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Talking About What We Support Versus Oppose Affects Others' Openness to Our Views

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People's unwillingness to engage with others who hold views that differ from their own—in other words, their lack of receptiveness to opposing views—is a growing problem globally. We explore the possibility that something as simple as how people frame their position can shape disagreeing others' receptiveness to them. Specifically, we investigate the role of *support-oppose framing*—that is, whether people frame their position in terms of what they support or what they oppose. In five main studies spanning 5,971 participants, we find a disparity in how communicators and disagreeing others perceive support- versus oppose-framed messages. Communicators believe that disagreeing others will be more receptive to them if they use support rather than oppose framing. One contributor to this effect is value congruence: Communicators perceive a message articulating their own position in support terms to be more value congruent. However, disagreeing others are actually *less* receptive to support-framed messages than to oppose-framed messages. We find that disagreeing others perceive support framing as less congruent with *their* values, which predicts decreased receptiveness. This effect manifests in self-reported receptiveness and a variety of downstream consequences and predicts greater attitude change following oppose- rather than support-framed messages. Thus, by framing their positions in terms of what they oppose (rather than support), people can elicit greater receptiveness from disagreeing others. Consistent with a value-congruence account, this framing effect fully reverses for people with the same values as the communicator.

Statement of Limitations

The present studies highlight a unique dimension of attitudes—specifically, support-oppose framing—that shapes predicted and actual receptiveness to disagreeing others in opposite directions. There are several limitations of the work that leave open promising directions for future research in this area. First, the current work uses controlled experiments, which help isolate causal effects that advance our understanding of support-oppose framing. However, these experiments do not necessarily speak to how support and oppose frames are naturally expressed or received in less controlled environments. In addition, we focus on Western samples online. Although online forums have become increasingly important platforms for communication, future work is necessary to understand whether the same effects occur in face-to-face real-time interactions and generalize cross-culturally. The current work also focuses only on politically contentious topics that can be represented on bipolar scales and excludes participants who are neutral toward these topics; future work is necessary to understand how the effects generalize to issues where different positions are less diametrically opposed and how neutral individuals may respond. Finally, we emphasize the psychological mechanism of value congruence. Future work could explore other variables that may be related to support-oppose framing, as these effects could be multiply determined.

Keywords: framing effects, attitudes, persuasion, political polarization

Supplemental materials: https://doi.org/10.1037/pspa0000473.supp

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Political polarization has been referred to as one of the defining issues of the 21st century (Carothers & O'Donohue, 2019; Dimock et al., 2014). A major contributor to polarization is a lack of productive conversations between individuals with conflicting views. People avoid information supporting contradictory opinions (M. K. Chen & Rohla, 2018) while seeking out information that affirms their own beliefs (Hart et al., 2009; Iyengar & Hahn, 2009; Smith et al., 2008). Even when people are exposed to information that contradicts their beliefs, they discount or dismiss it (Lord et al., 1979) and attribute disagreement to ignorance, bias, or malevolence on the part of disagreeing others (Ross & Ward, 1995, 1996). In short, interactions between disagreeing others are often both difficult to facilitate and unproductive when they occur.

In response to this problem, research has begun to explore ways to enhance receptiveness to disagreeing others as a means of promoting more productive conversations between people with differing views. Receptiveness, also known as openness, refers to the psychological tendency to access, consider, and evaluate information in an impartial manner (Minson et al., 2020; Minson & Chen, 2022). This construct is rooted in efforts to understand barriers to message receptivity long recognized in the psychological literature, such as selective exposure (the tendency to seek out belief-consistent information and avoid belief-inconsistent information; Frey, 1986; Frimer et al., 2017; Hart et al., 2009), confirmation bias (whereby individuals preferentially attend to and recall belief-confirming evidence; Nickerson, 1998), and motivated reasoning (how individuals' desire to maintain cherished beliefs can drive flawed inferential processes and biased conclusions; Ditto & Lopez, 1992; Taber & Lodge, 2006).

Receptiveness is an overarching psychological construct that has numerous attitudinal and behavioral implications. For example, receptive individuals attend more to disagreeing content, evaluate persuasive arguments more impartially, and consume more bipartisan information than do unreceptive individuals (F. S. Chen et al., 2010; Minson et al., 2020; Yeomans et al., 2020). As a result, receptiveness can facilitate attitude change and depolarization (Catapano et al., 2019; Xu & Petty, 2022). In short, receptiveness encourages individuals to engage with disagreeing others and results in more positive outcomes when they do.

