewed from this perspective, sharing is not only an important behavioral outcome of news consumption, but also a "soft" form of political participation that reshapes the news environment, affecting the salience of particular news articles by increasing their visibility as well as popularity (Webster & Ksiazek, 2012).

As such, news sharing has fundamental implications for democratic functioning: what individuals choose to share will affect the quality of information available to the public, which plays an essential role to the formation of an informed citizenry. In fact, Americans'

preference for getting news online has raised concerns about the lack of diversity in perspectives and viewpoints in each individual citizen's information diet. Some scholars argued that our online environment resembles an "echo chamber" where cross-cutting exposure is unlikely (Sunstein, 2001), and algorithm-based "filter bubbles" dictate the way new ideas and information are encountered (Pariser, 2011). Furthermore, such concerns are exacerbated in this post-truth era where fake news proliferates and ideological polarization heightens the chance that people share information that echoes their own values despite being unverified or not evidence based.

One of the factors that might contribute to or even exacerbate the problem of echo chamber is people's tendency to only share information that supports their viewpoints. While empirical research found evidence for ideological congruent news sharing (e.g., An, Quercia, & Crowcroft, 2013), important questions remain unanswered. Why are people more inclined to share ideologically congruent news? How do audience predispositions interact with message features to affect news sharing intentions? These questions go beyond asking what message characteristics affect sharing intentions to consider the critical role of audience variables in communication processes. We argue that a more complete model that takes into account both audiences and message content will shed light on the nature of user-directed online information flow, and most importantly, advance our knowledge on whether a more diverse and inclusive public sphere through news sharing is possible.

With these goals, we explored the link between audience predispositions and sharing intentions by drawing on the concept of issue frame perceptions. Issue frames are perspectives provided by political figures or news reporters to highlight alternative interpretations of a public issue. Through "emphasizing a subset of potentially relevant considerations" (Druckman, 2004, p. 672), frames can make the audience utilize the

corresponding beliefs when forming attitudes or making judgments (Chong & Druckman, 2007b; Slothuus, 2008).

We build on and expand the idea of issue framing by adding a perceptual dimension, considering how users might perceive a given frame differently depending on their predispositions. Consistent with the research paradigm that emphasizes contingent media effects based on audience characteristics (Schmitt, Gunther, & Liebhart, 2004), we conceptualize issue frame perception as an individual-level variable that captures users' evaluations of a message on four important dimensions: perceived believability, bias, importance, and influence.

Thus, this study systematically investigates how issue frame perceptions affect readers' willingness to share an article in the context of competitive online news environment where people encounter multiple differently-framed news articles on the controversial public issue of the U.S.-Mexico border wall construction. Our study integrates issue framing and perception formation theories to predict readers' likelihood of disseminating politically charged news articles that present different considerations of a highly contested public issue.

2 Literature review

News sharing has important implications for online information flows, which facilitates a marketplace of ideas and constitutes the basis of democratic decision-making. Scholars have looked into mechanisms that explain user-directed online news diffusion. One commonly used theoretical framework is the Uses and Gratifications approach (U&G), which looks at news sharing intentions from an audience-centered perspective. According to the U&G, people's selection and use of media content are goal-directed, purposive, and motivated (Katz, Blumler, & Gurevitch, 1974). Following U&G's focus on psychological needs and motives, Lee and Ma's study (2012) found that people's news sharing intentions

are driven by important gratification motives such as information seeking, status seeking, and socializing. In a similar line, Hanson and Haridakis (2008) found that interpersonal communication motives predicted news sharing intentions on YouTube.

Our study builds on and expands the existing literature on news sharing intentions in two important ways. First, drawing on issue framing theory, we examine sharing intentions for specific news articles that present particular perspectives of a highly contentious issue, which helps us better understand why certain perspectives travel faster and reach more people than alternative viewpoints on the same issue. Second, we also address the issue that audiences perceive a given message differently based on their predispositions (Schmitt, Gunther, & Liebhart, 2004). The lack of research on the interplay between audience perceptions and content features has limited scholar's ability to map out the factors underlying the message sharing patterns within an integrated theoretical framework. Thus, this study investigates reader perceptions of the believability, importance, bias and influence of differently framed news articles, and how such perceptions affect subsequent sharing intentions.

2.1 Issue framing

Framing refers to the process where an overarching template organizes the meanings that get assigned to a communication text (Gamson & Modigliani, 1987; Snow & Benford, 1988). The idea of framing has been widely applied to study mass media and its effects (Gamson & Modigliani, 1989; McLeod & Shah, 2015; Scheufele, 1999; Tewksbury & Scheufele, 2009). However, given that the concept originated from several different disciplines, it embodies systematically different lines of research (for an overview, see Liu & Scheufele, 2016).

In our study, we draw on the concept of *Issue Framing* in political communication research, which closely resembles the real-world arena of policy debate where political actors and media professionals provide alternative interpretations of an issue by emphasizing contrasting considerations (Druckman, 2004). For example, a news story on offshore drilling may discuss its economic consequence (e.g., boosting the economy through creating more jobs) or highlight its potential environmental impact (e.g., maritime pollution) (Druckman, Peterson, & Slothuus, 2013). People who encounter the news story with the economic frame are likely to interpret the issue of drilling utilizing that consideration and thus become more supportive of drilling compared to those who read the story with the environmental frame.

Applying the concept of issue framing, we investigated the influence of issue frames in the context of the U.S.-Mexico border wall construction to see their implications for users' subsequent sharing intentions. However, unlike typical issue framing studies that exposed participants to only one single frame, we addressed the ecological validity of the design by showing the respondents four differently-framed news excerpts on the same issue, resembling the digital media environment where multiple messages are often presented side by side at one encounter. Specifically, the four news stories framed President Trump's motivation to order the construction of the U.S.-Mexico border wall as either: 1) enhancing border integrity, 2) preventing border related crimes, 3) a form of xenophobia or 4) rallying supporters.

