

Personal Narratives Build Trust Across Ideological Divides

David Hagmann¹, Julia A. Minson¹, & Catherine H. Tinsley²

¹ Harvard Kennedy School, Harvard University

² McDonough School of Business, Georgetown University

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Correspondence concerning this article should be addressed to David Hagmann, Harvard Kennedy School, Taubman 362, Cambridge, MA 02138. E-mail: david_hagmann@hks.harvard.edu

Abstract

Lack of trust is a key barrier to collaboration across ideological divides. Across five preregistered experiments, we find that people judge those who support their opinions with narratives based on personal experiences as more trustworthy than those who support their opinions with either data or with narratives about third parties. This is true both for carefully crafted messages where all other content is held constant, as well as for free form messages written by lay participants. Trust does not suffer when arguments based on personal experience are combined with data, suggesting that our results are not driven by quantitative aversion. Perceptions of trustworthiness are mediated by the speaker's apparent vulnerability and are greater when the narrative reveals hardship experienced by the author. Consequently, people prefer to collaborate with authors of persuasive personal narratives on tasks requiring trust but prefer authors of data-driven arguments when working on tasks requiring cognitive abilities.

Keywords: narratives, trust, ideological polarization, information

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Introduction

Trust plays a fundamental role in our personal, professional, and civic lives: it facilitates cooperation (McAllister, 1995) and increases the likelihood of reaching bargaining agreements (Valley, Moag, & Bazerman, 1998). Organizations benefit in myriad ways when trust is present and suffer when it is absent (see Kramer, 1999 for a review). Indeed, lack of trust can motivate retaliation (Bies & Tripp, 1996) and lead to the collapse of entire firms (Gillespie & Dietz, 2009). At a broader level, trust is required for democratic societies to enact effective policies (Slovic, 1993). The centrality of trust for social functioning is perhaps best captured by Arrow (1974), who called it the “lubricant of a social system.”

Prior research has demonstrated that people have a difficult time trusting those with whom they disagree on important, identity-relevant beliefs (Hernández-Lagos & Minor, 2020). Indeed, as society has come to be characterized by more bitter and rancorous partisan polarization (Dimock, Doherty, Kiley, & Oates, 2014; Klein, 2020), trusting others has become increasingly challenging. As polarization increases, trust in members of the other political party declines (Banda & Kirkland, 2018; Hetherington & Rudolph, 2015). People who think their political views differ from those of their neighbors feel less attached to their community and are less likely to believe that people in their area can be trusted (Ritter, 2020). Americans, moreover, are wary of trusting evidence for ideologically opposing views, even when it comes from highly reputable outlets (Jurkowitz, Mitchell, Shearer, & Walker, 2020).

Disagreement across ideological lines additionally leads to a host of psychological biases which further prevent individuals from being able to trust each other and work collaboratively. Parties in ideological conflict tend to exaggerate the extremity and homogeneity of counterparts' views (Robinson, Keltner, Ward, & Ross, 1995; Van Boven, Judd, & Sherman, 2012; Westfall, Boven, Chambers, & Judd, 2015; Yudkin, Hawkins, &

Dixon, 2019) and expect interacting with them to be more emotionally aversive than it turns out to be (Dorison, Minson, & Rogers, 2019). People are “naive realists” (Ross & Ward, 1995, 1996), who believe in the accuracy and objectivity of their own views, and attribute disagreement to lack of information, poor judgment, or outright malevolence on the part of opponents.

Not surprisingly, such attributions often preclude opportunities for collaboration. Recent work by Marks, Copland, Loh, Sunstein, and Sharot (2019) finds that people prefer to receive task advice from someone who shares their political views, even when the job is unrelated to politics. In related research, workers hired for a non-political transcription task demanded a higher wage when the company’s founders were affiliated with the opposing political party (McConnell, Margalit, Malhotra, & Levendusky, 2018). More broadly, people hold negative associations with regard to those who ascribe to opposing ideologies, are less willing to hire them even if they are more qualified, and allocate fewer resources to them in economic games (Fowler & Kam, 2007; Iyengar & Westwood, 2015).

In the present research, we examine a path toward building trust among ideological opponents by leveraging the reciprocity norms associated with acting in a psychologically vulnerable manner. Specifically, we theorize that trust is increased when people support their point of view by relaying stories of personal experience, rather than drawing on experiences of others presented either as stories or aggregated data. We test this hypothesis across five experiments, finding that individuals report more trust and are more willing to collaborate with holders of opposing views when those individuals support their policy beliefs with self-revelatory stories. We hypothesize and find evidence for the fact that this effect is driven by impressions of psychological vulnerability that sharing a personal narrative creates.

Improving Collaboration Across Ideological Divides

Despite the large body of work documenting the psychological biases underpinning mistrust and conflict, fewer studies have proposed successful interventions that can enable ideological opponents to collaborate effectively. Crucially, many such interventions may be difficult to implement in the field. Some rely on coaching participants through effortful activities such as conscious reframing of emotions or perspectives. Others require a third party to provide outside information, or structure the interaction to reduce or eliminate behaviors and cognitions that lead to further conflict escalation.

For example, research on emotional reappraisal proposes that partisans in conflict should reframe their emotions toward their counterpart (Halperin, Sharvit, & Gross, 2011). Relatedly, people can be provided with individuating information about out-group members, making these targets less unidimensional and reducing prejudice and discrimination (Er-rافی & Brauer, 2012; Halperin, Sharvit, & Gross, 2011; Kteily, Bruneau, Waytz, & Cotterill, 2015). Coaching participants towards beliefs that outgroup members also possess a good “true self” can reduce intergroup bias (De Freitas & Cikara, 2018). More broadly, teaching people that groups’ characteristics are not fixed but rather are able to change and improve leads to more positive attitudes towards the out-group (Halperin, Sharvit, & Gross, 2011).

Yet, individuals on opposing sides of contentious issue often lack the motivation to follow directions to reframe their emotions or to contemplate the virtues of outgroup members. Furthermore, optimal conditions for these types of interventions to succeed are rarely in place. For example, the America in One Room experiment (Fishkin, Siu, Diamond, & Bradburn, 2020), which succeeded impressively in moderating partisan positions, asked willing participants to spend three days sequestered together in a hotel in Dallas, Texas after having read through over 50 pages of expertly-crafted briefing materials. Notable as such undertakings are, they do not represent a typical encounter between disagreeing neighbors or co-workers. Instead, most people must navigate interactions with disagreeing others using

their own instincts and best judgment, which as noted above, are often flawed.

Without externally imposed interventions, contact between partisans can do more harm than good. When Bail et al. (2018) incentivized Twitter users to follow accounts of politicians from the opposing party, those users ended up with more—not less—polarized views. This is in line with classic research on “biased assimilation” which finds that individuals subject opposing views to greater scrutiny than views supporting their own beliefs (Lord, Ross, & Lepper, 1979). Thus, although it may be tempting to address polarization by simply increasing contact between partisans, the structure of the contact and content of the exchange likely matter.

In the present research, we test an intervention that conflict participants can execute with no outside facilitation, requiring little effort, and which many persuasion professionals (politicians, salespeople, and con artists), seem to use intuitively. Namely, we examine the effect of supporting one’s point of view with evidence from one’s life experience (i.e., sharing a personal narrative) on trust toward, and willingness to collaborate with, those who hold opposing views.

Sharing a personal experience is distinct from other forms of evidence in two important ways. First, a personal experience is a story rather than a set of aggregated statistics. Second, a personal experience is centered on the self rather than reliant on the experiences of third parties. We propose and demonstrate that the sharing of a personal experience increases narrators’ vulnerability and thereby both their personal trustworthiness and the credibility of their evidence. This result holds in cases when an argument combines a personal narrative with data, suggesting this effect is not driven by aversion to statistics. Rather, the process of sharing personal information signals vulnerability, which in turn projects credibility and trustworthiness.

Personal Narratives

Stories, have enjoyed longstanding interest across the social sciences and the humanities. With some authors arguing that storytelling is one of the defining features of the human species (Gottschall, 2012), this attention may be well deserved. Economists, too, have recognized their centrality: Shiller (2017) argues that our behavior is often driven more by stories told around the kitchen table than by reflection on abstract economic data.

Recent field research has examined the effectiveness of stories and anecdotes for changing behavior and beliefs. For example, La Ferrara, Chong, and Duryea (2012) took advantage of variation in broadcast dates of popular telenovelas which featured families with fewer than usual children and found that exposure reduced fertility rates by 5%. In the United States, the show “16 and Pregnant” has been estimated to decrease teen births by 4% (Kearney & Levine, 2015). Broockman and Kalla (2016) found that a brief conversation with a canvasser who shared personal information about their transgender experience shifted attitudes on transgender rights. Meisel et al. (2016) find that readers of a medical newsletter were more likely to seek more information if the excerpt featured a particular physician facing a dilemma than when it offered information about general guidelines.

These recent findings connect to a larger literature suggesting the persuasiveness of exemplars and anecdotal information over statistical and base rate data Freling, Yang, Saini, Itani, & Rashad Abualsamh (2020). Yet, whereas persuasion can often be the main objective of a conversation between disagreeing parties (Mercier & Sperber, 2011), it is not the only one. Conversation also serves to establish and maintain interpersonal relationships with neighbors, co-workers, and family members. Ideological opponents may be motivated to feel heard (Bruneau & Saxe, 2012), to learn about the other side (Loewenstein, 1994), and to build cooperative relationships despite disagreement (Goodwin, 2005). And the inferences they make about the other party may depend on their communication style. As Kubin, Puryear, Schein, and Gray (2021) find, those who share stories are believed to be more

rational than those arguing on the basis of data. At work and around the dinner table, individuals have to manage the impression they have on others and find ways to establish and maintain a threshold of mutual trust and civil interaction, even if persuasion is unattainable. Supporting one's views with a personal narrative may offer one avenue for doing so.

We consider personal narratives as representing a sub-category of anecdotes, where the protagonist of the anecdote is also the storyteller. We propose that this special category of anecdote could be critical to building and maintaining trust between two people whose disagreements might otherwise tear them apart. Specifically, we theorize that sharing a personal narrative builds trust because it makes the narrator appear psychologically vulnerable and encourages the listener to reciprocate the vulnerability with trust.

From a strictly rational perspective, the hypothesis that listeners trust authors of personal stories is somewhat counter-intuitive, as it is quite easy to manufacture a false personal narrative. Authenticating the veracity of someone's personal narrative is bound to be more difficult than verifying a claim involving publicly known facts. Yet, we hypothesize and show supporting evidence for the idea that when disagreeing others support their views using evidence from personal experience, these self-disclosures are seen as more credible and the narrator appears more trustworthy than when opposing views are supported by third party stories or aggregate data.

Trust

Trust is traditionally defined as willingness to be vulnerable (Mayer, Davis, & Schoorman, 1995). Classic research in organizational behavior, has demonstrated that increased trust is preceded by signals of ability, benevolence, and integrity (Mayer, Davis, & Schoorman, 1995; Schoorman, Mayer, & Davis, 2007). Thus, trust increases when the trusting party believes the trusted party has the ability to carry out a particular task, has benevolent intentions, and subscribes to an acceptable set of moral principles. However, as

noted above, one of the fundamental challenges of building trust (or assessing trustworthiness) among holders of ideologically opposing views is the pervasive lack of interaction among parties committed to entrenched perspectives. Especially when assessing the trustworthiness of a relative stranger, individuals often lack the information to evaluate ability, benevolence, and integrity.

Fortunately, the literature also suggests another source of trust: classic research on social exchange theory posits that trust is built on reciprocity (Blau, 1964). Specifically, this work suggests that an actor who appears trusting compels a reciprocal level of trust from their counterpart. A narrator who opens up by sharing a personal story exposes a vulnerability to the listener. The listener, who has received the narrator's trust, is then encouraged to trust the narrator through social exchange norms. Said more simply, the psychologically reciprocal nature of trust suggests that those who are trusting are thought to be, themselves, more trustworthy (Jeong, Minson, & Gino, 2020; Malhotra & Murnighan, 2002; Ostrom, 2003; Schweitzer & Kerr, 2000). In the present research, we theorize and find that because self-disclosure of a personal narrative leads to perceptions of vulnerability, thus making the narrator appear trusting, recipients reciprocate that trust.

Self-Disclosure

Self-disclosure is central to relationship formation and development (Altman & Taylor, 1973) because the act of revealing personal details makes people appear warmer and more trusting compared with those who do not self-disclose (Ajzen, 1977; Traeger, Strohkorb Sebo, Jung, Scassellati, & Christakis, 2020). A person who reveals truthful details about herself has loosened her personal boundaries and risked negative feedback or outright rejection from a listener (Kelly & McKillop, 1996). This vulnerability reveals a trusting nature making her more likable. Conversely, those who do not self-disclose are sometimes thought of as more deceptive (John, Barasz, & Norton, 2016; Lane & Wegner, 1995) because they denied others personal information (Margolis, 1974).

Meta-analytic summaries of the disclosure literature confirm that those who self-reveal are judged to be more likable (Collins & Miller, 1994). Moreover, the depth of someone’s self-disclosure, meaning the intimacy of the revelations, moderates this effect such that those who take more of a risk by revealing more hardship are perceived as more likable (although there is a limit whereby extreme intimacy given the setting is deemed inappropriate, Collins & Miller, 1994).

Although prior research demonstrates a link between self-disclosure and likability, we go one step further to argue that self-disclosure will also make a protagonist appear more trustworthy. Specifically, whereas likability and trustworthiness are highly correlated in social perception, only trustworthiness is characterized by the willingness of trusting parties to make themselves vulnerable to the trusted party. Thus, trust has implications for collaboration that go beyond those of mere liking, because collaboration requires interactions of mutual dependency and thus mutual vulnerability.

Research Overview

We present the results of five pre-registered experiments wherein we experimentally manipulate whether an argument is presented in the form of a personal narrative or as grounded in data-driven information. We then measure the interpersonal inferences regarding the author of the argument, focusing in particular on perceptions of trust.

In our studies, we construct messages that convey identical information either quantitatively (e. g. the average beneficial effects of an increase in the minimum wage) or as a narrative (e. g. how an individual benefited from a minimum wage increase). Moreover, in Studies 2 and 3, we contrast stories told by the author about themselves (“personal narratives”) with those the author tells about a third party (which we term “anecdotal narratives”). Anecdotal narratives allow us to capture all the stylistic features of a personal narrative, only altering the protagonist of the story. We can then draw conclusions about the

effect of communication style (narrative versus quantitative information) versus the effect of inferences about the vulnerability of the protagonist (“self” versus “other”).

In the remainder of this paper, for simplicity, we will refer to personal narratives simply as “narratives,” and anecdotal narratives as “anecdotes.” Arguments featuring statistics, reports, research, and other factual information will be referred to as “data-driven” information. All data-driven arguments in our studies (except for Study 5, in which participants write their own messages) offer truthful information garnered from reputable sources. Narratives were constructed by matching the information in the data-driven arguments and presenting it in narrative form. As a result, both the narrative and data-driven versions of our stimuli contain identical information and we see little normative grounds on which individuals should trust the author of the narrative more than the author of the data-driven argument.

We find that participants rate the author of messages conveying a personal narrative as more trustworthy than those presenting identical arguments on the basis of data-driven information (Study 1). This finding is not merely the result of quantitative aversion: when the argument presents both a personal narrative and data-driven information, the increased trust level persists. The effect of narratives on trust is mediated by the extent to which the author reveals potentially sensitive information about herself (Study 2), and narratives that express a hardship generate greater trustworthiness than those that do not (Study 3). When participants can choose to work with a disagreeing author who wrote either a personal narrative or a data-driven argument, they prefer the author of a narrative for tasks relying on trust, but the author of factual arguments for cognitively challenging tasks (Study 4). Finally, we show that people view authors who were instructed to write about how their personal experience supports their belief on a contentious topic as more trustworthy than those who were instead instructed to argue based on data-driven information (Study 5). This last finding suggests that lay people given simple instructions, narrating naturally, can easily

benefit from our strategy.

Open Science Statement

We report all sample sizes, data exclusions, all manipulations, and all measures in the studies. Screen captures of the experimental materials are available in the Supplemental Information. The complete data, code to reproduce all statistical analyses and figures in the manuscript, as well as the preregistration reports are available via OSF.¹ All our studies were preregistered on AsPredicted.

Study 1

Our first study tests whether those who share a personal narrative to support or oppose a policy are rated as more trustworthy than those who make the same argument on the basis of data-driven information. We further examine the effect of combining a personal narrative and a data-driven argument: does the predicted increase in trustworthiness persist when claims based on data are added, or do data undermine any trust generated by the story? Trained communicators (politicians, business leaders, and public intellectuals) often introduce their position on an issue with a personal story before supporting it with statistics and data. However, prior work on the identifiable victim effect found that increases in charitable contributions that participants gave when they knew it targeted an individual beneficiary disappeared when statistical information was also included (Small, Loewenstein, & Slovic, 2007). Data-driven information seemed to negate the impact that anecdotal information (an identifiable victim) had on triggering people's generosity. Here, gains from narratives might similarly disappear when combined with a data-driven argument.