Recent research suggests that a primary contributor to receptiveness is perceived conversational partner receptiveness (Collins et al., 2022; Hussein & Tormala, 2021; Minson & Chen, 2022). That is, people reciprocate receptiveness when they detect it in others (e.g., Hussein & Tormala, 2024; Xu & Petty, 2022). However, a major issue in polarized environments is that people do not feel particularly receptive and thus are unlikely to *express* receptiveness to those on the other side. Without expressing receptiveness themselves, how can people stimulate receptiveness? We explore the possibility that something as simple as how a person frames their own attitude can shape receptiveness between people who disagree.

Support-Oppose Framing

Support-oppose framing refers to whether a person frames their attitude on a particular topic in terms of what they support (e.g., "I support allowing abortions") or what they oppose (e.g., "I oppose banning abortions"; see Table 1 for additional examples). This distinction can be independent of the valence of one's underlying attitude (Catapano & Tormala, 2021). For example, an individual with a positive attitude toward abortion rights could frame that attitude in terms of *support* for allowing abortions or *opposition* to banning abortions. Though different in their focus, these positions could be used to represent the same underlying attitude.

Interestingly, although support-oppose framing would seem to capture a fundamental aspect of how people view and talk about their own attitudes, it is understudied as an attitudinal dimension. The limited research that has been done suggests that support-oppose framing can affect attitude strength (Bizer et al., 2011; Bizer & Petty, 2005)—oppose-framed attitudes are generally stronger than support-framed attitudes (see also Teeny & Petty, 2025)—and attitude sharing (Catapano & Tormala, 2021)—people are more likely to share, or express, support-framed attitudes than oppose-framed attitudes. We examine how a communicator's support versus oppose framing affects disagreeing others' receptiveness to their position.

Support Framing as a Catalyst for Receptiveness

Are disagreeing others more receptive to support- or oppose-framed positions? It would be reasonable to surmise that support framing promotes greater receptiveness than oppose framing. For example, if support framing is viewed as expressing more positivity than oppose framing, it might seem to convey greater receptiveness (Yeomans et al., 2020), which in turn fosters more receptiveness in conversation partners. As discussed, previous work has shown that people who display receptiveness often trigger more receptiveness in others (e.g., Hussein & Tormala, 2024; Xu & Petty, 2022). Moreover, past research suggests that people believe that others will view them more favorably if they express their attitudes using support rather than oppose framing (Catapano & Tormala, 2021). If support framing is perceived as expressing more positivity or is

Table 1
Examples of Positive and Negative Attitudes Expressed Using Support and Oppose Framing

Framing	Attitude object	Positive attitude	Negative attitude
Support	Same-sex marriage	I am in favor of making same-sex marriage legal.	I am in favor of making same-sex marriage illegal.
	Abortion	I support allowing abortions.	I support banning abortions.
	Junk food tax	I agree that implementing a junk food tax would be good.	I agree that implementing a junk food tax would be bad.
Oppose	Same-sex marriage	I am against making same-sex marriage illegal.	I am against making same-sex marriage legal.
	Abortion	I oppose banning abortions.	I oppose allowing abortions.
	Junk food tax	I disagree that implementing a junk food tax would be bad.	I disagree that implementing a junk food tax would be good.

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viewed more favorably overall, we might expect it to trigger greater receptiveness in others.

Consistent with this reasoning, we submit that people believe that disagreeing others will be more receptive to their view if they frame that view in support rather than oppose terms. We posit that this effect occurs because people believe that *they* would feel more receptive to a message framing their view in support rather than oppose terms, and they project this feeling of receptiveness onto others. In other words, to answer the question, "What would others be receptive to?" people might begin by thinking, "What would I be receptive to?" and then project their own predicted receptiveness onto their conversation partner(s). This logic follows classic research on false consensus and projection, which suggests that individuals validate their own ideas by projecting their preferences and beliefs onto others (Holmes, 1968; Ross et al., 1977).

Why would people believe that they themselves would be more receptive to a message using support rather than oppose framing? Catapano and Tormala (2021) found that people view their own attitudes as more reflective of their core values and worldview when using support rather than oppose framing, just like they tend to define themselves more by who they are than by who they are not (Katz, 1960; Shavitt, 1989; Zhong et al., 2008). Given that support-framed attitudes feel more reflective of one's values than oppose-framed attitudes, support-framed attitudes likely feel more *congruent* with one's values as well. If so, people should feel more receptive to messages that express their own attitudes in support rather than oppose terms. Indeed, people are known to be more receptive to arguments that are framed in a way that is congruent with their values (Feinberg & Willer, 2019). In sum, we submit that people generally feel more receptive to a message framing their own position in support rather than oppose terms due to perceived value congruence and that they project this feeling onto others as well.