Our manipulation of the news frame also reflects two commonly used framing strategies in political news reporting: covering policy initiates as either motivated by underlying values (the value frame) or political strategizing (the strategy frame) (Lee, McLeod, & Shah, 2008). Specifically, journalists can choose to portray a policy issue in terms of underlying values and principles, linking the debate to different value choices (Shah, Domke, & Wackman, 1996; Shen & Edwards, 2005); alternatively, the same issue can be described as a competition between contending camps' tactics and strategies, making policy

initiatives only means to political gains (Cappella & Jamieson, 1997). In our case, the four news excerpts respectively frame the issue of border wall construction either as a move in pursuit of important values (i.e. border integrity, social order, or racial equality), or an attempt motivated by political interests and election concern (i.e. strategic maneuvering of the candidate to rally support).

This distinction is important to our manipulation of news frame, as previous scholarship has suggested that framing a public issue in terms of value choices or political machinations offers distinct frameworks for issue interpretation and has important implications for the resulting cognitive processes and opinion outcomes (Pan & Kosicki, 2005; Valentino, Beckmann, & Buhr, 2001). For example, strategy frames were found to promote distrust of political processes (Cappella & Jamieson, 1997), reduce information retention (Lawrence, 2000), and suppress the use of partisanship as primary considerations (Lee, McLeod, & Shah, 2008). As such, in the context of news sharing, it is also important to see whether the associations among political ideology, frame perceptions, and sharing intentions will vary depending on the types of frames in question.

2.2 Mechanisms underlying issue framing effects

There are two routes where one's attitude might be affected by issue frames. According to the value-expectancy model, one's summary attitude follows an algebraic equation: $A = \sum v_i w_i$ where v refers to the evaluation of the belief and w is the corresponding weight assigned to that belief (Anderson, 1981; Ajzen & Fishbein, 1980). Based on this idea, Nelson, Clawson and Oxley (1997) proposed the belief importance (weight) mechanism where frames "affect opinion simply by making certain considerations seem more important than others; these considerations, in turn, carry greater weight for the final attitude" (p. 569). Similarly, Price, Tewksbury and Powers (1997) found that issue-relevant thoughts listed by

people who were exposed to different frames did not differ in the volume, but were significantly different in focus (i.e., considerations generated by the readers to interpret the issue at hand and subsequently to form issue attitudes tend to echo the frames being communicated in the messages). From this perspective, the function of a frame is to activate the corresponding link between concepts in people's minds, known as the *applicability effects* (Price & Tewksbury, 1997). Many political scientists and mass communication scholars construed the effects of framing through this perspective in order to distinguish it from pure persuasion effects (Nelson, Oxley, & Clawson, 1997; Slothuus, 2008).

As the above equation suggests, apart from the weight of the belief, the evaluation of the belief also plays an essential role (Anderson, 1981; Ajzen & Fishbein, 1980). Following that line of reasoning, the other mechanism of a frame's influence on attitude change is through the evaluation of the issue frame. This is especially true given that there are often multiple frames in the news discourse regarding the same controversial public issue. For example, in the case of offshore drilling, a strong pro-policy frame may emphasize the economic benefits of drilling, whereas a comparatively weak pro-frame might highlight how expansion of drilling would lead to advancements in specialized technologies (Druckman et al., 2013). Chong and Druckman (2007a) found that whereas an editorial with a strong frame was able to significantly persuade people in the direction advocated by the frame, exposure to a weak frame might only affect readers who are less knowledgeable on the subject. Hence, apart from the assigned weight, evaluations of a frame's content might also determine the way a frame is able to affect individuals' cognitions and behavioral intentions.

2.3 Issue frame perceptions and party-ideology

It is also important to note that people will assign different weights to a given frame and evaluate the same frame differently. This idea that people perceive the same piece of

information differently can be traced back to Social Judgment Theory (Sherif & Sherif, 1967). To form judgments about information such as that found in a news article, readers have to rely on mental anchors to gauge the veracity of information. One such anchor is their pre-existing attitudes on the issue in question. If a message suggests a proposition that is within the individual's latitude of acceptance (i.e., the region of the attitude continuum that contains beliefs considered acceptable to the perceiver), the information will be processed favorably, leading to assimilation perceptions that the article is more consistent with one's issue opinion than it actually is. On the contrary, if a message suggests a proposition within the individual's latitude of rejection, the perceived difference between the message and the individual's position will be contrasted and amplified, making the readers perceive that the message is more divergent than it actually is (Sherif, Sherif, & Nebergall, 1981).

In one of the classic examples of such biased perceptions, researchers found that, after viewing the same television coverage of the Beirut massacre event, both pro-Israeli and pro-Arab partisans rated the content as unfavorably biased against their own positions (Vallone, Ross, & Lepper, 1985). This clearly illustrated the subjective nature of message perceptions, as the two groups both perceived the same coverage as supporting the opposing side.

Similarly, just like issue opinion, people's political ideology can function as such judgmental anchors that decide whether assimilation or contrast will occur. In other words, people with different political ideologies tend to perceive the same issue frame differently, particularly with value frames. This is because value-based frames tend to have their party ownership and thus often align better with one end of the ideological spectrum than the other (Arbour, 2014). For example, Democrats frequently frame tax cuts from the angle that the policy will benefit wealthy individuals, exacerbating income inequality. By contrast, Republicans usually depict the same policy as stimulating investment leading to job growth,

providing an economic boost. Partisans are more likely to trust the issue frame promoted by their own party and aligned well with their political ideologies.

Applying this idea to the two mechanisms underlying issue framing effects (i.e., belief evaluation and weight), we propose perceived frame believability and perceived frame bias as factors related to the evaluation of the issue frame, and perceived frame importance and perceived frame influence as indicators of the weight people assign to those frames.

Based on the literature review, we expect that readers' political ideology serves as an important judgmental anchor that affects their evaluation of issue frames. In the context of the border wall construction debate, we expect that frames that reflect the values of border integrity and social order are more likely to be perceived as more believable and less biased by Republicans or people holding conservative values, whereas issue frames that highlight racial diversity/equality are more likely to be perceived as more believable and less biased by Democrats or people holding liberal values. Thus, the following two hypotheses on frame evaluations are proposed:

H1a: Issue frames that are more consistent with one's political ideology will be perceived as more believable.