Method

We recruited 806 participants from Amazon Mechanical Turk (55% Female, $M_{Age} = 39$). Participants who passed a simple comprehension check prior to assignment to

¹https://osf.io/sb7mj/?view_only=6f6fc848a1304ca1b17f09c10eb727f6

experimental conditions. Participants began by reporting their attitudes on 5 statements related to employment in the United States (including questions related to the tradeoffs inherent in regulations for small businesses, unionization, increasing part-time employment, and improving workplace conditions). Among the five statements, we asked participants to report whether they believe that “the federal government should increase the minimum wage to \$15 an hour” (from strongly disagree to strongly agree on a 7-point scale). We chose this domain because it is a frequent topic of policy debate and one that participants in our study were likely to have an opinion about. Furthermore, there is mixed evidence in the academic literature on the impact of a minimum wage increase, which enabled us to create strong, data-driven arguments for both perspectives. Unbeknownst to participants, their response on this question determined whether they would see a message favoring or opposing an increase in the minimum wage, with all participants receiving a message opposing the position that they themselves endorsed.²

We then randomly assigned participants to one of four experimental conditions, which varied the type of evidence included in the message. In the “Narrative” condition, participants received a short paragraph that presented the argument in the form of a story about the author’s own experience. In the “Data-driven” condition, participants received identical arguments, but that conveyed information in terms of studies and statistical figures. The text was written to parallel the Narrative as closely as possible. Finally, in two mixed conditions (“Narrative First” and “Data First”), participants received both messages sequentially, starting with either the Narrative or the Data-driven text. Table 1 shows the messages across the four conditions opposing an increase in the minimum wage (see Supplementary Information for the text of all messages).

Participants then evaluated the messages and the author by responding to six questions on 5-point Likert scales (ranging from “not at all” to “extremely”). Four ratings

²Participants who selected the midpoint of the scale were assigned to one of the two positions at random.

related to trustworthiness: how trustworthy they thought the author of the message is, how sincere the author is, how likely they believe the information is to be true, and how misleading they think it is (reverse coded). The remaining two ratings related to topic competence: how knowledgeable and how informed they believed the author to be on the topic of the minimum wage.

We then presented participants with the policy statements from the beginning of the study, in order to assess possible attitude change as a result of exposure to the messages. We made no predictions about differences in attitude change between conditions and presented related analyses in the Supplementary Information.³ The survey then concluded with demographic questions.

Results

In line with our preregistration, we combined the first four questions into a single measure of trustworthiness ($\alpha_{\text{Trustworthiness}} = 0.86$) and the remaining two questions into a measure of competence ($\alpha_{\text{Competence}} = 0.88$). Figure 1 summarizes our key results. Authors of personal narratives were indeed viewed as more trustworthy than those who present a data-driven argument ($\Delta M = 0.51$, 95% CI [0.34, 0.68], $t(400) = 5.86$, $p < .001$).

Moreover, combining data-driven and narrative information similarly led to higher perceived trustworthiness compared to relying on data only ($\Delta M = 0.44$, 95% CI [0.28, 0.61], $t(403) = 5.25$, $p < .001$ if the data-driven information came first, and $\Delta M = 0.41$, 95% CI [0.24, 0.58], $t(401) = 4.71$, $p < .001$ if the order was reversed).

³In brief, in Studies 1-3 which share this paradigm, participants significantly revised their beliefs on a minimum wage increase in the direction of the argument they read. In Study 1, we find that participants in the “Narrative First” condition are more persuaded than those in the “Data only” and “Narrative only” conditions. In Study 2, we find no significant differences across message types. In Study 3, we observe more persuasion in the “Negative Framing” condition than the “Positive Framing” condition, but no difference across message types.

Contrary to our prediction that the inclusion of data might dilute the beneficial effect of the narrative, we observed no difference across the three messages that included the narrative ($F(2, 601) = 0.80$, $MSE = 0.70$, $p = .448$, $\hat{\eta}_G^2 = .003$).⁴ We did not predict any differences with regard to the perceived competence of the author and did not find any across the four conditions ($F(3, 802) = 1.11$, $MSE = 0.78$, $p = .346$, $\hat{\eta}_G^2 = .004$).

Discussion

In Study 1, arguments based on personal narratives led to greater perceptions of trustworthiness than arguments based on data. The gains in trust persisted even when the two types of information were combined. This finding suggests that the beneficial effects of personal narratives do not stem from an aversion to or skepticism of data. Moreover, the order in which the information was presented did not affect perceived trustworthiness: our results suggest that readers seem to integrate both parts before making their judgment, rather than becoming skeptical of the narrative after first reading about data or discounting the narrative when data follow.

Study 2

In Study 2, we examine the psychological mechanism for the effectiveness of personal narratives in increasing trust between disagreeing counterparts. Specifically, we hypothesize that trust is boosted by stories that reveal personal and potentially sensitive information on the part of the speaker because such disclosures place the speaker in a vulnerable position, and thus make them appear trusting. Because trust is governed by the norm of reciprocity, trusting behaviors executed by one party lead the other party to reciprocate in kind (Jeong, Minson, & Gino, 2020; Malhotra & Murnighan, 2002; Ostrom, 2003; Schweitzer & Kerr, 2000). Thus, in Study 2, we replicate the results of Study 1 and show that the extent to which self-disclosure by the author of the personal narrative is judged to demonstrate

⁴These results remain unchanged if we use only the item asking about the author's perceived trustworthiness instead of our trustworthiness measure combining the four items.

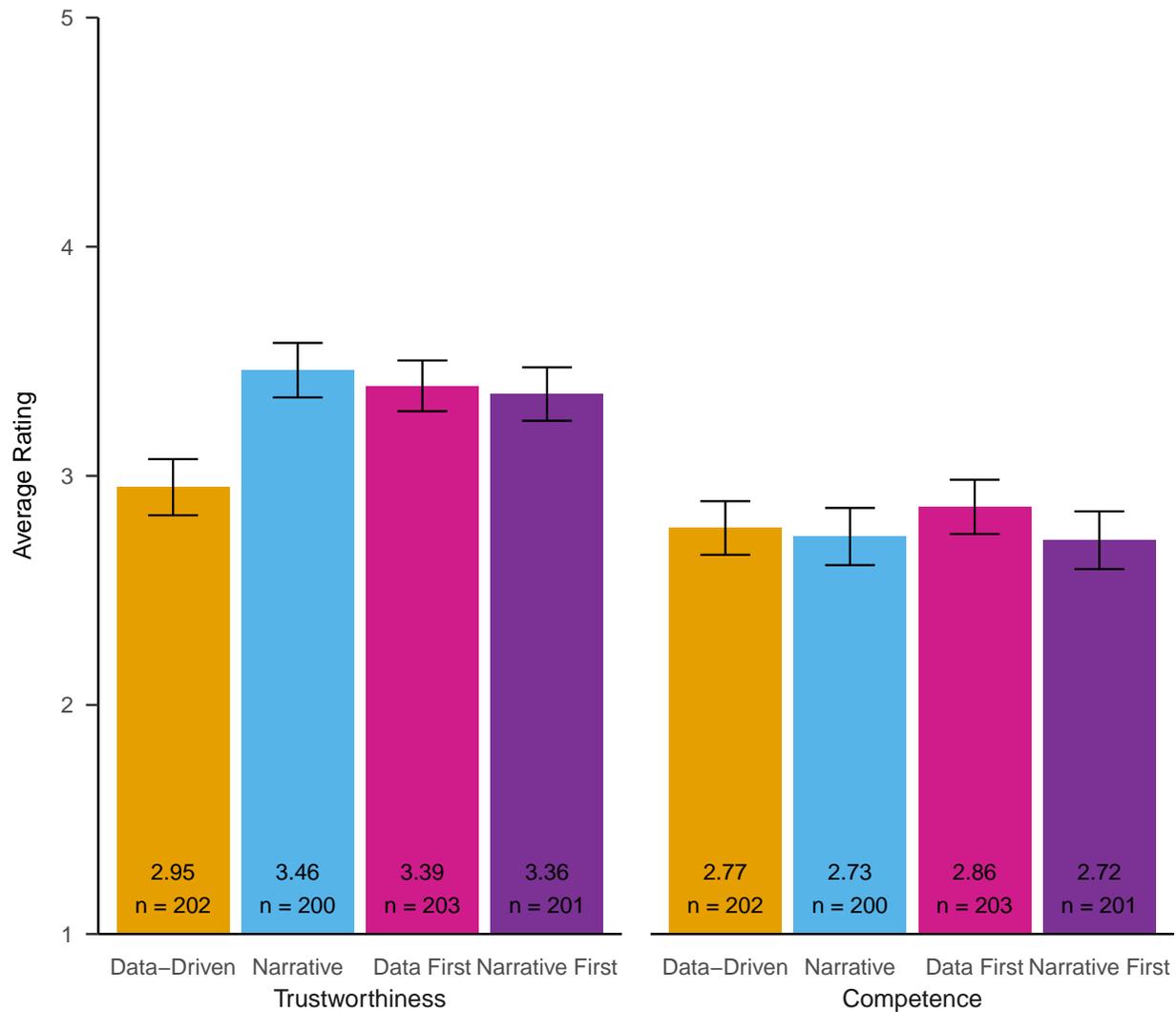


Figure 1. Ratings of Trustworthiness and Competence in Study 1. The narrative message was viewed as more trustworthy than the data-driven message. Moreover, the gains to trustworthiness persisted when the two types of information were combined. We observed no difference on perceived topic competence of the author across the conditions. Error bars show 95% confidence intervals.

vulnerability mediates the effect of narratives on trustworthiness.

In Study 2 we also introduce a condition in which the author relates a narrative about another person (an “anecdote”). To the extent that our effect is driven by perceptions of vulnerability (and not a general preference for stories), relating a story about someone else should not lead to perceptions of greater trustworthiness.

Method

We recruited 604 participants via Amazon Mechanical Turk (50% Female, $M_{Age} = 39$). The participants passed a comprehension check at the beginning of the survey and prior to assignment to experimental condition.

The design closely followed that of Study 1: we presented participants with the same five statements related to employment in the United States, including the target item on increasing the federal minimum wage. Participants who favored (opposed) an increase in the minimum wage were then assigned to a message opposing (favoring) the increase. We randomly assigned participants to one of three experimental conditions: in the “Narrative” condition, they saw a message in which the author conveyed a personal story that results from a change in the minimum wage policy. The “Data-driven” condition presented an argument paralleling the story, but relied on studies and statistics. These messages were identical to those used in Study 1. Finally, we introduced an “Anecdote” condition, which paralleled the narrative condition, except that the author recounted the experience of someone they knew, rather than a personal experience.

Participants were then asked to evaluate the author and content of the message using the items used in Study 1. To examine our hypothesized psychological mechanism, we constructed a measure of vulnerability using three items: how much the participant learned about the author, how much private information the author had revealed, and how embarrassed the author might be if the message became public. Participants responded to

all items on 5-point Likert scales. We also included a further measure of closeness (Aron, Aron, & Smollan, 1992). Participants were presented with 7 pairs of two circles that differed in the extent to which the circles overlapped. They then selected the pair that they felt best represented their relationship with the author of the message. Participants completed the study by reporting their attitudes related to the minimum wage, the four distractor items, and basic demographic information.

Results

As in our previous study, we found high internal consistency for measures of trustworthiness ($\alpha_{\text{Trust}} = 0.85$) and topic competence ($\alpha_{\text{Competence}} = 0.90$). Our new measure of vulnerability also showed moderately high internal consistency ($\alpha_{\text{Vulnerability}} = 0.63$).

Figure 2 presents our results. Replicating our finding from Study 1, participants rated the author of the narrative as more trustworthy than the author of the data-driven message ($\Delta M = 0.42$, 95% CI [0.25, 0.58], $t(400) = 4.94$, $p < .001$). Importantly, participants also rated the author of the narrative as more trustworthy than the author of the anecdote ($\Delta M = 0.35$, 95% CI [0.19, 0.51], $t(401) = 4.25$, $p < .001$), suggesting that the observed difference in trustworthiness is not driven by the rhetorical style or an aversion to quantitative information. Indeed, participants judged no difference in the trustworthiness of authors of the data-driven and anecdotal messages ($\Delta M = 0.07$, 95% CI [-0.10, 0.23], $t(401) = 0.79$, $p = .429$).

In line with Study 1 results, participants rated no differences in the topic competence of the authors of narratives and data-driven messages ($\Delta M = 0.10$, 95% CI [-0.08, 0.29], $t(400) = 1.12$, $p = .265$). We did not make any predictions about the perceived topic competence of the anecdote's author, but found that they were viewed as less informed than both the authors of the narrative ($\Delta M = -0.29$, 95% CI [-0.47, -0.11], $t(401) = -3.16$, $p = .002$) and the data-driven argument ($\Delta M = -0.40$, 95% CI [-0.57, -0.23],

$t(401) = -4.59, p < .001$).

Next, we turn our attention to the new measures of vulnerability and closeness. We predicted that authors of narrative messages would be viewed as more vulnerable than those of both data-driven and anecdotal information. Indeed, we find both to be the case ($\Delta M = 0.99$, 95% CI [0.86, 1.12], $t(400) = 15.22, p < .001$ and $\Delta M = 0.58$, 95% CI [0.44, 0.71], $t(401) = 8.49, p < .001$, respectively). Further, authors of anecdotal messages were viewed as more vulnerable than those of data-driven messages ($\Delta M = 0.41$, 95% CI [0.28, 0.54], $t(401) = 6.13, p < .001$), although we made no predictions about this comparison. Our measure of closeness revealed that participants felt significantly closer to authors of narratives than to those of anecdotes ($\Delta M = 0.34$, 95% CI [0.09, 0.60], $t(401) = 2.65, p = .008$), but the other pairwise comparisons did not differ significantly.

Next, we tested our prediction that perceptions of vulnerability statistically mediate the effect of condition assignment on trustworthiness. Figure 3 shows the results of our mediation analysis. We find that both anecdotes and narratives are associated with greater vulnerability (both $ps < 0.001$), and that greater vulnerability is associated with greater trustworthiness ($p = 0.024$). We estimate the mediation effect using 100,000 bootstrap repetitions and find that vulnerability mediates 27% of the effect of narratives on trustworthiness (95% CI [0.02, 0.64]).

Discussion

In line with our prediction, we found that participants rated the author of a narrative message as more vulnerable and more trustworthy than the author of either a data-driven message or an anecdote. Furthermore, this perceived vulnerability partially mediated the effect of relating a personal narrative on evoking a sense of trustworthiness. These results support our broader theorizing because they demonstrate that the power of personal narratives to boost trust arises from perceptions of greater vulnerability. Because authors of

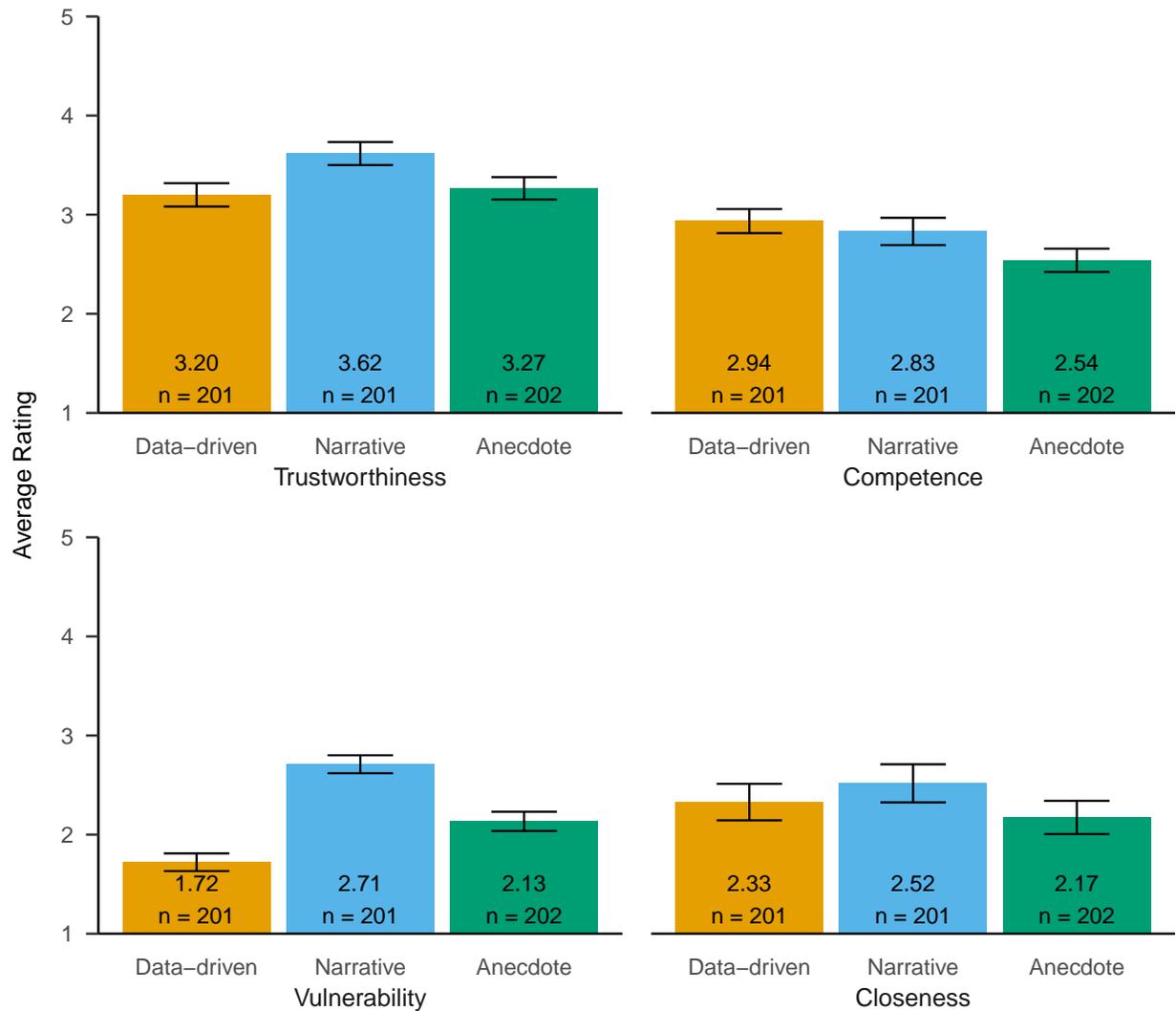


Figure 2. Study 2 Results. Authors of narratives were again rated most trustworthy and were further rated as most vulnerable. Error bars show 95% confidence intervals.

personal narratives appear to place trust in the reader by revealing private and potentially embarrassing information, the readers react to that vulnerability by reciprocating the narrator's trust. Interestingly, no condition made participants feel particularly close to the authors, suggesting messages were not evoking a sense of identification with the authors. Rather, results confirm our primary mechanism that narratives enhance a speaker's trustworthiness by signaling vulnerability.