Support Framing as an Inhibitor of Receptiveness

Ironically, the same forces that lead people to feel more receptive to messages framing their own views in support (vs. oppose) terms might actually *decrease* receptiveness among disagreeing others. As outlined, people are likely to see their own support-framed attitudes as more value congruent, which we posit increases how receptive they feel to messages that present their own position in support terms. Importantly, though, people who hold different attitudes on social and political issues are largely defined by their *conflicting* values and morals (Lakoff, 2002; Skitka & Bauman, 2008). Thus, a statement that feels more value congruent for the communicator (and others who agree with them) likely feels *less* value congruent for disagreeing others. For example, while a statement that "allowing abortions is good" may feel value congruent for a pro-choice individual (and matches the way this person and others in their group construe the issue), it is value *incongruent* for a pro-life individual because it focuses on the position that the pro-life individual opposes. The pro-life individual likely represents and prefers to think about their view in terms of the position that *they* support—that is, that allowing abortions is bad. For this individual, discussing the issue in terms of the position that allowing abortions is bad would be more value congruent or better matched to their construal of the issue.

This discrepancy in how disagreeing individuals mentally represent the same issue (and which position better matches their construal of that issue) is reflected in how people self-identify and talk about their own views. For example, people on both sides of the abortion debate represent their position in terms of the side they support—being "pro-life" or "pro-choice"—rather than the side they oppose (e.g., antilife or antichoice). When pro-choice individuals discuss abortion, they focus on the reasons why they support allowing a woman to choose. This representation of the issue is most aligned with their values, worldview, and identity. When pro-life individuals weigh in, they focus on the reasons they support the right to life, which is more aligned with how *they* represent the issue. We posit that when discussing abortion with disagreeing others, people would be more receptive to messages that focus on the representation, or construal, that they themselves prefer.

To summarize, we argue that just as communicators view the statement they support as more congruent with their values, disagreeing others view the statement *they* support as more congruent with *their* values. Thus, although communicators use support-framed positions and believe that these positions will be met by disagreeing others with more receptiveness, oppose-framed positions would better align with disagreeing others' mental representations and speak to their values and worldview. In short, we posit that people believe that disagreeing others will be more receptive to support framing when in fact they are more receptive to oppose framing.

Overview

Five main studies test our predictions. We find that although communicators believe that disagreeing others will be more receptive to support-framed positions, disagreeing others are in fact *less* receptive to support-framed positions. Moreover, we find that these effects are mediated by value congruence (Study 1) and have implications for people's willingness to engage with counterattitudinal content (Study 2) and actual openness to attitude change (Study 3). We rule out numerous alternative accounts, including perceptions of extremity and certainty (Study 4). Finally, consistent with a value-congruence mechanism, we find that the framing effect fully reverses for people with the same values as the communicator (Study 5).

Across studies, we focus on bipolar attitudes on polarizing issues, given their increasing prevalence in society (Pew Research Center, 2017) and the importance of understanding receptiveness in divisive contexts. We focus on individuals who are not neutral toward a given issue (thus ensuring that their support for one idea implies opposing its converse). To this end, we exclude participants who indicate neutrality toward the issue from our main analysis (consistent with both our preregistration and past research; e.g., Catapano & Tormala, 2021). We also minimize the potential for perceptions of neutrality by including messages that clarify the speaker's position. This design allows us to ensure that support- and oppose-framed positions are viewed as opposite versions of the same position and prevent potential misinterpretations.[1]

[1] Although the current article focuses on individuals who are not neutral on the target issue, in Study 4, we examine the possibility that perceptions of neutrality may differ between support- and oppose-framing conditions, and in the General Discussion section, we discuss receptiveness outcomes for neutral recipients.

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Study 1

Study 1 manipulated support-oppose framing on a contentious issue (abortion) and measured its impact on the predicted and actual receptiveness of disagreeing others. Study 1 also examined the proposed value-congruence account. As discussed, this account suggests that people perceive their own position to be more congruent with their values when it is support- rather than oppose-framed. This value congruence predicts increased receptiveness for communicators, who then project onto disagreeing others and believe that they will be more receptive to the support-framed position as well. On the other hand, we propose that the same value-congruence pathway that predicts greater receptiveness for support- rather than oppose-framed positions among communicators also predicts *lower* receptiveness among disagreeing others. That is, we posit that positions that are support-framed for communicators tend to feel less value congruent for disagreeing others. Lower value congruence, in turn, should predict reduced receptiveness among disagreeing others. To test these predictions in Study 1, we randomly assigned participants to the role of communicator or disagreeing other and compared communicator value congruence and predicted recipient receptiveness to recipient (i.e., disagreeing other) value congruence and actual receptiveness.