H1b: Issue frames that are more consistent with one's political ideology will be perceived as less biased.

Similarly, we also expect that political ideology provides an anchor against which perceptions about how much *weight* to assign to the issue frames is formed. Specifically, news articles that frame the issue from the perspective consistent with and confirming conservative values, such as security and order, are more likely to be judged by Republicans/conservatives as more important and more influential, whereas articles that frame the issue in ways that promote liberal values or align with the worldviews of

Democrats are more likely to be viewed by Democrats/liberals as more important and more influential. Thus, the following two hypotheses on frame weights are proposed:

H1c: Issue frames that are more consistent with one's political ideology will be perceived as more important.

H1d: Issue frames that are more consistent with one's political ideology will be perceived as more influential.

2.4 Issue frame perceptions and sharing intentions

Finally, we extend the mechanisms underlying framing effects to investigate news sharing intentions. Following the broader information utility literature (Knobloch, Carpentier, & Zillmann, 2003; Sears & Freedman, 1967), past research suggested that the likelihood of individuals selecting and sharing news content increases when the article is viewed as having higher information value (Messing & Westwood, 2014; Rudat & Buder, 2015). However, this information value is not an objective message feature but a perceptual construct that varies across individuals. Rudat, Buder, and Hesse (2014), for example, found that people attribute higher information value to a message that they believe to be influential.

In line with these findings, we propose that perceptions of a frame as believable, unbiased, important, and influential will increase the information value attributed to the news article and thus encourage subsequent sharing. Further, as hypothesized earlier, issue frame perceptions will be anchored by one's political ideology, such that ideologically congruent frames tend to be viewed as more believable, unbiased, important, and influential, leading to higher attributed information utility and sharing intentions.

As such, the following four hypotheses addressing the associations between issue frame perceptions and the likelihood of sharing are posed:

H2a: People who perceive an issue frame as more believable will be more likely to share the corresponding news article.

H2b: People who perceive an issue frame as more biased will be less likely to share the corresponding news article.

H2c: People who perceive an issue frame as more important will be more likely to share the corresponding news article.

H2d: People who perceive an issue frame as having larger influence will be more likely to share the corresponding news article.

H2e: People tend to indicate higher sharing intentions for news articles with ideologically congruent frames.

2.5 Does frame believability still matter?

By exposing each reader to multiple frames on the same issue of border wall construction, we gauged readers' intentions to share each of the articles, and proposed the hypotheses above to see if issue frame perceptions consistently predict sharing intentions across different articles.

Beyond that, multiple article exposure also allowed us to examine the different roles these frame perceptions play in individuals' decisions about which article to share.

Specifically, we broke down the psychological process where sharing intentions are formed into two stages, considering: 1) what factors predict willingness to share each of the articles one encounters, and 2) what factors predict willingness to share an individual's most preferred article.

This level of specification provides more depth to our analysis in two ways. On the one hand, although people often encounter multiple articles on the same topic online, it is rather unlikely that they will forward all of them. What truly matters and might lead to real-

world consequences is the one they indicate they are most likely to forward. On the other hand, we suspect that different aspects of frame perceptions might be of varying degrees of importance at different stages. Specifically, issue frames that are of low perceived believability will not be chosen by readers as their most-likely-to-forward article. However, for articles that are perceived as satisfactorily believable, other factors such as perceived frame importance might then be assigned more weight when determining whether or not to share the article. This expectation echoes the decreasing role of factual accuracy in online information in this post-truth era. Accordingly, we pose H3 below.

H3: Perceived frame importance will outweigh perceived frame believability in predicting readers' willingness to share their *most-likely-to-forward* article.

Moreover, as discussed in the previous sections, partisans holding strong ideological values are likely to identify with frames aligned with their political ideologies or promoted by their parties (Arbour, 2014). In other words, strong partisans are more likely to use political ideology and issue frame consistency as heuristics in forming perceptions of the article and making sharing decisions. Thus, issue frame perceptions are hypothesized to play a more prominent role in sharing decisions among partisans than among the politically moderate. Thus, we also propose H4.

H4: Issue frame perceptions are more strongly associated with sharing intentions among strong partisans than political moderates.

Figure 1 shows the theoretical framework for the proposed model.

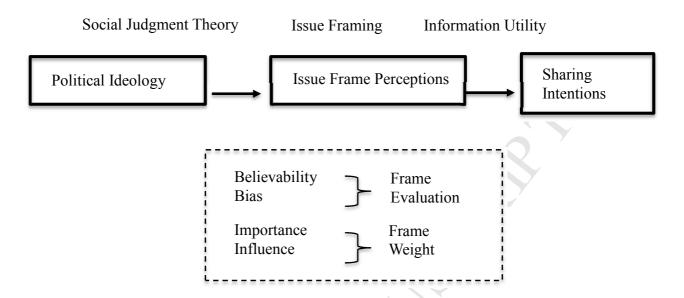


Figure 1. Theoretical model predicting news sharing intention.

3 Methods

3.1 Procedure

To test our hypotheses, an online survey was conducted with participants from a large Midwestern public university in the U.S. recruited via email invitations in exchange for extra credit points for courses. Informed consent was obtained from those who took the survey. Respondents were instructed to read four news excerpts on the topic of President Trump's executive order to construct the U.S.-Mexico border wall and then answer questions regarding their beliefs about the issue, perceptions of the issue frames, and their motivations to forward the articles. Respondents' demographics were also collected.

News excerpts were constructed by researchers based on articles that have been published by actual news organizations in order to replicate the real-world news environment. Each article featured a particular underlying motivation of Trump on the construction of the border wall. Accordingly, the news expects are titled: 1) Trump Orders Construction of Border Wall to Restore Integrity of Borders, 2) Trump Orders Mexican Border Wall to Be

Built to Prevent Crime, 3) Trump's Order to Build Border Wall Reflects Xenophobic Views, and 4) Trump Moves to Build Border Wall to Mobilize His Supporters. These articles will be referred to as "border integrity", "crime prevention", "xenophobic views" and "rallying support." Reinforcing the issue frame adopted, the first sentence of each excerpt clearly pointed out its respective perspective to the issue at hand. For example, the border integrity excerpt starts the article with the sentence: President Trump said in his address to Congress last week that "we will soon begin the construction of a great, great wall along our southern border" to "restore integrity and the rule of law at our borders." Similarly, the crime prevention excerpt accentuates its frame as it opens up with the statement that "Trump signed an executive order directing the construction of a wall on the US-Mexico border to prevent drugs and crime from crossing over to the north".