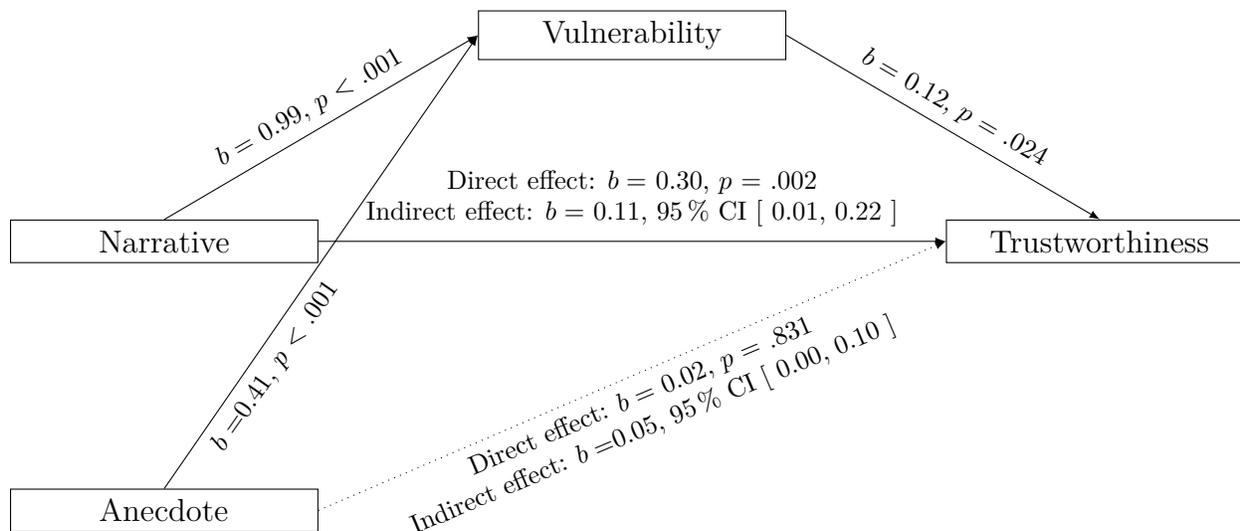


Figure 3. Study 2 mediation analysis. Both Narratives and Anecdotes are associated with greater degrees of perceived vulnerability than are data-driven arguments. Vulnerability mediates 27% of the effect of Narratives on Trustworthiness. Estimates calculated using 100,000 bootstrap repetitions.

Study 3

Arguments can recount the hardship associated with a policy (e.g., the financial struggles resulting from a low-wage job) or the benefits associated with a policy (e.g., the easing of financial struggles after a wage increase). If trustworthiness is driven by vulnerable self-disclosure, then we would expect that narratives involving hardships evoke greater trustworthiness than those recounting benefits. We test this hypothesis in Study 3. As in the previous study, we compare narratives to messages relaying data-driven information and to anecdotal accounts. We go beyond our prior studies by further varying whether the target events described in the messages focus on harms or benefits.

Method

We recruited 1203 participants from Amazon Mechanical Turk who passed a three-item comprehension check (54% Female, $M_{\text{Age}} = 39$). Our procedure followed closely that of the previous studies: participants again indicated their support for or opposition to an increase of the federal minimum wage to \$15 an hour and for four distractor items. As before, we

assigned them to a message opposing their initial position.

Our study featured a 3×2 between-subjects design. As in Study 2, participants received either a narrative message related to the effects of a minimum wage increase, a data-driven message, or an anecdotal message. We further varied the valence of these messages. For half the participants, the message was framed positively: the presence of a high minimum wage eased financial hardship, if the participant initially opposed the increase; or the absence of a high minimum wage kept prices lower and prevented layoffs, if the participant initially supported the increase. In the negative frame, the absence (or presence) of a high minimum wage had imposed hardship on the author. Thus, we had a total of six messages advocating for an increase in the federal minimum wage and six messages opposing such an increase.

We then asked participants to evaluate the author's trustworthiness and topic competence, using the same items as in the previous two studies. After eliciting the ratings of the message, we again asked participants about their attitudes toward the same statements and concluded the survey with basic demographic information.

Results

As in the previous two studies, the measures of trustworthiness and topic competence had high internal consistency ($\alpha_{\text{Trust}} = 0.87$, $\alpha_{\text{Competence}} = 0.90$). The first three bars in the left panel of Figure 4 show average ratings of trustworthiness of the data-driven message, the narrative, and the anecdote for the negative framing. The authors of narratives were rated as more trustworthy than were those of data-driven messages ($\Delta M = 0.34$, 95% CI [0.16, 0.53], $t(377) = 3.62$, $p < .001$) and of anecdotes ($\Delta M = 0.17$, 95% CI [0.00, 0.35], $t(410) = 1.96$, $p = .051$), replicating our previous findings. We also find that authors of negative anecdotes were viewed as marginally more trustworthy than those of data-driven arguments, which we did not predict ($\Delta M = 0.17$, 95% CI [-0.01, 0.35], $t(411) = 1.90$, $p = .058$).

The next set of three bars shows the corresponding ratings when the message is in the

positive frame. Here too, the authors of narratives were rated as more trustworthy than both those of data-driven messages ($\Delta M = 0.33$, 95% CI [0.14, 0.51], $t(421) = 3.45$, $p = .001$) and of anecdotes ($\Delta M = 0.30$, 95% CI [0.11, 0.50], $t(388) = 3.09$, $p = .002$). In the positive frame, no difference emerged between data-driven and anecdotal messages ($\Delta M = 0.02$, 95% CI [-0.16, 0.21], $t(387) = 0.23$, $p = .819$).

Finally, we compared trustworthiness across the positive and negative framings. For each message type, the negative frame evoked greater trustworthiness ($\Delta M = 0.17$, 95% CI [-0.01, 0.36], $t(399) = 1.87$, $p = .062$ for the data-driven messages, $\Delta M = 0.19$, 95% CI [0.00, 0.38], $t(399) = 2.00$, $p = .046$ for the narrative messages, and $\Delta M = 0.32$, 95% CI [0.15, 0.50], $t(399) = 3.58$, $p < .001$ for the anecdotes).

The right panel of Figure 4 shows ratings for topic competence across the experimental conditions, for which we did not pre-register predictions. As in the previous two studies, we observed no difference between the data-driven message and the narrative in the negative framing ($\Delta M = 0.03$, 95% CI [-0.17, 0.22], $t(377) = 0.28$, $p = .779$). Replicating the finding of Study 2, moreover, we find that authors of the anecdotal message were rated as having less topic competence than either the authors of the data-driven or the narrative messages ($\Delta M = -0.24$, 95% CI [-0.42, -0.06], $t(411) = -2.56$, $p = .011$ and $\Delta M = -0.21$, 95% CI [-0.39, -0.03], $t(410) = -2.27$, $p = .024$, respectively). In the positive framing, the author of the data-driven messages was viewed as more competent than that of the narrative and the anecdote ($\Delta M = 0.19$, 95% CI [0.02, 0.37], $t(421) = 2.13$, $p = .033$ and $\Delta M = 0.31$, 95% CI [0.13, 0.50], $t(387) = 3.39$, $p = .001$, respectively). We found no difference between narratives and anecdotes in this comparison ($\Delta M = 0.12$, 95% CI [-0.07, 0.31], $t(388) = 1.26$, $p = .209$).

We then tested for the interaction between message type and message frame (Table 2). The results of a baseline OLS regression model consisting of main effects as well as a model with an interaction between message type with the message frame are reported for

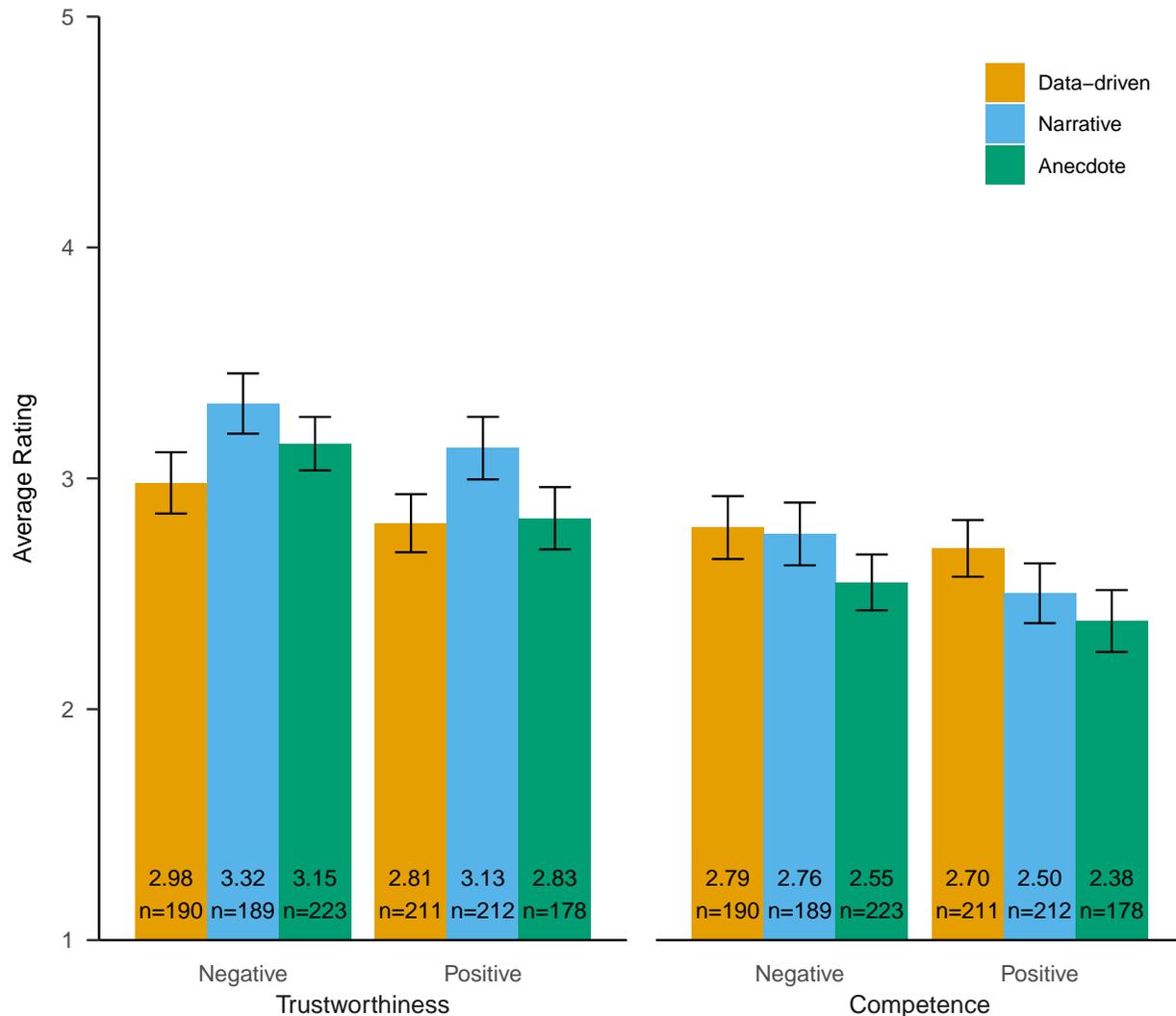


Figure 4. Study 3 ratings of messages. Narrative authors were rated as more trustworthy compared to the authors of data-driven messages. Error bars show 95% confidence intervals.

trustworthiness (columns 1 and 2) and topic competence (columns 3 and 4). Replicating our t-test results for trustworthiness, column 1 shows that within message types, the narrative author is viewed as more trustworthy—and within message frames, the positive frame is perceived as less trustworthy. The interaction of message frame \times message type is not significant. Replicating our t-test results for competence, authors of narratives were not viewed as less competent than those of data-driven messages (column 3), while authors of anecdotes were. The positive frame led to lower ratings of competence than the negative frame, and the interaction of message frame \times message type was again not significant.

Discussion

Replicating our finding from Studies 1 and 2, we again show that authors of narrative messages were rated as more trustworthy than are those of data-driven messages. In addition, we found a main effect of presenting messages in a negative frame on trustworthiness as well as competence. For example, talking about the difficulties of finding employment after a minimum wage increase led to greater trustworthiness than reporting the ease of finding work in the absence of such an increase.

These results support our broader theory about the role of perceived vulnerability in driving the effect of narratives on trust. When people support their beliefs with stories of hardships created by public policies, they expose their suffering. This exposure makes them more vulnerable. We theorize that this vulnerability invites reciprocal trust. However, in line with our earlier results regarding the partially mediating role of vulnerability, we still observe our effect in the positive framing, suggesting that additional psychological forces are also at play. Finally, although we did not pre-register concrete predictions regarding the effects of our anecdote treatment on competence, it is interesting that the authors of anecdotes were judged to be less competent than authors of other message types across two studies. This result suggests that the distinction between (personal) “narrative” and “anecdote,” often confounded in previous research, is important when attempting to build interpersonal relationships.

Study 4

Our studies so far have relied on ratings and evaluations of hypothetical authors. We now turn toward exploring the behavioral implications of these findings on individuals’ willingness to collaborate with a holder of an opposing view. As in prior studies, participants were exposed to messages from authors who disagree with them. In this study, they received two messages: one narrative and one data-driven. They then chose which author they preferred to work with on a series of tasks. This study allows us to evaluate the implications

of our findings for collaboration intentions. We presented participants with tasks that rely on cognitive ability or on benevolent trust. We predicted that participants would prefer to collaborate with the author of a personal narrative for tasks that rely on trust, but would prefer the author of the message drawing on data-driven information for cognitive tasks that rely on quantitative reasoning skills, because constructing a data-driven narrative suggests comfort with numbers.

Method

We recruited 301 participants via Amazon Mechanical Turk (53% Female, $M_{Age} = 36$). Participants began as before by reporting their attitude toward statements related to a minimum wage increase, concealed among four distractor items. We then assigned participants to read two messages opposing their initial position on the minimum wage, one featuring a personal narrative and one featuring a data-driven argument. Thus, this study featured a within-subjects design. For ease of identification, the messages were presented in two different colors (blue and brown), and the color was counterbalanced across message type.

After rating the authors of both messages on trustworthiness and competence with regard to the topic, we introduced the participants to a series of four tasks. For each task, participants indicated on a 6-point Likert scale if they preferred to be partnered with the author of the blue or the brown message (the scale did not include a point of indifference).

The task descriptions (presented in the Supplementary Information) made it apparent that on two of the tasks, performance relied on trust between the partners. One of these tasks was a trust game in which the participant could send money to the author, who would then choose to split the gains or keep them for themselves (Berg, Dickhaut, & McCabe, 1995). The other trust-related task was an advice game in which the participant would have to rely on the author to truthfully convey information that the author was uniquely privy to

(similar to Gneezy, Rockenbach, & Serra-Garcia, 2013). The remaining two tasks relied on quantitative reasoning. One consisted of diagnosing a pattern in geometric shapes (the Raven’s matrix, Raven, 2000); the other required participants to find the unique pair of numbers in a table adding up exactly to the number 10 (Mazar, Amir, & Ariely, 2008). The four tasks were presented in random order, and the study concluded with basic demographic questions.⁵

Results

We begin by looking at the now-familiar ratings of trustworthiness and topic competence. As in our previous studies, we find that the author of the narrative message was rated as more trustworthy than the author of the data-driven message in a paired t-test comparison ($M_d = 0.27$, 95% CI [0.18, 0.37], $t(300) = 5.60$, $p < .001$). Again, there was no difference on perceived competence of the author ($M_d = 0.06$, 95% CI [-0.04, 0.16], $t(300) = 1.11$, $p = .267$).