3.2 Participants

A total of 252 participants were recruited. After excluding 12 respondents who did not follow the instructions to read news excerpts, we ended up with a sample size of 240. Of these respondents, the average age was 19.2 (Range: 18 to 22, SD = 0.93). 65.1% were female and 34.5% were male. 88.5% were white, 1.3% were Black or African American, 6.4% were Asian and 3.8% were of other ethnicities. With respect to the annual household income, 4.3% of participants had a household income less than 20,000, 6.0% between 20,000 and 50,000, 9.4% between 50,000 and 80,000, and 80.2% above 80,000. Our sample presented a close to representative sample of university population at the national level in terms of gender, and overrepresented white university students compared to the national population (National Center for Education Statistics, 2017).

3.3 Measurements

Sharing intentions. Participants' level of willingness to forward each of the four articles was measured using items adapted from previous research (Eckler & Bolls, 2011; Lee & Ma, 2012). Specifically, participants were asked to indicate how likely they would be to forward each of the four news excerpts if they saw the article posted on the day President Trump signed the executive order on a 11-point scale where 0 = not at all likely and 10 = extremely likely (M = 2.25, SD = 2.74 for the border integrity frame; M = 2.40, SD = 2.83 for the crime prevention frame; M = 3.94, SD = 3.32 for the xenophobic views frame; and M = 2.53, SD = 2.65 for the rallying support frame). Participants were also asked to choose one article that they were most likely to share. Using these two measures, we constructed a variable that measures the intentions to share each respondent's most-likely-to-forward article (0 = not at all likely, 10 = extremely likely, M = 4.89, SD = 3.27).

Perceived frame believability and frame bias. Frame believability was measured using scales adapted from previous studies (Allen & Burrell, 1992; Beltramini, 1988; Kim, 2006). An index of two items was developed to tap into perceived believability in the context of this study. Participants were asked to indicate how believable each story frame was in terms of 1) categorizing President Trump's motivation behind constructing the wall as well as 2) the implication of the proposed wall. For example, with respect to the crime prevention frame, the first item asked participants to rate to what extent they agree or disagree that the construction of the border wall will prevent crimes, and to what extent they believe President Trump's motivation to construct the wall was to prevent crime. The original scale for the first item was anchored from -5 (*strongly disagree*) to 5 (*strongly agree*) and was recoded to be consistent with the second item anchored from 0 (*strongly disagree*) to 10 (*strongly agree*). An index was formed by averaging the two items, with higher values indicating higher perceived frame believability (M = 4.85, SD = 2.44, r = .42 for the border integrity frame; M

= 4.73, SD = 2.53, r = .47 for the crime prevention frame; M = 6.52, SD = 2.81, r = .69 for the xenophobic views frame; and M = 7.25, SD = 2.18, r = .57 for the rallying support frame).

Perceived frame bias was measured using a scale adapted from the literature (e.g., Schmitt, Gunther, & Liebhart, 2004). For each article, participants were asked to rate the impartiality of its issue frame. The question read: "Would you say that each of the following news articles about the wall debate was strictly neutral, or biased in favor of one side over the other?" where -5 = strongly biased against the wall, 0 = neutral, and 5 = strongly biased in favor of the wall. To be consistent with other perception measures, we recoded the perceived bias measure into a scale anchored from 0 to 10. The resulting scale was further recoded based on one's issue position such that higher scores indicate higher levels of perceived bias against one's position (M = 6.58, SD = 2.85 for the border integrity frame; M = 6.58, SD = 3.06 for the crime prevention frame; M = 3.17, SD = 3.65 for the xenophobic views frame; and M = 4.89, SD = 2.79 for the rallying support frame).

The perceived believability (M = 7.68, SD = 1.91) and bias (M = 2.89, SD = 3.03) of each individual's most-likely-to-forward article were also computed using existing measures described above.

Perceived frame importance and influence. Perceived frame importance was measured following previous studies (e.g., Druckman & Nelson, 2003; Nelson, Clawson, & Oxley, 1997; Slothuus, 2008) by tapping the extent to which participants perceived each of the four issue frames as reflecting important considerations to the formation of their border wall opinion. These considerations are as follows: whether the construction of the border wall 1) could restore border integrity, 2) could prevent crimes, 3) reflects xenophobic views, and 4) is simply used to mobilize Trump's supporters. Respondents were asked how important each of those considerations was to the formation of their border wall opinion on a 11-point scale $(0 = not important \ at \ all, 10 = extremely important) \ (M = 3.99, SD = 3.16 \ for the border$

integrity frame; M = 4.97, SD = 3.04 for the crime prevention frame; M = 6.27, SD = 3.17 for the xenophobic views frame; and M = 4.28, SD = 3.04 for the rallying support frame).

Perceived influence measure assessed individuals' perceptions of each issue frame's influence on themselves and on the average American reader. Building on past research (e.g., Gunther & Storey, 2003; Rojas, 2010), participants were asked the following two questions: "Overall, how much would you say your position on the wall has been influenced by reading the excerpt from article?" and "Overall, how much would you say the average American reader's position on the wall would be influenced by reading the excerpt from article?" each on a 11-point scale where -5 = strong influence against the wall, 0 = no change in position, and 5 = strong influence in favor of the wall). A 6-point scale (ranging from 0 to 5) was constructed by taking the absolute values for both items. The two scores were summed up, with higher score indicating perception of stronger article influence (M = 2.05, SD = 1.91 for the border integrity frame; M = 2.45, SD = 2.08 for the crime prevention frame; M = 3.10, SD = 2.41 for the xenophobic views frame; and M = 4.04, SD = 2.06 for the rallying support frame).

The perceived importance (M = 7.19, SD = 2.67) and influence (M = 2.79, SD = 2.34) of each individual's most-likely-to-forward article were also computed using existing measures described above.

Political ideology. Political ideology was measured by a scale adapted from previous studies that captures the social, economic, and political aspects of liberalism-conservatism (Dunlap, Xiao, & McCright, 2001; Rucinski & Salmon, 1990). Respondents were asked about their party identification, social ideology, and economic ideology. The party identification question read, "Which of the following best describes your political identification?" (1 = *strong democrat*, 7 = *strong republican*). The social ideology measure asked, "In terms of social issues, would you say you are very liberal or very conservative?" (1

= *very liberal*, 7 = very conservative). In a similar way, economic ideology measures participants' ideology on economic issues on a 7-point scale (1 = very liberal, 7 = very conservative). Three items were averaged to construct a 7-point scale, with higher scores indicating more conservative political ideology ($\alpha = .86$, M = 3.39, SD = 1.40). Political ideology measure was further used to divide participants into 5 groups using the cumulative percentage such that higher score indicates higher level of conservative ideology. The size of each group is as follows: Political-ideology score 1.00-2.00 (n = 48, 20.4%), 2.33-2.67: (n = 46, 19.6%), 3.00-3.67: (n = 55, 23.4%), 4.00-4.67: (48, 20.4%), and 5.00-7.00: (n = 38, 16.2%).

We chose to use the composite political ideology measure and further break it down into five sub-groups based on quantiles. This decision was made due to the purpose of this study and the nature of our data. To begin with, this study aims to investigate how news frames affect subsequent sharing differentially, depending on the receivers' deep-seated ideological orientations. These ideological preferences are related to, but not perfectly aligned with, one's party identification (Fiorina & Levendusky, 2007). Also, the current political environment in the U.S. has seen an increase in self-identified "independent voters", greater than the number of self-identified partisans but also a heterogeneous group in itself. ("5 facts about America's political independent", 2016). Tapping political ideology with a single dimension of Republicans versus Democrats might miss the nuance in the ideological spectrum, cross-pressure respondents to self-identify as moderates, and produce inaccurate or unreliable predictions (Treier & Hillygus, 2009). On the other hand, given the distribution of our data being skewed toward the liberal side, by breaking down the ideological scores into quantiles using cumulative percentage, we are able to distinguish respondents from one another in relative terms meanwhile ensuring that we have sufficiently large number of

respondents in each bucket for data analysis, which gave us relatively equivalent statistical power to conduct regression analysis within each group.

Issue interest and knowledge. Following previous studies (Munno & Nabatchi, 2014; Nabi, 2003), issue-specific interest was measured by an index that consists of two items (M = 2.60, SD = .81, r = .75, p < .001): 1) "How interested are you in learning more information about the controversy regarding the construction of the border wall?" and 2) "How interested are you in the controversy of the construction of the border wall?" (1 = not at all interested, 4 = very interested). Issue-specific knowledge was measured by asking participants to indicate on a 5-point scale how much they have heard that President Trump ordered the construction of a wall along the U.S.-Mexico border where 1 = not at all and 5 = a great deal (M = 3.94, SD = 1.04).

Control variables. Demographics (gender, race, and income) were included and controlled in the analysis. Empirical studies have suggested that there are differences by key demographics such as gender, race, and income with respect to social media use and internet skills in general, online content sharing and creation in particular (Correa, 2010; Hargittai & Walejko, 2008; Hoy & Milne, 2010; Van Deursen, van Dijk, & Peters, 2011). For example, Glynn, Huge, and Hoffman (2012) found that gender significantly affects how people use Facebook for news-related purposes. This points to the importance of controlling gender in investigating social media news sharing.

In addition to demographics, this study also controlled for general political interest, as people with higher level of political interest might be more likely to engage in all kinds of expression including but not limited to the act of sharing (Vitak et al., 2011). Political interest in general was measured by asking respondents how interested they are in political issues on a 11-point scale (0 = not at all interested, 10 = very interested, M = 6.00, SD = 2.87).

3.4 Analysis

Bivariate regression analyses were conducted for each article to test the effects of political ideology on issue frame perceptions and willingness to share. Then, to test the relationships between frame perceptions and willingness to share, hierarchical linear regressions were run for each of the four news articles as well as the article participants indicated they are most likely to share, controlling for important background variables such as political interest and issue knowledge. We also tested whether the standardized beta for frame believability is significantly different from that of frame importance, using the approach recommended by Cumming (2009) (details described below). Finally, the strength of association between perceptions and sharing, as well as the amount of variance explained were compared between strong partisans and the political moderates. All analyses were conducted using SPSS software.

4 Results

H1 predicted that political ideology has an effect on issue frame perceptions including frame believability, bias, importance and influence. Overall, results from bivariate regressions suggested that the more politically conservative participants are, the more likely they will judge the two pro-wall frames as presenting important considerations (β = .43, p < .001 and β = .44, p < .001 for the crime prevention frame and the border integrity frame, respectively) and believable content (β = .60, p < .001; β = .59, p < .001), while being less biased (β = -.41, p < .001; β = -.46, p < .001) and more influential (β = .19, p < .01; β = .19, p < .01), as shown in Table 1. For judgments about the anti-wall xenophobic views frame, similar pattern was observed, in which people with more conservative political ideology tend to perceive the frame as less important (β = -.52, p < .001), less believable (β = -.65, p < .001) and more biased (β = .52, p < .001).

Table 1 The relationship between issue frame perceptions and sharing intentions by political ideology.