Next, we examined which author the participants preferred for either the two quantitative reasoning tasks or the two trust tasks. In line with our preregistration, for any given participant, we averaged the responses for each type of task, where “1” is the strongest preference for the author of the data-driven message and “6” is the strongest preference for the author of the narrative message. As predicted, we find that participants have a stronger preference toward the narrative author on trust tasks (3.62) than on the quantitative reasoning tasks (3.02, $M_d = 0.60$, 95% CI [0.45, 0.76], $t(300) = 7.52$, $p < .001$). Notably, the preference for the narrative author on trust tasks is not significantly higher than the point of indifference, 3.5 ($M = 3.62$, 95% CI [3.46, 3.78], $t(300) = 1.50$, $p = .136$); but the preference for the author of the data-driven message on the quantitative tasks is significantly lower than

⁵Immediately prior to demographics, and following all decisions, we also included an attention check and preregistered excluding participants who failed it. The attention check showed a message and asked participants to identify whether the Blue or Brown author wrote it. Because of a coding error in the survey logic, some participants saw a text that did not match text they had seen as part of their condition. Therefore, we do not exclude any participants irrespective of their response.

the midpoint ($M = 3.02$, 95% CI [2.86, 3.18], $t(300) = -6.00$, $p < .001$).

As an additional robustness check, we can also look at how often participants preferred the author of the narrative message. On trust tasks, participants selected the author of the narrative message 55% of the time, which is significantly higher than chance ($\chi^2(1, n = 602) = 7.25$, $p = .007$). Conversely, on the quantitative reasoning tasks, participants selected the narrative author only 36% of the time (less frequently than chance, $\chi^2(1, n = 602) = 49.22$, $p < .001$).

Discussion

In Study 4, we replicated our previous results, again finding that people rate authors of narrative messages as more trustworthy than authors of messages conveying data-driven information. Moreover, we found that participants preferred to work with the author of a narrative message on tasks that relied on trust and benevolence, whereas they preferred the author of data-driven information on tasks that required quantitative reasoning abilities. These results extend our prior findings by demonstrating the organizational implications of our effect. When a task demands trust, individuals are more willing to work with a partner who presented an opposing view in terms of a personal narrative. Furthermore, we also observed a benefit of using data-driven information. Although participants in our previous studies did not rate authors of data-driven messages as more competent on the topic, they did prefer to work with these authors when the task required pattern insight or numeric abilities. Possibly, data-driven messages signaled a comfort with abstraction and numeracy that quantitative reasoning tasks would likely require.

Study 5

In our studies so far, we have carefully crafted messages to provide the reader with the same informational content across data-driven and narrative accounts. The parallel nature of the messages allowed us to causally identify the role of message type. Yet, outside of the

laboratory, people may generate messages that differ substantially in content when recounting personal experiences or when arguing on the basis of data. Can lay people garner the trust benefits that we have documented in our studies by building their arguments around a personal narrative?

For this study, we recruited two sets of participants. First, we recruited undergraduate students and asked them to write about information that informed their view on one of several policy-relevant topics, drawing either on their personal experience or on facts and statistics. Next, we recruited a second set of participants to read these messages and rate the authors' trustworthiness and topic competence. We again predicted that those assigned to write personal narratives would be viewed as more trustworthy.

Method

Participants. We first recruited 514 students as part of an in-person, omnibus study at a large research university (43% Female, $M_{Age} = 20$). These participants were asked to write a message related to a contentious policy topic by drawing either on their personal experience ("Narrative" condition) or on facts and statistics ("Data-driven" condition). We excluded 5 individuals who did not write any text, leaving us with a sample of 509 messages. We then opened recruitment to 700 participants via Lucid, an online panel drawing a sample that is representative of the US population on age, gender, and geographic location (and with considerable heterogeneity on policy attitudes). We did not exclude any participants who completed the survey and ended up with data from 705 participants (51% Female, $M_{Age} = 46$).

Procedure.

Message generation.

The student participants reported their agreement with statements related to 5 politically controversial issues (Table 3) on 7-point Likert scales ranging from "Strongly

disagree” to “Strongly agree.” We then randomly assigned participants to write either about how their belief was informed by factual information (Data-driven condition) or by their personal experience (Narrative condition). We allowed participants to choose the topic they wanted to write about (in order to avoid poor quality messages that might have resulted from participants being forced to write on unfamiliar topics) and asked them to write for a minimum of 7 minutes. Participants who were assigned to the Data-driven condition had access to Google in order to search for supporting information.

Message evaluation.

We randomly assigned participants from the Lucid online panel to one of the policy issues used in the study and asked them to report their agreement with the relevant policy statement (using a 7-point Likert scale ranging from “Strongly disagree” to “Strongly agree”). We then asked participants to evaluate 4 randomly selected messages related to that statement. The messages were drawn from both conditions and could be in favor or opposed to the position endorsed in the statement.

Participants first evaluated whether the messages adhered to the instructions. In particular, we asked if the message was related to the policy statement (yes/no); whether the author agreed, disagreed, or expressed no view on the issue; whether the message contained an example of a story; and whether the statement relied on objective information. We then asked raters to evaluate the message on 3 dimensions: trustworthiness and topic competence of the author, as well as the rater’s willingness to interact with the author. We measured trust and competence using the same items as before ($\alpha_{\text{Trust}} = 0.72$, $\alpha_{\text{Competence}} = 0.89$). We further asked participants how willing they would be to discuss the topic with the author and how willing they would be to meet with the author, averaging those two responses to create our “willingness-to-interact” measure ($\alpha_{\text{Interact}} = 0.86$).

After participants rated two messages, we introduced an attention check task requiring them to find two numbers adding up to 10 in a 4x4 table. In order to proceed with the study, participants had to answer the attention check correctly. After participants rated all 4 messages, the survey concluded with basic demographic questions.⁶

Results

Message evaluations. More participants in the Narrative condition wrote about Affirmative Action, while the Marijuana topic was more frequently selected by those assigned to writing an argument based on data. Minority policing was rarely selected by either group. Overall, participants wrote more words in the Narrative condition ($\Delta M = 16.95$, 95% CI [3.90, 30.00], $t(507) = 2.55$, $p = .011$), but this difference disappears when we controlled for topic choice ($b = 10.74$, 95% CI [-2.42, 23.90], $t(503) = 1.60$, $p = .110$). We show the number of participants who selected each topic and the average word count of the messages in 4.

Because each rater evaluated four messages, we analyze the results using linear regressions with standard errors clustered at the rater level. Table 5 shows results for our three ratings: author trustworthiness, willingness to interact with the message author, and author topic competence. The first model includes only a condition indicator (narrative vs. factual message), whereas the second model also includes policy agreement between the rater and author as a control.

As predicted, using narratives had a positive effect on ratings of author trustworthiness (Columns 1 and 2). The first column shows that participants evaluated narrative messages as directionally more trustworthy than data-driven arguments ($p = 0.09$). The effect becomes

⁶We originally planned to exclude messages where the majority of raters thought the participant did not follow directions. However, while raters overwhelmingly agreed on what position on the issue the author of the message took, there was substantial disagreement on the two questions relating to the use of data and narratives. Our exclusion criteria would have excluded 121 of 509 messages that, upon review by a research assistant blind to the hypothesis, did comply with the instructions. We report all analyses for the full sample of messages and raters.

significant when we control for whether the rater agreed or disagreed with the author, or had no opinion on the topic ($p = 0.04$). Not surprisingly, raters saw authors as more trustworthy when they agreed with them ($p < 0.001$). The effect size of agreement also provides some context for the effect size of narrative messages. While an increase in ratings of 0.06 scale points may seem small, it is approximately 13% of the effect of going from disagreeing with the author to agreeing with them.

The third and fourth columns show the corresponding regressions for the participant's willingness to meet with the author. Narratives on their own only directionally increase such willingness, but the effect again becomes significant when we control for agreement with the author. Respondents were 0.7 points more willing to meet with someone who agreed with them than someone who disagreed ($p < 0.001$), and 0.09 points more willing if the author used a narrative. Thus, the effect of using a narrative is again about 13% of switching from disagreement to agreement.

Finally, columns five and six show raters' perceptions of how competent about the topic the authors of the messages are judged to be. Consistent with the other two dimensions, we see that participants rate those with whom they agree as more competent than those who hold opposing views ($p < 0.001$). As in our prior studies, we see no effect for condition assignment on topic competence, suggesting that a reliance on narratives versus factual information does not make the author seem less informed.

Natural language analysis. The availability of a large sample of naturalistic messages reliant on personal narratives versus data allows us to examine linguistic differences that might exist when individuals employ these two forms of communication. Specifically, we analyzed our sample of messages to test whether words used in the narrative condition were more likely to be associated with trust than those in the data-driven condition. We use the "NRC" dictionary (Mohammad & Turney, 2013), which consists of over 10,000 words previously rated by people on being associated with one of 6 affective states and positive or

negative sentiment. Importantly for our purposes, one of these states was “trust.” Using the dictionary, we can calculate the proportion of words in the message that had been associated with trust. This includes words such as: school, united, personal, provide, or friend.

To see if words associated with trust occur more frequently in the Narrative versus the Factual condition, we conducted a series of OLS regressions where we used the experimental condition to predict the proportion of trust-related words in the message. Column 1 in Table 6 shows the baseline model that confirms our expectation. The constant shows that in the Factual condition, approximately 12% of words were associated with trust. This proportion increased by 4 percentage points, or approximately 30%, in the Narrative condition ($p < 0.05$).

It may be that messages related to some policy topics are more likely to refer to words associated with trust. Column 2 addresses this concern by adding fixed effects for the statement about which participants wrote. We find that the effect of condition persists ($p < 0.01$). Finally, we had observed that participants in the Narrative condition wrote slightly longer messages and higher fractions of words associated with trust might be a consequence of longer messages. Column 3 includes a fixed effect for word count and suggests the opposite is true: longer messages lead to lower fractions of words related to trust ($p < 0.001$). Importantly for our analysis, however, being assigned to the Narrative condition continues to be associated with a greater share of trust-related words ($p < 0.001$).

Naturalistic messages, of course, can differ on many other dimensions in addition to the presence of trust-related words. It is possible that there is nothing special about trust words and that narratives use a larger proportion of words related to all affective states. Table 7 shows the regression with controls for topic choice and word length for the 5 other affective states in the NLC dictionary, along with the general positive and negative sentiments. Narrative messages relied more on words associated with anticipation and joy, as well as with positive sentiment (all $ps < 0.001$). It is not merely that narrative accounts are

more emotional, however: they relied equally on words associated with anger and fear as factual messages, as well as on words related to negative sentiments. Finally, narratives appeared to rely less on words associated with disgust.

Discussion

Using naturalistic, open-form text responses, we find that raters viewed the writers of narrative messages as more trustworthy than the authors of data-driven messages and were more willing to meet with them. Although not pre-registered, this latter finding is important in that it confirms that greater trust may have important consequences for behaviors required to bridge partisan divides. Holders of opposing views who normally avoid interaction with each other were more willing to meet and discuss contentious topics when a message was not framed in terms of a personal narrative.

Our exploratory sentiment analysis similarly suggested that authors of narrative messages relied more on words that were associated with trust than did authors of factual messages, and that this was not merely a reflection of longer messages or more emotional language.

General Discussion

Across five experiments, we find that people view authors of narrative accounts as more trustworthy than those who use objective, factual, data-driven messages. This finding holds regardless of whether the messages were generated by lay participants (and hence varied on many dimensions) or whether the messages were crafted to precisely parallel each other in content. Narrative messages evoked more trust even though our data-driven information (at least in Studies 1-4 where we had full control over the content) was completely accurate. Authors whose narrative shared a hardship were viewed as more trustworthy than those who argued for a policy because they themselves had benefited from it. Furthermore, combining a personal narrative with data-driven arguments did not dilute the power of the narrative to

evoke perceptions of trustworthiness. We find support for the hypothesis that personal narratives generated feelings of trustworthiness because these self-disclosures revealed the author to be vulnerable. Importantly, these perceptions of trustworthiness translated into real preferences to work with authors of personal narratives on tasks that depended on the partner's trustworthiness and a greater willingness to meet them to discuss relevant issues.

Stories and anecdotes have received substantial interest across the social sciences. Previous work has explored how stories can create engagement with information and change people's attitudes. Politicians and others who seek to persuade frequently draw on anecdotes to influence their audience. In this paper, we drew a distinction between such anecdotes and personal narratives, where the speaker is the subject of the story. Moreover, we examined the importance of narratives beyond persuasion. We found that sharing personal narratives enhanced—a crucial and lacking ingredient for collaboration across ideological disagreement. In the public sphere, building trust may also be a key objective of those seeking to mobilize support among voters: much of their communication may not be intended to persuade, but to build a trusting relationship. For business leaders, having a trustworthy image can be a foundational goal, particularly in turbulent environments where leaders may need followers to trust continually changing directives. Leaders who are more trustworthy are seen as more ethical stewards of their organization's future (Caldwell, Hayes, & Long, 2010) and leadership trustworthiness has been linked to organizational ambidexterity (Purvee & Enkhtuvshin, 2015). Finally, followers who trust their leaders report more job satisfaction (Wang & Satow, 1994).

While our results suggest that increased trustworthiness translates into a greater willingness to work with the author of a personal narrative on tasks requiring trust, future research could examine more specific workplace outcomes that may be associated with use of personal narratives. Are people who disagree with their bosses more willing to work for supervisors who use personal narratives than those who use other types of arguments? Are

supervisors more likely to delegate tasks to those who share personal narratives?

Future work might also examine the attributions people make regarding their colleagues' motivations for sharing personal stories rather than making a point using data. One reason stories might engender more trust is simply because the listener does not judge the speaker as trying to persuade. This is in line with our results regarding the greater perceptions of vulnerability associated with authors of personal narratives. A story-teller seems less likely to be trying to "win" an argument or disabuse the listener of his opposing view than simply revealing her own truth. Although we found stories to be no more or less persuasive than data-driven information (as detailed in the Supplementary Information), listeners of data-driven argument may react more negatively to the speaker because they project more persuasive intent. On the other hand, narrators of a personal story may appear more authentic and benevolent.

Relatedly, future work might explore more fully why use of personal stories as evidence is seen as more credible than evidence grounded in objective data. We note that our trustworthy measure contained not only measures of speaker sincerity but also how much participants believed that speaker's message. As noted above, that listeners might judge a personal story to be more credible than a data driven argument is somewhat ironic since the latter is presumably much easier to verify than the former. Is there a lower threshold for believability in personal stories than for objective facts?

Our work also contributes to the literature on anecdotal information more generally. We show that not stories about experiences evoke comparable perceptions of trustworthiness. Specifically, anecdotes, or stories involving someone other than the author, did not confer the same advantages as did personal narratives involving the author. This speaks to the mechanism for why personal narratives may be effective in the real world: they reveal potentially sensitive information about the person telling the story and it is vulnerable self-disclosure that engenders trust. Because trust is often a reciprocal emotion, and

signaling a trusting nature by revealing personal information, invites trust in return.

Future research might also explore the boundary conditions of our findings. For example, what happens if the personal story is later revealed to be an embellishment of the truth? Do personal narratives increase the trustworthiness if targets know this is the intended purpose of the maneuver? Is there a limit to how personal the narratives should be? Is the effect enhanced in a face-to-face exchange?

Our society is grappling with the presence of unprecedented ideological conflict and some of the consequences have started to spill over into other domains, including work requiring collaboration with those with whom we disagree. Our findings suggest a way to bridge the divide. When disagreements threaten our ability to work with one another, encouraging people to share how their personal experiences have shaped their beliefs may be a simple yet effective tool in promoting understanding and establishing trust.

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Table 1

Data-driven, Narrative, and Narrative First messages opposing an increase in the minimum wage in Study 1. The Data First message and the arguments favoring an increase in the minimum wage are shown in the Supplementary Information.