Political-ideology (7-point scale: 1 = strong liberal; 7 = strong conservative) N = 235	Perceived frame believability (0-10 scale)	Perceived frame importance (0-10 scale)	Perceived frame bias (0-10 scale)	Perceived frame influence (0-10 scale)	Sharing intentions (0-10 scale)
Ideology score: 1.00-2.00 (n = 48) xenophobic view rallying support crime prevention border integrity	8.90 ^a (1.34)	8.38 ^a (2.38)	1.56 ^a (2.70)	2.81 ^a (2.61)	5.67 ^a (3.25)
	8.01 ^a (2.66)	4.46 ^b (3.71)	4.90 ^b (2.89)	1.88 ^{a, b} (2.10)	2.40 ^b (2.77)
	2.60 ^b (2.01)	3.25 ^b (2.94)	7.79 ^c (2.60)	2.21 ^{a, b} (2.04)	1.52 ^{b,c} (2.07)
	3.08 ^b (2.08)	2.35 ^c (2.65)	7.94 ^c (2.55)	1.71 ^b (1.65)	1.40 ^c (2.29)
Ideology score: 2.33-2.67 (n = 46) xenophobic view rallying support crime prevention border integrity	7.67 ^a (1.93)	7.61 ^a (2.30)	1.27 ^a (1.84)	2.39 ^a (2.26)	5.58 ^a (3.21)
	7.22 ^a (1.91)	4.63 ^b (2.90)	4.67 ^b (2.87)	1.72 ^{a,b} (1.92)	2.24 ^b (2.60)
	3.90 ^b (1.95)	4.35 ^{b,c} (2.80)	7.60 ^c (2.23)	1.65 ^b (1.72)	1.58 ^b (2.08)
	3.92 ^b (1.76)	3.37 ^c (2.90)	7.33 ^c (2.07)	1.67 ^{a,b} (1.94)	1.27 ^b (1.83)
Ideology score: 3.00-3.67 (n = 55) xenophobic view rallying support crime prevention border integrity	6.92 ^a (2.13)	6.53 ^a (2.80)	2.80 ^a (3.14)	3.42 ^a (2.66)	3.64 ^a (3.09)
	7.23 ^a (2.06)	4.11 ^{b,c} (3.12)	4.80 ^b (2.65)	2.35 ^b (2.40)	2.62 ^{a,b} (2.75)
	4.48 ^b (2.21)	4.58 ^b (2.83)	6.89 ^c (2.78)	2.60 ^{a,b} (2.08)	2.13 ^{b,c} (2.78)
	4.45 ^b (2.06)	3.22 ^c (2.77)	7.20 ^c (2.30)	1.96 ^b (1.83)	1.69 ^c (2.29)
Ideology score: 4.00-4.67 (n = 48) xenophobic view rallying support crime prevention border integrity	5.06 ^a (2.50)	4.54 ^{a,b} (2.95)	4.10 ^a (3.88)	3.52 ^a (2.17)	2.58 ^a (2.69)
	7.57 ^b (1.79)	4.06 ^a (2.77)	5.10 ^a (2.89)	1.92 ^b (1.85)	2.46 ^a (2.37)
	6.09 ^a (2.06)	6.06 ^b (2.84)	5.88 ^a (3.20)	2.75 ^{a,b} (2.09)	2.98 ^a (3.08)
	5.92 ^a (2.02)	4.88 ^a (3.22)	5.67 ^a (2.88)	2.33 ^b (1.79)	2.88 ^a (2.85)

Ideology score: 5.00-7.00 (n = 38) xenophobic view rallying support crime prevention border integrity	3.42 ^a (2.62)	3.87 ^a (3.16)	7.47 ^a (3.37)	3.29 ^a (2.12)	1.87 ^a (2.64)
	5.96 ^b (1.98)	4.05 ^a (2.56)	5.00 ^b (2.81)	2.34 ^a (1.95)	2.71 ^{a,b} (2.57)
	7.09 ^{b,c} (1.82)	7.18 ^b (2.28)	3.82 ^b (3.08)	3.13 ^a (2.32)	4.16 ^{b,c} (3.36)
	7.43 ^c (1.86)	6.89 ^b (2.32)	3.71 ^b (2.70)	2.74 ^a (2.30)	4.53 ^c (3.27)
Total sample xenophobic view rallying support crime prevention border integrity	6.52 ^a (2.81)	6.27 ^a (3.17)	3.17 ^a (3.65)	3.10 ^a (2.41)	3.93 ^a (3.32)
	7.25 ^b (2.18)	4.28 ^b (3.04)	4.89 ^b (2.79)	2.04 ^b (2.06)	2.50 ^b (2.61)
	4.73 ^c (2.53)	4.97 ^c (3.04)	6.58 ^c (3.06)	2.45 ^c (2.08)	2.40 ^b (2.83)
	4.85 ^c (2.44)	3.99 ^b (3.16)	6.58 ^c (2.85)	2.05 ^b (1.91)	2.25 ^b (2.74)
Ideology standardized beta N = 235 xenophobic view rallying support crime prevention border integrity	65*** 22*** .60*** .59***	52*** 06 .43*** .44***	.52*** .03 41*** 46***	.12 .07 .19** .19**	44*** .04 .31*** .38***

Note: Numbers in the first six rows are the means (standard deviations) for each stratum. Means with different superscripts are significantly different at p < .05 level. Numbers in the last row are standardized regression coefficient. *p < .05; **p < .01; ***p< .001

The rallying support frame presented an interesting case in which political ideology was not a strong predictor of article perceptions. As expected, those with politically conservative views tended to judge the information presented in the rallying support article as less believable ($\beta = -.22$, p < .001). However, political ideology was not significantly related to the perception of frame importance ($\beta = -.06$, p = n.s.), frame bias ($\beta = .03$, p = n.s.), and frame influence ($\beta = .07$, p = n.s.) for the rallying support frame.

In addition, perceived article influence was not related to political ideology (β = .12, p = n.s. and β = .07, p = n.s., respectively) for the xenophobic views frame and the rallying support frame, in contrast to the two pro-wall frames, in which conservative political ideology was strongly predictive of frame influence perception. Therefore, H1 was partially supported (see Table 1).

Political ideology was also found to be a strong predictor of sharing intention (with the exception of the rallying support frame). Conservative ideology encouraged the sharing of a pro-wall framed article (crime prevention β = .31, p < .001; border integrity β = .38, p < .001) while reduces sharing intentions of an anti-wall framed article (xenophobic views β = -.44, p < .001). H2e is partially supported (see Table 1).

To test the role of issue frame perceptions in influencing sharing intentions (H2), a series of hierarchical linear regressions was conducted for each news article that presented a particular issue frame. Demographics and predispositions (gender, income, ethnicity, and political interest) were entered in the first block, followed by issue-specific variables such as issue interest, issue knowledge, and additional information on the construction of the wall. Issue frame perceptions (believability, importance, bias, and influence) were entered in the last block.

Results from hierarchical linear regressions (see Table 2) suggested that, after controlling for demographics and predispositions, issue interest remained a significant predictor of sharing intention across different issue frames, while issue-specific knowledge was not. With respect to our key variables on frame perceptions, results suggested that sharing intentions were driven not only by various sets of perceptions, but also depend on the nature of frames. Specifically, our manipulation concerns two common types of frames, the value-based frame and the strategy frame. To illustrate, the four news excerpts depicted President Trump's motivation to construct the border wall as either grounded in underlying values (in pursuit of border integrity, social order, or racial equality), or driven by political strategizing for election success (to rally support). Results suggest that frame perceptions (i.e. believability, importance, bias, and influence) together explain more variance in value-based frames (30.31% for the border integrity frame, p < .001; 23.78% for the crime prevention

frame, p < .001; 19.72% for the xenophobic views frame, p < .001) than strategy frame (10.54% for the rallying support frame, p < .001).

Table 2 Hierarchical regression analysis predicting sharing intention by Trump motivation issue frame.

frame.				
	Trump motivation story frames			
	Border Integrity (N = 220)	Crime Prevention $(N = 220)$	Xenophobic Views (N = 221)	Rallying Support (N = 220)
Demographics and predispositions				
Gender (male = 1)	.05	.04	03	.03
Race (white = 1)	06	14*	07	.02
Income	07	05	10	05
Political interest	05	.05	.10	06
Incremental R ² (%)	2.66	2.30	12.04***	0.51
Issue Perceptions				
Knowledge	11	15*	03	.02
Interest	.18*	.14*	.14*	.26***
Additional message	04	06	.00	.00
Incremental R ² (%)	3.84*	5.00*	5.00**	6.93**
Article Perceptions				
Frame believability	.17*	.20*	.26***	12
Frame importance	.29***	.15*	.26**	.14*
Frame bias	21**	18**	03	15*
Frame influence	.14*	.18**	.07	.22***
Incremental R ² (%)	30.31***	23.78***	19.72***	10.54***

Total R ² (%)	36.81***	31.07***	36.76***	17.98***

Note. Cell entries are standardized final regression coefficients.

p < .05, **p < .01, ***p < .001

H2a and H2c involve the effects of perceived frame believability and importance. Results indicate that, overall, the more people perceived the news article frame to be believable and important, the more likely they were to indicate intention to share that article (see Table 2). This was consistent for all issue frames except for the rallying support frame, in which only frame importance predicted sharing intention. Therefore, H2a was partially supported, while H2c was supported.

On the other hand, perceptions of frame bias and frame influence were found to be significantly associated with sharing intention for all articles except for the xenophobic views frame. Specifically, bias perception was found to negatively predict sharing intention in three articles (the border integrity frame: $\beta = -.21$, p < .01; the crime prevention frame: $\beta = -.18$, p < .01; the rallying support frame: $\beta = -.15$, p < .05), while influence perceptions were positively correlated with willingness to share in the same three articles ($\beta = .14$, p < .05; $\beta = .18$, p < .01; and $\beta = .22$, p < .001, respectively). H2b and H2d, therefore, were supported in all articles except for the xenophobic views frame.

H3 predicted that perceived frame importance would outweigh believability in predicting readers' willingness to share their *most-likely-to-forward* article. To test this hypothesis, we compared the standardized beta coefficients for perceived frame believability ($\beta = .04$, p = n.s.) with the beta coefficients for importance ($\beta = .28$, p < .001), bias ($\beta = .01$, p = n.s.), and influence ($\beta = .16$, p < .01) by estimating their corresponding 95% confidence intervals via bias corrected bootstrap (1,000 re-samples) (Cumming, 2009). Results suggested that frame believability was no more important than any other factors in predicting sharing intention. In contrast, frame importance ($\beta = .28$, p < .001) appeared to outweigh frame

believability (β = .04, p = n.s.) as a stronger predictor for sharing intention (Δ β = 0.24, p < .05). In other words, when it comes to each reader's most-likely-to-forward article, what really increased intention to share was whether the news article presented a consideration people deem important to the formation of their issue opinions (see Table 3).

Table 3

Predicting sharing intention of the most-likely-to-forward article by party-ideology.

Political- ideology (1= strong liberal; 7 = strong conservative)	Perceived frame believability	Perceived frame importance	Perceived frame bias	Perceived frame influence	R ² (%)
1.00-2.00	.22	.33*	03	.02	19.78*
2.33-2.67	.22	.22	08	01	12.36
3.00-3.67	16	.45*	.10	.15	11.88
4.00-4.67	.06	.18	.40*	.38*	12.29
5.00-7.00	08	.51**	21	.46**	51.83***
Overall	.04 ^a	.28 ^b ***	.01 ^a	.16 ^a **	11.85***

Note. Cell entries are standardized final regression coefficients.

H4 further examined whether the above finding changes with political ideology. As is shown in Table 3, when it comes to the most-likely-to-forward article, the role of various article perceptions in predicting sharing intention varies depending on participants' political ideology. Overall, our model explained the most variance among strong partisans, especially the politically conservative, compared to political moderates. Specifically, in the hierarchical linear regression model, the issue frame perceptions block (believability, importance, bias, and influence) explained 51.83% of the total variance in sharing intention among strong conservatives (p < .001) and 19.78% variance among strong liberals (p < .05). However, this same block did not significantly contribute to the explained variance in sharing intention among the political moderates (i.e., the second, third, and fourth strata in our political

p < .05, **p < .01, ***p < .001

ideology measure). Thus, H4 was supported. Furthermore, while perceived frame importance played a significant role in predicting sharing intention for both liberals and conservatives (i.e., the first and the fifth groups in the table 3), perceived influence of the frame presented itself as a unique consideration underlying news sharing intention for conservatives ($\beta = .46$, p < .01).