Data-driven Message	Narrative Message
<p>Increasing the minimum wage hurts the people it's supposed to help and drives up prices.</p>	<p>Increasing the minimum wage hurts the people it's supposed to help and drives up prices.</p>
<p>Seattle raised its minimum wage to \$15 an hour in 2015. Studies found that many businesses run on small margins, so that many have had to lay off employees. One study reported that the number of low and moderate wage jobs available decreased by 10%. Since the minimum wage has changed, some business had to raise prices for their customers. Moreover, one study estimated that it reduced the number of hours employers offered to their workers. Employers also reduced costs by cutting health insurance benefits. Many businesses have shut down because they couldn't afford the increased costs and prices in some stores have gone up.</p>	<p>I used to work for a small family-owned business in Seattle. The city recently raised its minimum wage to \$15 an hour. The place where I worked was barely able to keep the doors open, and after the minimum wage increase they fired some long-time employees, including me. I've been looking for work and really need a job, but most businesses are not hiring because they can't pay the high wages. The jobs that are available are part-time and don't offer benefits, like basic health insurance. At the same time, prices in my neighborhood have gone up, too.</p>
<p>Life for many and for their families has gotten harder as a result.</p>	<p>Life has gotten a lot harder for me and my family.</p>
Narrative First	
<p>Increasing the minimum wage hurts the people it's supposed to help and drives up prices.</p>	
<p>I used to work for a small family-owned business in Seattle. The city recently raised its minimum wage to \$15 an hour. The place where I worked was barely able to keep the doors open, and after the minimum wage increase they fired some long-time employees, including me. I've been looking for work and really need a job, but most businesses are not hiring because they can't pay the high wages. The jobs that are available are part-time and don't offer benefits, like basic health insurance. At the same time, prices in my neighborhood have gone up, too.</p>	
<p>Studies found that many businesses run on small margins, so that many have had to lay off employees. One study reported that the number of low and moderate wage jobs available decreased by 10%. Since the minimum wage has changed, some businesses had to raise prices for their customers. Moreover, one study estimated that it reduced the number of hours employers offered to their workers. Employers also reduced costs by cutting health insurance benefits. Many businesses have shut down because they couldn't afford the increased costs and prices in some stores have gone up.</p>	
<p>Life has gotten a lot harder for me and my family.</p>	

Table 2

Ratings for authors of Study 3 messages. In addition to a main effect of the narrative on trustworthiness, we also see a main effect of the positive frame. Authors of positive messages are generally viewed as less trustworthy.

	Trust	Trust	Competence	Competence
Narrative	0.33*** (0.07)	0.34*** (0.10)	-0.12 (0.07)	-0.03 (0.10)
Anecdote	0.10 (0.07)	0.17 (0.09)	-0.28*** (0.07)	-0.24* (0.09)
Positive Frame	-0.23*** (0.05)	-0.17 (0.09)	-0.17** (0.05)	-0.09 (0.09)
Narrative x Positive Frame		-0.02 (0.13)		-0.17 (0.13)
Anecdote x Positive Frame		-0.15 (0.13)		-0.08 (0.13)
(Intercept)	3.01*** (0.05)	2.98*** (0.07)	2.83*** (0.05)	2.79*** (0.07)
R ²	0.04	0.04	0.02	0.02
Adj. R ²	0.03	0.03	0.02	0.02
Num. obs.	1203	1203	1203	1203

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table 3

Topics in Study 5. *Participants could choose one of the statements and write about how either their personal experience ("Narrative" condition) or factual information ("Data-driven" condition) informed their belief on the topic.*

Topic	Statement
Immigration	The United States should make it a lot more difficult for illegal immigrants to enter and stay in the country.
Marijuana	I support the national legalization of marijuana for medical use.
Minimum Wage	The federal minimum wage should be increased to \$15 per hour.
Minority Policing	The public reaction to recent confrontations between police and minority crime suspects has been overblown.
Affirmative Action	University admissions should never take into account gender or racial characteristics of the students applying, as it is unfair to some students.

Table 4

Choices of message topic and average word count in the Data-driven and Narrative conditions, respectively, in Study 5.

Topic	Data-driven	Narrative
Immigration	N = 35, Average Length = 141	N = 48, Average Length = 175
Marijuana	N = 75, Average Length = 129	N = 38, Average Length = 134
Minimum Wage	N = 71, Average Length = 150	N = 59, Average Length = 150
Minority Policing	N = 14, Average Length = 165	N = 13, Average Length = 162
Affirmative Action	N = 60, Average Length = 165	N = 96, Average Length = 180

Table 5

Messages and their authors rated as part of Study 5. We compare the trustworthiness and competence of a message author, along with a willingness to interact with them, between narrative and data-driven conditions. We see that authors of narratives are viewed as more trustworthy and that people are more interested in interacting with them. Across all dimensions, participants rate people who agree with their position more favorably.

	Trustworthiness	Trustworthiness	Willingness to Interact	Willingness to Interact	Competence	Competence
Narrative	0.05 [†] (0.03)	0.06* (0.03)	0.08 [†] (0.05)	0.09* (0.04)	-0.05 (0.04)	-0.04 (0.04)
Rater Agrees		0.48*** (0.05)		0.70*** (0.07)		0.66*** (0.06)
Rater Has No Opinion		-0.09 (0.06)		-0.01 (0.08)		-0.02 (0.07)
Constant	3.35*** (0.03)	3.12*** (0.05)	2.98*** (0.04)	2.61*** (0.06)	3.16*** (0.04)	2.82*** (0.05)
R ²	0.00	0.09	0.00	0.09	0.00	0.10
Adj. R ²	0.00	0.09	0.00	0.09	0.00	0.10
Num. obs.	2820	2820	2820	2820	2820	2820

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$; [†] $p < 0.1$

Table 6

Authors of messages in the Narrative condition rely more on words associated with trust than do those in the data-driven condition. We show the results of OLS regressions on the fraction of words in a message that were associated with trust words, as a share of all non-stopwords in the message. This effect holds when controlling for choice of topic (Column 2) and word count (Column 3).

	Trust	Trust	Trust
Narrative	0.38 (1.42)	1.41 (1.44)	2.50* (1.27)
Topic: Marijuana		5.58* (2.32)	2.80 (2.06)
Topic: Minimum Wage		4.14 (2.23)	3.22 (1.97)
Topic: Minority Policing		1.00 (3.51)	1.39 (3.10)
Topic: Affirmative Action		-0.25 (2.15)	1.05 (1.90)
Word Count			-0.10*** (0.01)
Constant	12.74*** (1.00)	9.95*** (1.93)	25.61*** (2.14)
R ²	0.00	0.02	0.24
Adj. R ²	-0.00	0.01	0.23
Num. obs.	509	509	509

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Table 7

Columns show the results of OLS regressions on the fraction of words associated with different emotions for messages written by participants in Study 5. Messages in the Narrative condition of Study 5 differed not only in their reliance on words associated with trust, but also with other emotions. Narrative authors used more words associated with anticipation, joy, and positive sentiment, and fewer words associated with disgust. We find no difference in the use of words associated with anger, fear, or negative sentiment.

	Anticipation	Anger	Disgust	Fear	Joy	Positive	Negative
Narrative	1.67*	0.36	0.25	-0.52	1.00	3.85	-0.52
	(0.77)	(0.53)	(0.33)	(0.77)	(0.53)	(2.03)	(1.32)
Topic: Marijuana	1.68	1.20	0.75	1.77	1.17	4.48	3.03
	(1.24)	(0.86)	(0.54)	(1.24)	(0.86)	(3.29)	(2.14)
Topic: Minimum Wage	1.96	1.28	0.80	1.75	1.34	5.13	3.05
	(1.19)	(0.83)	(0.51)	(1.19)	(0.82)	(3.15)	(2.05)
Topic: Minority Policing	0.85	0.53	0.33	0.68	0.57	2.20	1.21
	(1.87)	(1.30)	(0.81)	(1.87)	(1.29)	(4.96)	(3.22)
Topic: Affirmative Action	0.63	0.44	0.27	0.62	0.44	1.68	1.08
	(1.15)	(0.80)	(0.50)	(1.15)	(0.79)	(3.04)	(1.98)
Wordcount	-0.06***	-0.04***	-0.03***	-0.06***	-0.04***	-0.16***	-0.11***
	(0.01)	(0.00)	(0.00)	(0.01)	(0.00)	(0.01)	(0.01)
Constant	15.26***	11.46***	7.11***	17.60***	10.70***	41.10***	29.88***
	(1.29)	(0.90)	(0.56)	(1.29)	(0.89)	(3.43)	(2.23)
R ²	0.24	0.25	0.25	0.27	0.24	0.24	0.26
Adj. R ²	0.23	0.24	0.24	0.26	0.23	0.23	0.25
Num. obs.	509	509	509	509	509	509	509

*** $p < 0.001$; ** $p < 0.01$; * $p < 0.05$

Appendix A
Supplementary Analysis

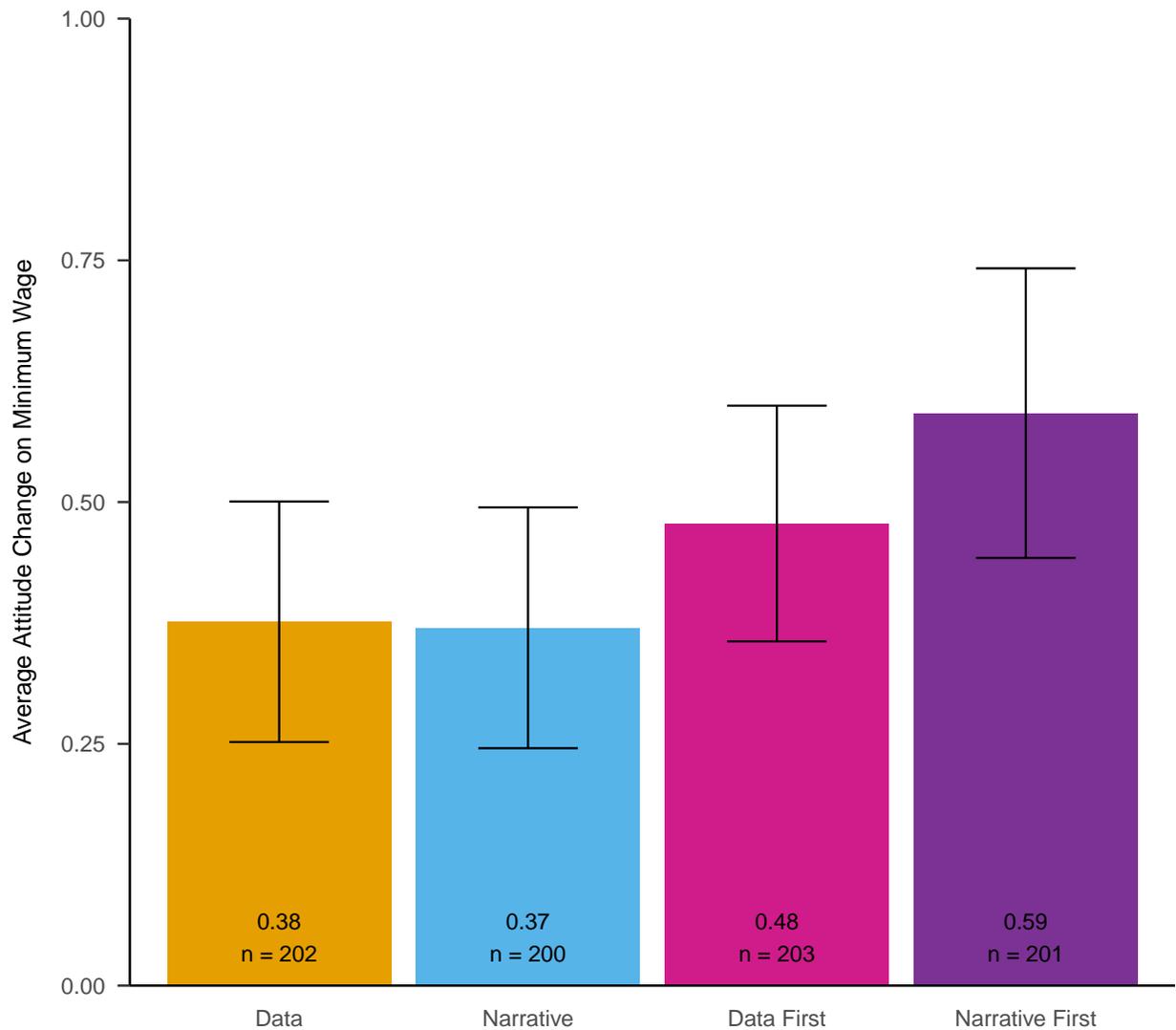


Figure A1. Changes in attitude on a minimum wage increase in Study 1. In all conditions, participants on average shifted their position in the direction of the argument. Participants in the Narrative First condition, moreover, were persuaded significantly more than those in the Data only and Narrative only conditions. No other comparisons are statistically significant.

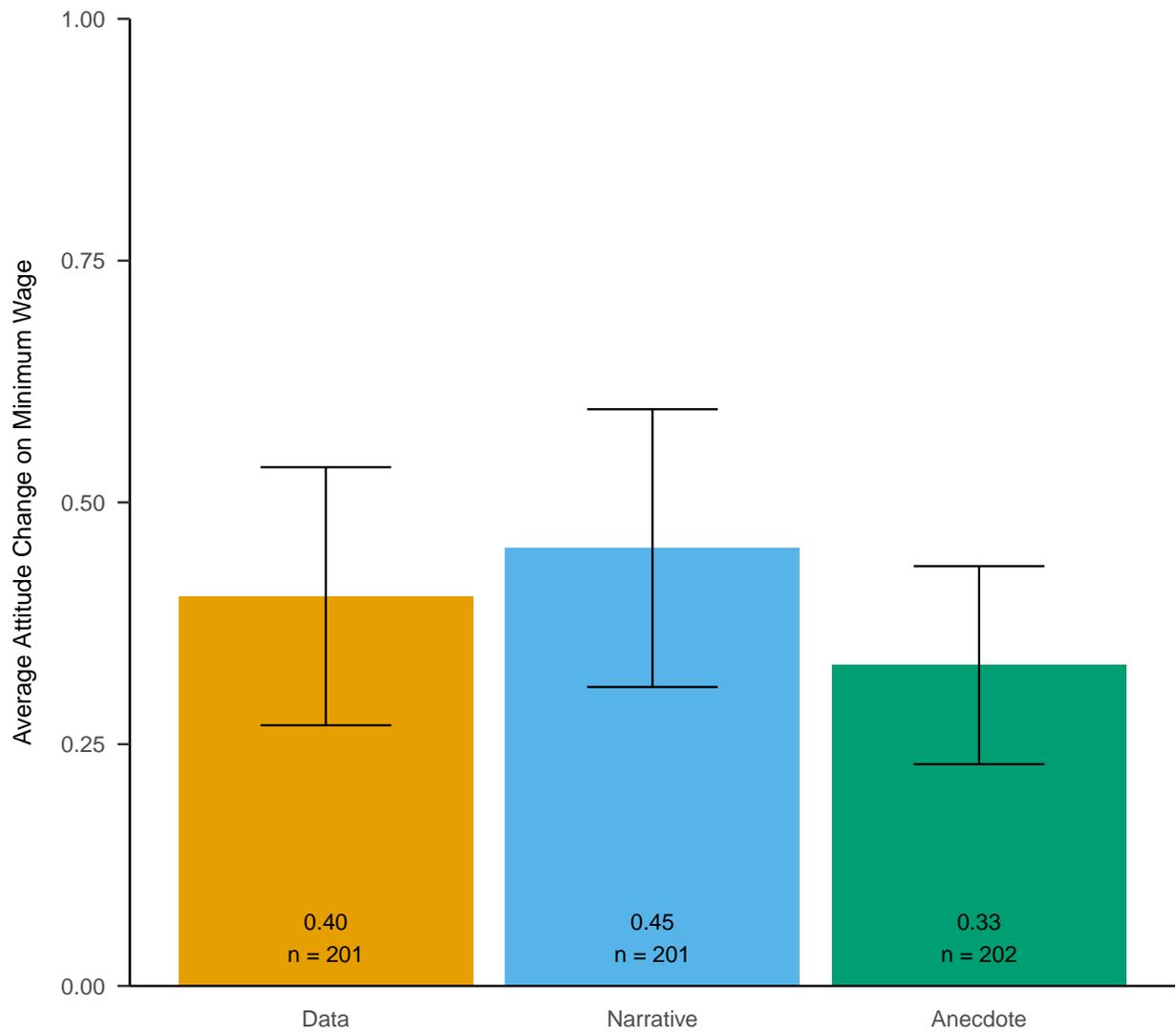


Figure A2. Changes in attitude on a minimum wage increase in Study 2. In all conditions, participants on average shifted their position in the direction of the argument. There were no significant differences across experimental conditions.

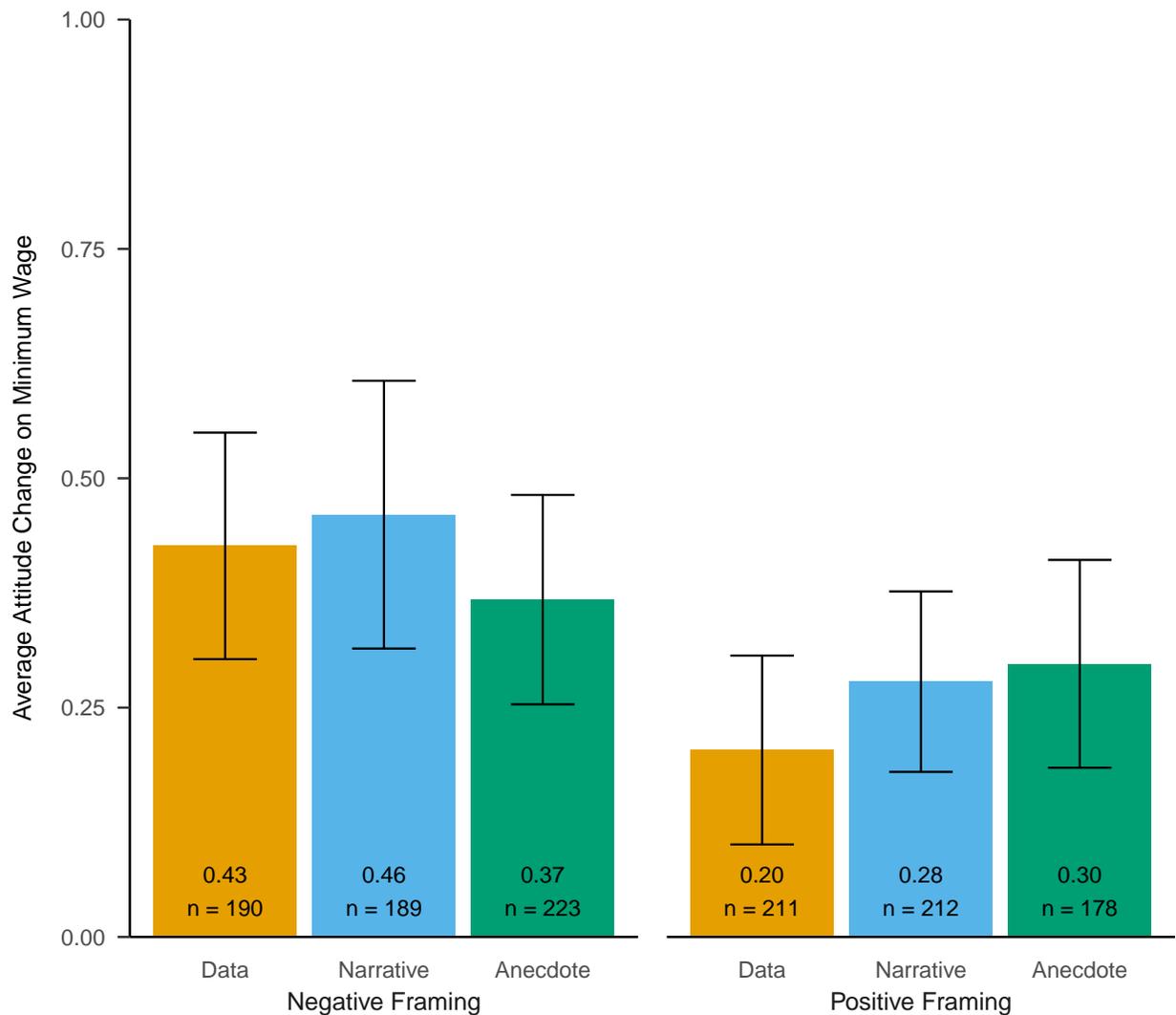


Figure A3. Changes in attitude on a minimum wage increase in Study 3. In all conditions, participants on average shifted their position in the direction of the argument. There were no significant differences across the different message types. Overall, participants in the Negative Framing condition shifted their attitudes more than did those in the Positive Framing condition.

Appendix B

Experimental Materials

Study 1

Instructions and Comprehension Quiz

To participate in this study, you will be asked a comprehension quiz on the instructions to show that you have read them. If you fail the comprehension check, you will not be eligible to continue with the study.



Figure B1. Screen 1.

Instructions

In this study, we are interested in your perception of wages and employment in the United States. The study consists of two parts:

In **Part 1**, we will present you with statements related to employment and wages. We would like to know to what extent you agree or disagree with them.

In **Part 2**, we will present you with information (a short text) relating to employment and wages in the United States. We would like to get your opinion about the text as well as your perception of the author.

On the next screen, you will be asked a brief comprehension check to ensure that you have read and understood these instructions. If you answer all questions correctly, you will be eligible to proceed with the study. Otherwise, the survey will end.



Figure B2. Screen 2.

Comprehension Check

This study most closely relates to the topic of...

Employment
Investment decisions
Immigration
Health care

In the first part of the study, you will be asked to...

Make choices about how to invest money
Write a message to another participant
Express your agreement or disagreement with a series of statements
Guess whether statements are true or false

In the second part of the study, you will be asked to...

Write a message to another participant
Complete a personality quiz
Make choices between different products
Express your opinion about a text and its author



Figure B3. Screen 3.

You have answered all questions correctly and are eligible to participate in this study.

On the next page, Part 1 of the study will begin.



Figure B4. Screen 4.

Part 1

In this part, we would like to get your opinion about policies related to employment and wages in the United States.

For each of the statements below, please tell us how much you agree or disagree. There is no "correct" answer. We are simply interested in your opinion.

The federal government should increase the minimum wage to \$15 an hour.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
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There should be fewer regulations for small businesses.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
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Most workers would be better off if they were part of a union.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to increase the number of people who can find work, even if that work is only part-time.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to help people find full time employment with good working conditions, even if that means fewer people will be employed.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------



Figure B5. Screen 5.

Part 2

In this second part, we will present you with a message relating to the minimum wage in the United States.

We will ask you about your perception of the text as well as the author of the text. Again, there is no “correct” answer.



Figure B6. Screen 6.

Below is the message related to the minimum wage in the United States:

"Increasing the minimum wage hurts the people it's supposed to help and drives up prices.

I used to work for a small family-owned business in Seattle. The city recently raised its minimum wage to \$15 an hour. The place where I worked was barely able to keep the doors open, and after the minimum wage increase they fired some long-time employees, including me. I've been looking for work and really need a job, but most businesses are not hiring because they can't pay the high wages. The jobs that are available are part-time and don't offer benefits, like basic health insurance. At the same time, prices in my neighborhood have gone up, too.

Studies found that many businesses run on small margins, so that many have had to lay off employees. One study reported that the number of low and moderate wage jobs available decreased by 10%. Since the minimum wage has changed, some business had to raise prices for their customers. Moreover, one study estimated that it reduced the number of hours employers offered to their workers. Employers also reduced costs by cutting health insurance benefits. Many businesses have shut down because they couldn't afford the increased costs and prices in some stores have gone up.

Life has gotten a lot harder for me and my family."

How trustworthy do you think that the author of the message is?

Not at all trustworthy	Slightly trustworthy	Somewhat trustworthy	Very trustworthy	Extremely trustworthy
------------------------	----------------------	----------------------	------------------	-----------------------

How sincere do you think that the author of the message is?

Not at all sincere	Slightly sincere	Somewhat sincere	Very sincere	Extremely sincere
--------------------	------------------	------------------	--------------	-------------------

How likely do you believe the information in this text is to be true?

Not at all likely	Slightly likely	Somewhat likely	Very likely	Extremely likely
-------------------	-----------------	-----------------	-------------	------------------

How misleading do you think the information in this text is?

Not at all misleading	Slightly misleading	Somewhat misleading	Very misleading	Extremely misleading
-----------------------	---------------------	---------------------	-----------------	----------------------

How knowledgeable do you believe that the author of this message is?

Not at all knowledgeable	Slightly knowledgeable	Somewhat knowledgeable	Very knowledgeable	Extremely knowledgeable
--------------------------	------------------------	------------------------	--------------------	-------------------------

How informed do you believe the author of this message is on the topic of the minimum wage?

Not at all informed	Slightly informed	Somewhat informed	Very informed	Extremely informed
---------------------	-------------------	-------------------	---------------	--------------------



Figure B7. Screen 7.



Figure B8. Full set of messages. Left column shows messages opposing an increase in the minimum wage and right column shows those favoring an increase. The rows show the messages displayed in the data-driven, the narrative, the data-first, and the narrative-first conditions.

Now that you have had a chance to read a text related to the minimum wage, we'd like to again ask you the questions from Part 1.

It may be that you found the information to be compelling, or you may already have been aware of the information. Moreover, you may have found yourself agreeing or disagreeing with the information in the text. As a result, your views may have changed or they may have remained unchanged.

In either case, we would like you to again respond to the same statements and indicate the extent to which you agree or disagree with each of them.



Figure B9. Screen 8.

For each of the statements below, please tell us how much you agree or disagree. There is no "correct" answer. We are simply interested in your opinion.

The federal government should increase the minimum wage to \$15 an hour.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

There should be fewer regulations for small businesses.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

Most workers would be better off if they were part of a union.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to increase the number of people who can find work, even if that work is only part-time.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to help people find full time employment with good working conditions, even if that means fewer people will be employed.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------



Figure B10. Screen 9.

Finally, we would like to ask you some demographic questions.

Gender

Male	Female	Other
------	--------	-------

Age

Ethnicity

White	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Pacific Islander	Other
-------	---------------------------	----------------------------------	-------	-------------------------------------	-------

What is the highest level of education you have completed?

Less than high school	High school graduate	Some college	2 year degree	4 year degree	Professional or Masters degree	Doctoral degree
-----------------------	----------------------	--------------	---------------	---------------	--------------------------------	-----------------



Figure B11. Screen 10.

Which of the following best describes your political ideology?

Very liberal	Somewhat liberal	Slightly liberal	Neither liberal nor conservative	Slightly conservative	Somewhat conservative	Very conservative
--------------	------------------	------------------	----------------------------------	-----------------------	-----------------------	-------------------

Which of the following best describes your political party affiliation?

Strongly Democrat
Somewhat Democrat
Slightly Democrat
Middle of the road
Slightly Republican
Somewhat Republican
Strongly Republican
None of the above



Figure B12. Screen 11.

Thank you for completing this study!

On the next screen you will see your unique completion code.

Do you have any comments for the researchers? (optional)



Figure B13. Screen 12.

Study 2

Instructions and Comprehension Quiz

To participate in this study, you will be asked a comprehension quiz on the instructions to show that you have read them. If you fail the comprehension check, you will not be eligible to continue with the study.



Figure B14. Screen 1.

Instructions

In this study, we are interested in your perception of wages and employment in the United States. The study consists of two parts:

In **Part 1**, we will present you with statements related to employment and wages. We would like to know to what extent you agree or disagree with them.

In **Part 2**, we will present you with information (a short text) relating to employment and wages in the United States. We would like to get your opinion about the text as well as your perception of the author.

On the next screen, you will be asked a brief comprehension check to ensure that you have read and understood these instructions. If you answer all questions correctly, you will be eligible to proceed with the study. Otherwise, the survey will end.



Figure B15. Screen 2.

Comprehension Check

This study most closely relates to the topic of...

Immigration
Health care
Employment
Investment decisions

In the first part of the study, you will be asked to...

Write a message to another participant
Make choices about how to invest money
Guess whether statements are true or false
Express your agreement or disagreement with a series of statements

In the second part of the study, you will be asked to...

Complete a personality quiz
Write a message to another participant
Make choices between different products
Express your opinion about a text and its author



Figure B16. Screen 3.

You have answered all questions correctly and are eligible to participate in this study.

On the next page, Part 1 of the study will begin.



Figure B17. Screen 4.

Part 1

In this part, we would like to get your opinion about policies related to employment and wages in the United States.

For each of the statements below, please tell us how much you agree or disagree. There is no "correct" answer. We are simply interested in your opinion.

The federal government should increase the minimum wage to \$15 an hour.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

There should be fewer regulations for small businesses.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

Most workers would be better off if they were part of a union.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to increase the number of people who can find work, even if that work is only part-time.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to help people find full time employment with good working conditions, even if that means fewer people will be employed.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------



Figure B18. Screen 5.

Part 2

In this second part, we will present you with a message relating to the minimum wage in the United States.

We will ask you about your perception of the text as well as the author of the text. Again, there is no "correct" answer.



Figure B19. Screen 6.

Below is the message related to the minimum wage in the United States:

"The minimum wage should be increased, because it benefits working families who need all the help they can get.

I work in Chicago, where the minimum wage is \$12 an hour. Losing the fight to earn a living wage means I won't be able to afford living in the city I grew up in anymore. I struggle to take care of living expenses like groceries and cover the copay of prescriptions. I have to resort to payday loans to make ends meet, paying as much as 400% in interest. Life for me and my family is a constant struggle and it's all because the city I live in just doesn't look out for working people. Nobody should have to work for a wage they can't live on."

How much do you feel you have learned about the author?

Learned nothing about the author	Learned a slight amount about the author	Learned some amount about the author	Learned a lot about the author	Learned a great deal about the author
----------------------------------	--	--------------------------------------	--------------------------------	---------------------------------------

How much information that people typically consider private did the author reveal in this message?

No private information at all	Slight amount of private information	Some private information	A lot of private information	A great deal of private information
-------------------------------	--------------------------------------	--------------------------	------------------------------	-------------------------------------

How embarrassed would the author of this text be to make this statement publicly.

Not at all embarrassed	Slightly embarrassed	Somewhat embarrassed	Very embarrassed	Extremely embarrassed
------------------------	----------------------	----------------------	------------------	-----------------------



Figure B20. Screen 7.

We have a few more questions related to the message you have just read. Below, you will see the same message again for your reference.

"The minimum wage should be increased, because it benefits working families who need all the help they can get.

I work in Chicago, where the minimum wage is \$12 an hour. Losing the fight to earn a living wage means I won't be able to afford living in the city I grew up in anymore. I struggle to take care of living expenses like groceries and cover the copay of prescriptions. I have to resort to payday loans to make ends meet, paying as much as 400% in interest. Life for me and my family is a constant struggle and it's all because the city I live in just doesn't look out for working people. Nobody should have to work for a wage they can't live on."

How trustworthy do you think that the author of the message is?

Not at all trustworthy	Slightly trustworthy	Somewhat trustworthy	Very trustworthy	Extremely trustworthy
------------------------	----------------------	----------------------	------------------	-----------------------

How sincere do you think that the author of the message is?

Not at all sincere	Slightly sincere	Somewhat sincere	Very sincere	Extremely sincere
--------------------	------------------	------------------	--------------	-------------------

How likely do you believe the information in this text is to be true?

Not at all likely	Slightly likely	Somewhat likely	Very likely	Extremely likely
-------------------	-----------------	-----------------	-------------	------------------

How misleading do you think the information in this text is?

Not at all misleading	Slightly misleading	Somewhat misleading	Very misleading	Extremely misleading
-----------------------	---------------------	---------------------	-----------------	----------------------

How knowledgeable do you believe that the author of this message is?

Not at all knowledgeable	Slightly knowledgeable	Somewhat knowledgeable	Very knowledgeable	Extremely knowledgeable
--------------------------	------------------------	------------------------	--------------------	-------------------------

How informed do you believe the author of this message is on the topic of the minimum wage?

Not at all informed	Slightly informed	Somewhat informed	Very informed	Extremely informed
---------------------	-------------------	-------------------	---------------	--------------------

[Next](#)

Figure B21. Screen 8.

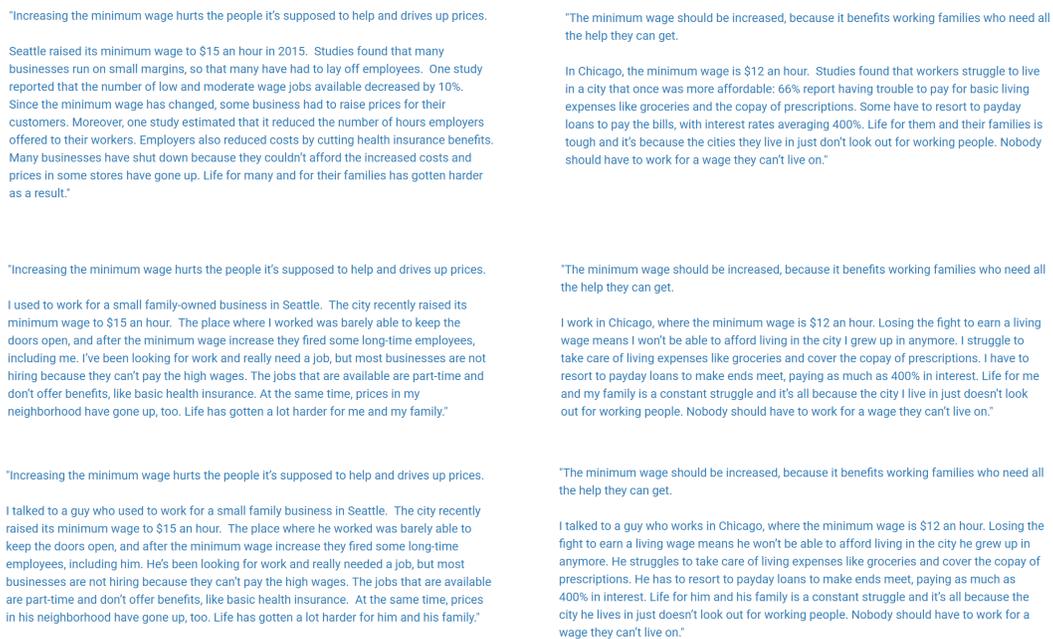
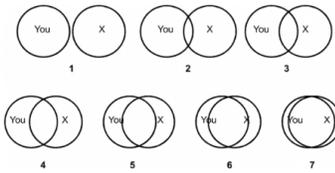


Figure B22. Full set of messages. Each column shows a message direction (in favor or opposed to the minimum wage increase). Each row shows one of the message types (Data-driven, Narrative, Anecdote).