5 Discussion

Social media have become one of the primary platforms for news consumption, contributing to the flow of information essential for subsequent political discussion and policy debates. However, there has been increasing concern over social media's role in reducing exposure to ideologically cross-cutting information and opinions. Sunstein (2001), for example, contended that the diversity of public discourse on the Internet has been largely limited due to people's tendency to self-select into ideological enclaves in which only similar viewpoints get to be heard.

This study extends the discussion on online information flow by considering how user actions might change and reshape the current information environment. Specifically, we examine pathways to news sharing in the digital age, providing a micro-level explanatory mechanism underlying people's decision to share a news article. We argue that news sharing constitutes a "soft" form of political participation that has implications for the collective construction of social reality. Compared to other hard forms of political participation such as voting, news sharing has real political consequences by shaping user-directed information flow and thus affecting the quality of information available to the public. This is especially relevant in a society where falsehoods travel faster than truth (Vosoughi, Roy, & Aral, 2018) and disinformation campaigns are prevalent (Prier, 2017).

On a broader note, understanding how people make news sharing decisions is important, as the digital media environment has fundamentally changed the metrics of gaining attention and influence. While traditional power actors such as political elites and news professionals still hold some gatekeeping power, social media users are now endowed with new abilities to influence issue visibility and amplify viewpoints. Understanding why people share certain news articles thus provides important insights into the nature and origin of echo chamber, and how a more inclusive and healthy public space is possible.

Our study found that overall, an individual's perceptions of an issue frame affect how much they want to share the corresponding article; more importantly, frame perceptions are anchored by people's deep-seated predispositions such as political orientation. Specifically, we found that the more an issue frame is perceived as presenting believable and important perspectives, and as being less biased and more influential, the more likely people are to indicate higher intention to forward the message. This finding suggests that news consumers engage in evaluating the issue frame of an article in terms of its content and weight, consistent with the logic of the expectancy-value model that predicts attitude as a function of belief content and its associated weight (Ajzen & Fishbein, 1980). Our study thus contributes to past scholarship on framing effects that has traditionally looked at attitude change, demonstrating that issue frames also have influence on people's intention to forward messages through shaping particular frame perceptions.

However, it is also important to note that these issue frame perceptions are not just an objective assessment of message characteristics. Instead, people tend to apply their more deep-seated values or predispositions to evaluate issue frames they encounter. Ideologically-aligned frames tend to be judged as more important, more believable, more influential, and less biased. This is because people form social judgments not in absolute terms but against judgmental anchors, such as ideological orientations, that affect how attitudinal relevant

messages will be encoded and evaluated. Furthermore, results suggest that to what extent frame perceptions predict sharing intention differs depending on the nature of frames. While perceptions of value frames (in our case, frames pertaining to border integrity, crime prevention and xenophobia) are strong predictors of sharing intentions, less variance was explained by strategy frames: frames that describe policy initiatives not as a pursuit of important values but as a strategic move driven by election considerations (in our case, the rallying support frame). Since strategy frames tend to highlight political maneuver as motivated only by winning votes, they often fail to directly invoke or resonate with message recipients' ideological predispositions. Thus, our paper provides empirical evidence that value-based issue frames can reinforce the role of political ideology in serving as a judgmental anchor based on which the issue position in the article is assimilated or contrasted, which in turn affects both frame perceptions and sharing intentions. In contrast, political ideology becomes less an important factor driving willingness to disseminate political messages under strategy frames (Table 1).

Beyond that, our study also suggests that frame perceptions exert different degrees of influence on sharing intentions at different stages. Specifically, when it comes to each reader's most-likely-to-share article, what really encourages sharing is not frame believability, but whether the frame presents the issue from a perspective deemed by the reader as important and influential. This indicates that while frame believability may co-predict which article to share, its prominence largely receded and other perceptions prevail as to how likely that chosen article will actually be forwarded. Findings presented here therefore explain why many articles that are believed to be accurate and evidence-based never gain a high level of visibility whereas articles that are considered as important and influential are likely to become more and more popular in the issue discourse (Table 3).

Interestingly, this pattern is more prevalent among partisans. Compared to the political moderates, strong partisans, especially conservatives, are more likely to make their news sharing decisions based on whether the news frames present important concerns to them and how influential the frame is in affecting attitude change (Table 3). This confirms Slothuus' (2008) finding that *among strong partisans*, issue frames affect opinions through the psychological process of changing the weights of considerations, but not changing the content of considerations. This is particularly relevant in a society where political ideology and party cues have become commonly used heuristics in political decision making (Baldassarri & Gelman, 2008).

Our study has its limitations. First, it is important to note that we measured news sharing through self-report behavioral intentions. While this provides a proxy for actual sharing, future studies can benefit from directly observing behaviors or using computational approaches to map out the online information flow. Second, this study did not measure how other forms of participatory behaviors might co-occur or even encourage each other. For example, it is intriguing to explore whether people tend to share news articles when they want to comment on that article. Third, our sample is skewed toward the liberal side and we broke down the ideological scores into five relative categories based on quantiles when interpreting the results. While this gives us more variance in delineating the function of political ideological orientations, we acknowledged that doing so might to some extent limit our ability to generalize our findings and future studies might benefit from using a nationally representative sample.

In sum, contemporary citizens are faced with a changing media environment that offers unprecedented amount of information yet poses new challenges to our society's ability to make collective decisions based on our shared knowledge of the world. While digital media have been celebrated as a more inclusive public space that facilitates the exchange of

viewpoints and information, many have voiced concerns over the nature and quality of the information available online (Sunstein, 2001; Pariser, 2011). This has become an even more pressing issue with the emergence of partisan news and ensuing information war. Our study sees each internet user as both a consumer and a producer in their information environment, exploring important factors that drive news sharing intentions. It shows that news sharing, as an important form of political expression, is driven in part by people's perceptions of the news article, which is shaped not only by how the issue is framed but also audience more deep-seated ideology and values.

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- We examined pathways to news sharing by integrating theories on issue framing, social judgment, and information utility.
- We exposed participants to multiple differently framed news in an online survey.
- Perceptions of issue frame believability, bias, importance and influence affected sharing intention.
- Issue frame perceptions are anchored by political ideology.