Finally, we would like you to think about how close you feel to the author of the message.

Below, you see pictures of two circles. The pictures differ in the extent to which the circles overlap, ranging from not at all overlapping (1) to overlapping almost entirely (7).



Please think of the author of the message you have just read as "X" and select the picture below that most closely resembles how close you feel to the author of this message.

1

2

3

4

5

6

7



Figure B23. Screen 9.

Now that you have had a chance to read a text related to the minimum wage, we'd like to again ask you the questions from Part 1.

It may be that you found the information to be compelling, or you may already have been aware of the information. Moreover, you may have found yourself agreeing or disagreeing with the information in the text. As a result, your views may have changed or they may have remained unchanged.

In either case, we would like you to again respond to the same statements and indicate the extent to which you agree or disagree with each of them.



Figure B24. Screen 10.

For each of the statements below, please tell us how much you agree or disagree. There is no "correct" answer. We are simply interested in your opinion.

The federal government should increase the minimum wage to \$15 an hour.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

There should be fewer regulations for small businesses.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

Most workers would be better off if they were part of a union.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to increase the number of people who can find work, even if that work is only part-time.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to help people find full time employment with good working conditions, even if that means fewer people will be employed.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------



Figure B25. Screen 11.

Finally, we would like to ask you some demographic questions.

Gender

Male	Female	Other
------	--------	-------

Age

Ethnicity

White	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Pacific Islander	Other
-------	---------------------------	----------------------------------	-------	-------------------------------------	-------

What is the highest level of education you have completed?

Less than high school	High school graduate	Some college	2 year degree	4 year degree	Professional or Masters degree	Doctoral degree
-----------------------	----------------------	--------------	---------------	---------------	--------------------------------	-----------------



Figure B26. Screen 12.

Which of the following best describes your political ideology?

Very liberal	Somewhat liberal	Slightly liberal	Neither liberal nor conservative	Slightly conservative	Somewhat conservative	Very conservative
--------------	------------------	------------------	----------------------------------	-----------------------	-----------------------	-------------------

Which of the following best describes your political party affiliation?

Strongly Democrat
Somewhat Democrat
Slightly Democrat
Middle of the road
Slightly Republican
Somewhat Republican
Strongly Republican
None of the above



Figure B27. Screen 13.

Thank you for completing this study!

On the next screen you will see your unique completion code.

Do you have any comments for the researchers? (optional)



Figure B28. Screen 14.

Study 3

Instructions and Comprehension Quiz

To participate in this study, you will be asked a comprehension quiz on the instructions to show that you have read them. If you fail the comprehension check, you will not be eligible to continue with the study.



Figure B29. Screen 1.

Instructions

In this study, we are interested in your perception of wages and employment in the United States. The study consists of two parts:

In **Part 1**, we will present you with statements related to employment and wages. We would like to know to what extent you agree or disagree with them.

In **Part 2**, we will present you with information (a short text) relating to employment and wages in the United States. We would like to get your opinion about the text as well as your perception of the author.

On the next screen, you will be asked a brief comprehension check to ensure that you have read and understood these instructions. If you answer all questions correctly, you will be eligible to proceed with the study. Otherwise, the survey will end.



Figure B30. Screen 2.

Comprehension Check

This study most closely relates to the topic of...

Investment decisions
Health care
Immigration
Employment

In the first part of the study, you will be asked to...

Express your agreement or disagreement with a series of statements
Write a message to another participant
Guess whether statements are true or false
Make choices about how to invest money

In the second part of the study, you will be asked to...

Express your opinion about a text and its author
Write a message to another participant
Make choices between different products
Complete a personality quiz



Figure B31. Screen 3.

You have answered all questions correctly and are eligible to participate in this study.

On the next page, Part 1 of the study will begin.



Figure B32. Screen 4.

Part 1

In this part, we would like to get your opinion about policies related to employment and wages in the United States.

For each of the statements below, please tell us how much you agree or disagree. There is no "correct" answer. We are simply interested in your opinion.

The federal government should increase the minimum wage to \$15 an hour.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

There should be fewer regulations for small businesses.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

Most workers would be better off if they were part of a union.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to increase the number of people who can find work, even if that work is only part-time.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to help people find full time employment with good working conditions, even if that means fewer people will be employed.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------



Figure B33. Screen 5.

Part 2

In this second part, we will present you with a message relating to the minimum wage in the United States.

We will ask you about your perception of the text as well as the author of the text. Again, there is no “correct” answer.



Figure B34. Screen 6.

"Increasing the minimum wage hurts the people it's supposed to help and drives up prices.

I talked to a guy who used to work for a small family business in Seattle. The city recently raised its minimum wage to \$15 an hour. The place where he worked was barely able to keep the doors open, and after the minimum wage increase they fired some long-time employees, including him. He's been looking for work and really needed a job, but most businesses are not hiring because they can't pay the high wages. The jobs that are available are part-time and don't offer benefits, like basic health insurance. At the same time, prices in his neighborhood have gone up, too. Life has gotten a lot harder for him and his family."

How trustworthy do you think that the author of the message is?

Not at all trustworthy	Slightly trustworthy	Somewhat trustworthy	Very trustworthy	Extremely trustworthy
------------------------	----------------------	----------------------	------------------	-----------------------

How sincere do you think that the author of the message is?

Not at all sincere	Slightly sincere	Somewhat sincere	Very sincere	Extremely sincere
--------------------	------------------	------------------	--------------	-------------------

How likely do you believe the information in this text is to be true?

Not at all likely	Slightly likely	Somewhat likely	Very likely	Extremely likely
-------------------	-----------------	-----------------	-------------	------------------

How misleading do you think the information in this text is?

Not at all misleading	Slightly misleading	Somewhat misleading	Very misleading	Extremely misleading
-----------------------	---------------------	---------------------	-----------------	----------------------

How knowledgeable do you believe that the author of this message is?

Not at all knowledgeable	Slightly knowledgeable	Somewhat knowledgeable	Very knowledgeable	Extremely knowledgeable
--------------------------	------------------------	------------------------	--------------------	-------------------------

How informed do you believe the author of this message is on the topic of the minimum wage?

Not at all informed	Slightly informed	Somewhat informed	Very informed	Extremely informed
---------------------	-------------------	-------------------	---------------	--------------------



Figure B35. Screen 7.

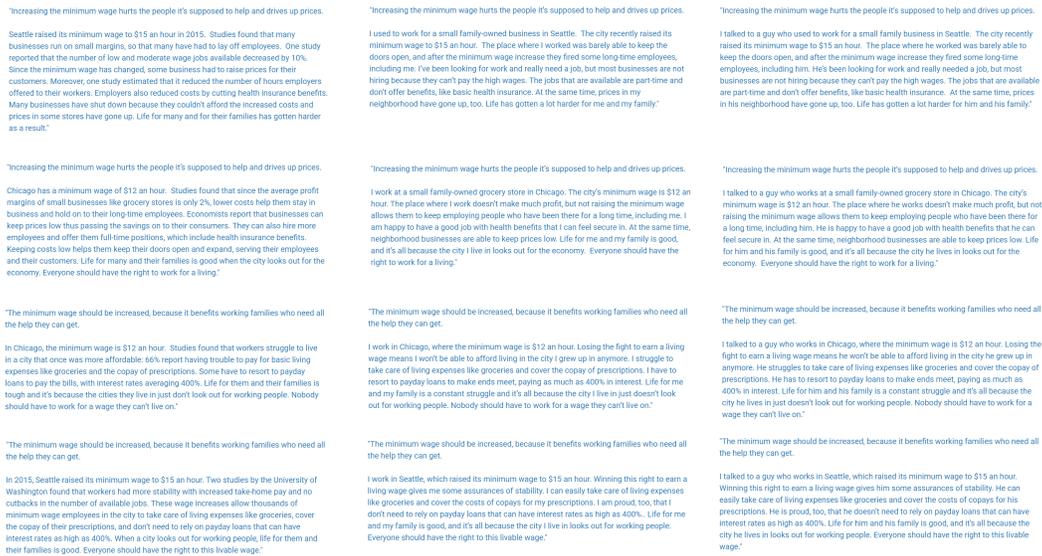


Figure B36. Full set of messages. Each column shows a message type (Data-driven, Narrative, Anecdote). The first two rows show the the negative and positive framings of messages opposing a minimum wage increase. The third and fourth rows show the negative and positive framings of messages supporting an increase in the minimum wage.

Now that you have had a chance to read a text related to the minimum wage, we'd like to again ask you the questions from Part 1.

It may be that you found the information to be compelling, or you may already have been aware of the information. Moreover, you may have found yourself agreeing or disagreeing with the information in the text. As a result, your views may have changed or they may have remained unchanged.

In either case, we would like you to again respond to the same statements and indicate the extent to which you agree or disagree with each of them.



Figure B37. Screen 8.

For each of the statements below, please tell us how much you agree or disagree. There is no "correct" answer. We are simply interested in your opinion.

The federal government should increase the minimum wage to \$15 an hour.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

There should be fewer regulations for small businesses.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

Most workers would be better off if they were part of a union.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to increase the number of people who can find work, even if that work is only part-time.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to help people find full time employment with good working conditions, even if that means fewer people will be employed.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------



Figure B38. Screen 9.

Finally, we would like to ask you some demographic questions.

Gender

Male	Female
------	--------

Age

Ethnicity

White	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Pacific Islander	Other
-------	---------------------------	----------------------------------	-------	-------------------------------------	-------

What is the highest level of education you have completed?

Less than high school	High school graduate	Some college	2 year degree	4 year degree	Professional or Masters degree	Doctoral degree
-----------------------	----------------------	--------------	---------------	---------------	--------------------------------	-----------------



Figure B39. Screen 10.

Which of the following best describes your political ideology?

Very liberal	Somewhat liberal	Slightly liberal	Neither liberal nor conservative	Slightly conservative	Somewhat conservative	Very conservative
--------------	------------------	------------------	----------------------------------	-----------------------	-----------------------	-------------------

Which of the following best describes your political party affiliation?

Strongly Democrat
Somewhat Democrat
Slightly Democrat
Middle of the road
Slightly Republican
Somewhat Republican
Strongly Republican
None of the above



Figure B40. Screen 11.

Thank you for completing this study!

On the next screen you will see your unique completion code.

Do you have any comments for the researchers? (optional)



Figure B41. Screen 12.

Study 4

Instructions and Comprehension Quiz

To participate in this study, you will be asked a comprehension quiz on the instructions to show that you have read them. If you fail the comprehension check, you will not be eligible to continue with the study.



Figure B42. Screen 1.

Instructions

Welcome to this study! This study consists of two parts.

In **Part 1**, we would like to get your opinion on a series of statements related to employment in the United States.

In **Part 2**, we will show you two messages about the topics. We will then introduce you to a number of tasks. For each task, we will ask you which of the two authors of those messages you would rather work with.

On the next screen, you will be asked a brief comprehension check to ensure that you have read and understood these instructions. If you answer all questions correctly, you will be eligible to proceed with the study. Otherwise, the survey will end.



Figure B43. Screen 2.

Comprehension Check

This study most closely relates to the topics of...

- Employment
- Immigration
- Crime
- Investment decisions

In the first part of the study, you will be asked to...

- Make choices about how to invest money
- Guess whether statements are true or false
- Write a message to another participant
- Express your opinion on a series of statements

In the second part of the study, you will be asked to...

- Choose one of two people you want to work with
- Write a message to another participant
- Complete a personality quiz
- Make choices between different products



Figure B44. Screen 3.

You have answered all questions correctly and are eligible to participate in this study.

On the next page, Part 1 of the study will begin.



Figure B45. Screen 4.

Part 1

In this part, we would like to get your opinion about policies related to employment in the United States.

For each of the statements below, please tell us how much you agree or disagree. There is no "correct" answer. We are simply interested in your opinion.

The federal government should increase the minimum wage to \$15 an hour.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

There should be fewer regulations for small businesses.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

Most workers would be better off if they were part of a union.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to increase the number of people who can find work, even if that work is only part-time.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------

The goal for policymakers should be to help people find full time employment with good working conditions, even if that means fewer people will be employed.

Strongly disagree	Disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Agree	Strongly agree
-------------------	----------	-------------------	----------------------------	----------------	-------	----------------



Figure B46. Screen 5.

Part 2

In this second part, we will show you two messages relating to the minimum wage in the United States written by other people.

You will then learn about 4 tasks. For each of the tasks, we will ask you which writer you'd rather collaborate with.



Figure B47. Screen 6.

The first message was written by the "Blue" author:

"Working class families have suffered higher prices since minimum wage increases went into effect, decreasing their quality of life. San Jose increased its minimum wage to \$15 an hour. Studies found that customers are paying significantly higher prices, particularly in restaurants and grocery stores where labor costs go up. These price increases hit low-income workers the most; people who already don't spend much on luxuries, but now had to cut back on going out altogether. These changes make it difficult for families to pay for life's little pleasures."

How trustworthy do you think that the author of the message is?

Not at all trustworthy	Slightly trustworthy	Somewhat trustworthy	Very trustworthy	Extremely trustworthy
------------------------	----------------------	----------------------	------------------	-----------------------

How sincere do you think that the author of the message is?

Not at all sincere	Slightly sincere	Somewhat sincere	Very sincere	Extremely sincere
--------------------	------------------	------------------	--------------	-------------------

How likely do you believe the information in this text is to be true?

Not at all likely	Slightly likely	Somewhat likely	Very likely	Extremely likely
-------------------	-----------------	-----------------	-------------	------------------

How informed do you believe the author of this message is on the topic of the minimum wage?

Not at all informed	Slightly informed	Somewhat informed	Very informed	Extremely informed
---------------------	-------------------	-------------------	---------------	--------------------

How misleading do you think the information in this text is?

Not at all misleading	Slightly misleading	Somewhat misleading	Very misleading	Extremely misleading
-----------------------	---------------------	---------------------	-----------------	----------------------

How knowledgeable do you believe that the author of this message is?

Not at all knowledgeable	Slightly knowledgeable	Somewhat knowledgeable	Very knowledgeable	Extremely knowledgeable
--------------------------	------------------------	------------------------	--------------------	-------------------------



Figure B48. Screen 7.

The second message was written by the "Brown" author:

"Increasing the minimum wage hurts the minimum wage workers, like me, who get laid off. I used to work for a small family-owned business in Seattle. The city recently raised its minimum wage to \$15 an hour. The place where I worked was barely able to keep the doors open, and after the minimum wage increase they fired some long-time employees, including me. I've been looking for work and really need a job, but most businesses are not hiring because they can't pay the high wages. The jobs that are available are part-time and don't offer benefits, like basic health insurance. Life for me and my family has gotten harder as a result."

How trustworthy do you think that the author of the message is?

Not at all trustworthy	Slightly trustworthy	Somewhat trustworthy	Very trustworthy	Extremely trustworthy
------------------------	----------------------	----------------------	------------------	-----------------------

How sincere do you think that the author of the message is?

Not at all sincere	Slightly sincere	Somewhat sincere	Very sincere	Extremely sincere
--------------------	------------------	------------------	--------------	-------------------

How likely do you believe the information in this text is to be true?

Not at all likely	Slightly likely	Somewhat likely	Very likely	Extremely likely
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How misleading do you think the information in this text is?

Not at all misleading	Slightly misleading	Somewhat misleading	Very misleading	Extremely misleading
-----------------------	---------------------	---------------------	-----------------	----------------------

How knowledgeable do you believe that the author of this message is?

Not at all knowledgeable	Slightly knowledgeable	Somewhat knowledgeable	Very knowledgeable	Extremely knowledgeable
--------------------------	------------------------	------------------------	--------------------	-------------------------

How informed do you believe the author of this message is on the topic of the minimum wage?

Not at all informed	Slightly informed	Somewhat informed	Very informed	Extremely informed
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Figure B49. Screen 8.

"Increasing the minimum wage will help working families meet their basic monthly expenses. In Chicago, the minimum wage is \$12 an hour. Studies found that workers struggle to live in a city they have lived in for years: 43% report having trouble affording basic living expenses like groceries and prescription copays. Some have to resort to payday loans to pay the bills, with interest rates averaging 400%. Nobody should have to work for a wage they can't live on."

"Increasing the minimum wage will help families like mine by not forcing both me and my spouse to juggle multiple jobs. In Phoenix, where I live, the minimum wage is \$11 an hour. My spouse and I find it hard to live in this city that we call home, even with both of us working two jobs. We both hold down second jobs in order to make ends meet. It's really stressful to manage two jobs with shift schedules that change weekly and on top of that try to figure out who picks up the kids each day from aftercare. Our government doesn't understand the stress of juggling multiple jobs"

"Increasing the minimum wage hurts the minimum wage workers who get laid off. Seattle raised its minimum wage to \$15 an hour in 2015. Studies found that many businesses run on small margins, meaning many have had to lay off employees. One study reported that the number of low and moderate wage jobs decreased by 10%, and another study estimated that it reduced the number of hours businesses offered to their workers. Businesses also reduced costs by cutting health insurance benefits. Life for many and for their families has gotten harder as a result."

"Working class families have suffered higher prices since minimum wage increases went into effect, decreasing their quality of life. San Jose increased its minimum wage to \$15 an hour. Studies found that customers are paying significantly higher prices, particularly in restaurants and grocery stores where labor costs go up. These price increases hit low-income workers the most: people who already don't spend much on luxuries, but now had to cut back on going out altogether. These changes make it difficult for families to pay for life's little pleasures."

"Increasing the minimum wage will help families by not forcing both parents to juggle multiple jobs. In Phoenix, the minimum wage is \$11 an hour. Studies found that even families with two working parents find it hard to live in this city that they have lived in for years. Many have to juggle multiple jobs—one PEW survey found that 46% of families report having at least two jobs to make ends meet. And 40% of working mothers report always being stressed, because they have to figure out how to coordinate weekly work schedules and childcare. Life for them and their families is a constant struggle and it's because local governments don't understand the stress of juggling multiple jobs"

"Increasing the minimum wage will help working families like mine meet our basic monthly expenses. I work in Chicago, where the minimum wage is \$12 an hour. I struggle to earn enough for me and my family to live in this city we call home. Sometimes we cannot afford basic living expenses like groceries and prescription copays. We have had to resort to payday loans to pay the bills, paying as much as 400% in interest. We shouldn't have to work for a wage we can't live on."

"Working class families like mine have suffered higher prices since minimum wage increases went into effect, decreasing our quality of life. The city where I live, San Jose, increased its minimum wage to \$15 an hour. As a result, me and my family are paying higher prices for basic services that we used to take for granted. Prices of groceries and restaurant meals have gone up. This hits families like ours the most: we don't spend much on luxuries, but we had to cut back on going out altogether. These changes make it difficult for us to pay for life's little pleasures."

"Increasing the minimum wage hurts the minimum wage workers, like me, who get laid off. I used to work for a small family-owned business in Seattle. The city recently raised its minimum wage to \$15 an hour. The place where I worked was barely able to keep the doors open, and after the minimum wage increase they fired some long-time employees, including me. I've been looking for work and really need a job, but most businesses are not hiring because they can't pay the high wages. The jobs that are available are part-time and don't offer benefits, like basic health insurance. Life for me and my family has gotten harder as a result."

Figure B50. Full set of messages. Participants always saw a data-driven and a narrative message that disagreed with their position. The two messages tackled different arguments so they appeared to come from different authors. We randomized which argument was shown as a narrative.

On the next screen, you will see the first of four tasks. For each task, we will ask you whether you would prefer to be partnered with the **Blue** author or the **Brown** author.



Figure B51. Screen 9.

Task 1: Trust Game

The “Trust Game” relies on your partner’s trustworthiness. You will receive some money to invest in a project with your partner. If the partner proceeds with the investment, you will both receive **double** what you gave them. However, they can also choose to **steal** the money, which would triple their earnings but you will receive nothing.

The author of which message would you like to have as a partner on this task?

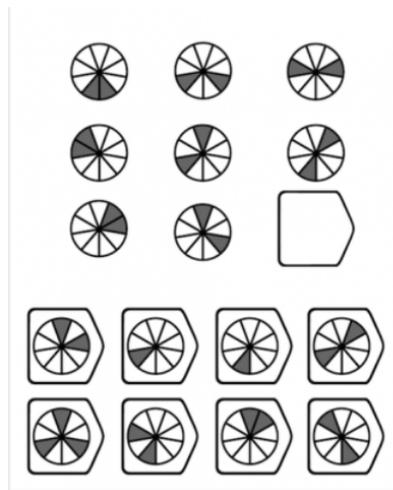
Strongly prefer Blue	Somewhat prefer Blue	Slightly prefer Blue	Slightly prefer Brown	Somewhat prefer Brown	Strongly prefer Brown
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Figure B52. Screen 10.

Task 2: Pattern Game

The "Pattern Game," relies on strong spacial reasoning skills and is commonly used as a measure of intelligence. Your objective is to figure out the pattern behind 8 shapes on the screen and select the correct one to fill the open spot. For an example, see the image below.



In this example, the correct response is the 4th symbol in the second row.

The author of which message would you like to have as a partner on this task?

- Strongly prefer
Blue
- Somewhat prefer
Blue
- Slightly prefer
Blue
- Slightly prefer
Brown
- Somewhat prefer
Brown
- Strongly prefer
Brown



Figure B53. Screen 11.

Task 3: Summation Game

The “Summation Game” relies on mathematical ability. Your objective is to find the unique pair of two numbers in a table that add up to 10. Below, you can see an example of this task.

7.253	8.477	7.897	5.578
6.600	8.368	3.589	2.417
7.751	5.800	0.893	6.171
2.103	3.262	7.384	8.959

In this example, the correct two numbers are: $7.897 + 2.103 = 10$

The author of which message would you like to have as a partner on this task?

Strongly prefer Blue	Somewhat prefer Blue	Slightly prefer Blue	Slightly prefer Brown	Somewhat prefer Brown	Strongly prefer Brown
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Figure B54. Screen 12.

Task 4: Advice Game

The “Advice Game” relies on your partner's good will. You will have to make a choice between two options. Your choice would determine your earnings, but you do not know which option is best. Your partner has a hint that can help you. It does not cost your partner to help you, nor does your partner gain if you make the wrong choice. However, your partner can just decide not to give you the hint and force you to make the choice on your own.

The author of which message would you like to have as a partner on this task?

Strongly prefer Blue	Somewhat prefer Blue	Slightly prefer Blue	Slightly prefer Brown	Somewhat prefer Brown	Strongly prefer Brown
----------------------------	----------------------------	----------------------------	-----------------------------	-----------------------------	-----------------------------



Figure B55. Screen 13.

Below is the message written by one of the two participants. Do you recall which participant wrote this message? The answer does not affect your earnings in this study.

"Increasing the minimum wage hurts the people it's supposed to help and drives up prices.

Seattle raised its minimum wage to \$15 an hour in 2015. Studies found that many businesses run on small margins, so that many have had to lay off employees. One study reported that the number of low and moderate wage jobs available decreased by 10%. Since the minimum wage has changed, some business had to raise prices for their customers. Moreover, one study estimated that it reduced the number of hours employers offered to their workers. Employers also reduced costs by cutting health insurance benefits. Many businesses have shut down because they couldn't afford the increased costs and prices in some stores have gone up. Life for many and for their families has gotten harder as a result."

Which participant wrote this message?

Blue Participant

Brown Participant



Figure B56. Screen 14.

Finally, we would like to ask you some demographic questions.

Gender

Male	Female	Other
------	--------	-------

Age

Ethnicity

White	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Pacific Islander	Other
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What is the highest level of education you have completed?

Less than high school	High school graduate	Some college	2 year degree	4 year degree	Professional or Masters degree	Doctoral degree
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Which of the following best describes your political ideology?

Very liberal	Somewhat liberal	Slightly liberal	Neither liberal nor conservative	Slightly conservative	Somewhat conservative	Very conservative
--------------	------------------	------------------	----------------------------------	-----------------------	-----------------------	-------------------

Which of the following best describes your political party affiliation?

Strongly Democrat
Somewhat Democrat
Slightly Democrat
Middle of the road
Slightly Republican
Somewhat Republican
Strongly Republican
None of the above



Figure B57. Screen 15.

Thank you for completing this study!

On the next screen you will see your unique completion code.

Do you have any comments for the researchers? (optional)



Figure B58. Screen 16.

Study 5: Message Collection

Welcome to this study!

Below is a list of current policy issues. Please indicate the extent to which you agree or disagree with each of the statements.

Of course there are no right or wrong answers. We are interested in your opinions.

1. The United States should make it a lot more difficult for illegal immigrants to enter and stay in the country.

Strongly Disagree	Moderately Disagree	Slightly Disagree	No Opinion	Slightly Agree	Moderately Agree	Strongly Agree
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2. The United States should legalize marijuana for medical use in all states.

Strongly Disagree	Moderately Disagree	Slightly Disagree	No Opinion	Slightly Agree	Moderately Agree	Strongly Agree
-------------------	---------------------	-------------------	------------	----------------	------------------	----------------

3. The federal minimum wage should be increased to \$15 per hour.

Strongly Disagree	Moderately Disagree	Slightly Disagree	No Opinion	Slightly Agree	Moderately Agree	Strongly Agree
-------------------	---------------------	-------------------	------------	----------------	------------------	----------------

4. The public reaction to recent confrontations between police and minority crime suspects has been overblown.

Strongly Disagree	Moderately Disagree	Slightly Disagree	No Opinion	Slightly Agree	Moderately Agree	Strongly Agree
-------------------	---------------------	-------------------	------------	----------------	------------------	----------------

5. University admissions should never take into account gender or racial characteristics of the students applying, as it is unfair to some students.

Strongly Disagree	Moderately Disagree	Slightly Disagree	No Opinion	Slightly Agree	Moderately Agree	Strongly Agree
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Figure B59. Screen 1.

We would now like you to write about one of the five topics from the previous screen. Please select one of the statements for which you believe you can provide **personal experiences** to support your belief.

The federal minimum wage should be increased to \$15 per hour.

The public reaction to recent confrontations between police and minority crime suspects has been overblown.

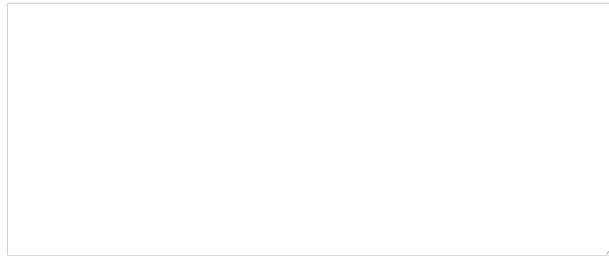
University admissions should never take into account gender or racial characteristics of the students applying, as it is unfair to some students.

The United States should make it a lot more difficult for illegal immigrants to enter and stay in the country.

I support the national legalization of marijuana for medical use.

We would now like you to write about how your experiences support your belief on the topic you have selected above. In your first sentence, please express your belief in your own words, and then explain why that belief is informed by **your personal experience**.

You might describe the circumstances that first led you to form the belief, or describe memorable personal experiences that strengthened your belief. You might describe how you saw or heard something from friends that shaped your views, or how the views, advice, or experiences of family members convinced you. The important thing is to state the key experiences that best support your position.



Note: The software will not allow you to click to the next screen for 7 minutes, so please feel free to take your time in writing. No responses are too long.

Figure B60. Screen 2 – Narrative Condition.

We would now like you to write about one of the five topics from the previous screen. Please select one of the statements for which you believe you can provide **objective information**, such as survey data or statistics to support your belief. You will be able to use Google to search for additional information.

- The United States should make it a lot more difficult for illegal immigrants to enter and stay in the country.
- The public reaction to recent confrontations between police and minority crime suspects has been overblown.
- I support the national legalization of marijuana for medical use.
- University admissions should never take into account gender or racial characteristics of the students applying, as it is unfair to some students.
- The federal minimum wage should be increased to \$15 per hour.

We would now like you to write about how objective information supports your belief on the topic you have selected above. In your first sentence, please express your belief in your own words, and then explain why that belief is informed by **objective information**.

You might state the key logical arguments underlying your belief, or describe the most compelling facts that support it. You could also write about specific scientific evidence, news reports, or assessments of public opinion that should increase confidence that your belief is correct. The important thing is to state the key objective justifications that best support your position.

You may use Google and other resources to find information to support your view. To open a new browser window to help with your research, you may click this link: [Open New Browser Window](#)

Note: The software will not allow you to click to the next screen for 7 minutes, so please feel free to take your time in writing. No responses are too long.

Figure B61. Screen 2 – Data-driven Condition.

Thank you for participating in this study!



Figure B62. Screen 3.

Study 5: Message Evaluation

Instructions

As part of a previous experiment, we asked students from a large university to report the extent to which they agreed or disagreed with each of 8 statements related to public policies. We then asked them to write a message to another participant about their view on one of the policies.

In this study, we would like to ask you to **evaluate the students' responses**.

We are going to show you the messages as written by 4 different students. All messages will be related to the same policy. However, students may have different views on these policies.



Figure B63. Screen 1.

Instructions (continued)

We would like you to evaluate messages related to the following policy-related statement:

I support the national legalization of marijuana for medical use.

However, before showing you the messages written by the students, we would like to get your own view on the statement. Please tell us whether you agree or disagree with the statement. This will not affect the messages you will be shown and asked to evaluate.

Strongly Disagree	Moderately Disagree	Slightly Disagree	No Opinion	Slightly Agree	Moderately Agree	Strongly Agree
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Figure B64. Screen 2. Participants reported their attitude on the policy domain from which they evaluated messages.

I support the national legalization of marijuana for medical use.

Message #1 of 4

"My dad was diagnosed with stage 4 Hodgkin's Lymphoma Cancer a year and a half ago. There was a period of time where he refused to eat anything. My mom would literally sit and beg him to just try something. He lost around 50lbs. in a couple weeks. Finally he tried medical marijuana and he was so much more relaxed and he actually ate something. I think this was a crucial part of his recovery."

First, we have some questions about how well the writer followed the directions in the earlier study:

Was the author's message related to the statement?

Yes	No
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Did the author agree or disagree with the statement? Or did they not express a clear view either way?

Agreed	Disagreed	Expressed no clear view
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Did the message contain an example or a story that related directly to the writer, a close relative or friend of the writer, or an anecdote about someone not close to the writer?

Yes (Personal)	Yes (Family, Friend)	Yes (Someone else)	No
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Did the message make an argument or offer evidence about why the writer's belief regarding the statement is "correct" and/or that others are wrong?

Yes	No
-----	----



Figure B65. Screen 3.

Now, we have some questions about your impressions of the statement and the person who wrote it. As a reminder, the message is repeated below. Please read the message again.

"My dad was diagnosed with stage 4 Hodgkin's Lymphoma Cancer a year and a half ago. There was a period of time where he refused to eat anything. My mom would literally sit and beg him to just try something. He lost around 50lbs. in a couple weeks. Finally he tried medical marijuana and he was so much more relaxed and he actually ate something. I think this was a crucial part of his recovery."

Do you believe that the writer's message is reasonable and sensible?

Strongly disagree	Somewhat disagree	Neither agree nor disagree	Somewhat agree	Strongly agree
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How persuasive do you believe this message would be to someone who holds the opposing view from that of the writer?

Not at all persuasive	Slightly persuasive	Somewhat persuasive	Very persuasive
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How trustworthy do you think that the author of the message is?

Not at all trustworthy	Slightly trustworthy	Somewhat trustworthy	Very trustworthy
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Figure B66. Screen 4.

How sincere do you think that the author of the statement is?

Not at all sincere	Slightly sincere	Somewhat sincere	Very sincere
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How willing would you be to sit down with the author of the message and have a discussion about this statement?

Not at all willing	Slightly willing	Somewhat willing	Very willing
--------------------	------------------	------------------	--------------

How knowledgeable do you believe that the writer of this message is on the topic of the statement?

Not at all knowledgeable	Slightly knowledgeable	Somewhat knowledgeable	Very knowledgeable
--------------------------	------------------------	------------------------	--------------------

How enjoyable do you believe it would be to meet the person who wrote the message, not necessarily to discuss this particular topic?

Not at all enjoyable	Slightly enjoyable	Somewhat enjoyable	Very enjoyable
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Figure B67. Screen 4 (continued).

You will now see another participant's message on the same topic.



Figure B68. Screen 5.

To give you a chance to clear your mind before seeing the remaining two messages, we would like to present you with a different task.

In the table below, please find the two numbers that add up to 10. You can enter them into the two boxes below in any order.

8.8	1.3	1.8	6.0
5.6	2.0	3.1	0.8
9.7	2.1	0.2	8.9
5.3	6.5	9.1	1.1

First Number

Second Number



Figure B69. Screen 6.

Finally, we would like to ask you a few demographic questions.

Gender

Male	Female
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Age

Ethnicity

White	Black or African American	American Indian or Alaska Native	Asian	Native Hawaiian or Pacific Islander	Other
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Figure B70. Screen 7.

What is the highest level of education you have completed?

Less than high school	High school graduate	Some college	2 year degree	4 year degree	Professional or Masters degree	Doctoral degree
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When it comes to politics, do you usually think of yourself as...

Extremely Liberal	Liberal	Slightly Liberal	Moderate, Middle of Road	Slightly Conservative	Conservative	Extremely Conservative
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Figure B71. Screen 8.

Thank you for completing this study.

Do you have any comments for the researchers? (optional)



Figure B72. Screen 9.