Method

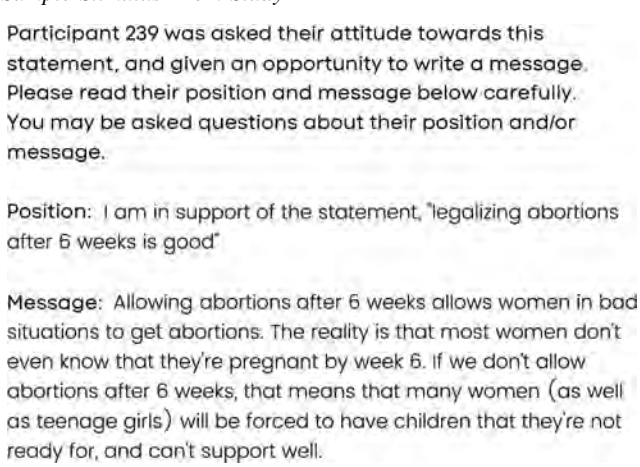
We set a target sample size of 500 participants per cell (2,000 total), yielding 80% power to detect a small simple effect ($d = .20$) after allowing for a 20% exclusion rate. After excluding participants based on preregistered attention and attitude consistency checks (Catapano & Tormala, 2021; see Appendix A and the Supplemental Materials), 1,382 participants remained. Participants indicated their attitudes toward abortion on a trinary scale (*pro-life*, *pro-choice*, *neither*). As described in the overview, in this study and subsequent studies, participants who indicated "neither" were screened out of the study. We then told participants that they had been matched with another participant and told them the other participant's attitude toward abortion—that is, whether they supported or opposed the statement, "legalizing abortions after 6 weeks is (bad/good)." In reality, participants were not actually matched with a previous participant and were instead always told that the other participant disagreed with their own position. Participants also reported their own attitude toward the statement on a 7-point scale (1 = *extremely opposed*, 7 = *extremely in favor*).

We then assigned participants to either the *communicator* or *recipient* role. *Communicators* imagined that they were sending a message to the other participant and were shown their own position (i.e., the position they had just reported) along with a message (generated by the researchers) articulating reasons for that position. We also manipulated support-oppose framing. For communicators in the *support-framing condition*, the position was framed as "I am in support of the statement, [the statement they supported]" (i.e., the position was framed as being about the statement they selected on the attitude measure). For communicators in the *oppose-framing condition*, the position was framed as "I am against the statement, [the statement they opposed]" (i.e., the position was framed as being about the statement they did not select). It is important to note that in both conditions, communicators saw a position and message that were consistent with their own view. Thus, participants who indicated a positive attitude toward legalizing abortions viewed a message that was about why legalizing abortions is good, framed in terms of why they support the idea that legalizing abortions is good or oppose the idea that legalizing abortions is bad (depending on condition assignment). Conversely, participants who indicated a negative attitude toward legalizing abortions viewed a message that was about why legalizing abortions is bad, framed in terms of why they support the idea that legalizing abortions is bad or oppose the idea that legalizing abortions is good (depending on condition assignment). All participants viewed a message that expressed their own view on abortions, but it was framed in terms of the position they supported or opposed.

After reading the support- or oppose-framed position and message, communicators predicted how receptive the disagreeing message recipient would be to their message and then reported how value congruent the message was for them as the communicator. Predicted receptiveness was measured with a two-item index (adapted from Catapano et al., 2019: "To what extent would they be [receptive/open-minded] to your arguments?" 1 = *not at all receptive/open-minded*, 7 = *extremely receptive/open-minded*; $r = .73$). Value congruence was measured with a three-item index (adapted from Catapano et al., 2019; e.g., "To what extent is the position [in favor of/against] this statement congruent with your own values?" 1 = *not at all congruent*, 7 = *extremely congruent*; $\alpha = .98$; see Appendix B for all measures).

Like communicators, *recipients* were also told that they had been paired with another participant. However, instead of imagining that they were sending a message to another participant, they instead evaluated how they would feel if they received the target message from a previous participant. Recipients were also assigned to either the support-framing or oppose-framing condition. Participants in the *support-framing condition* read a counterattitudinal message (ostensibly from the other participant who disagreed with them on this issue; in fact, all participants received one of two counter-attitudinal messages that had been generated by the researchers, varying only based on recipients' reported attitudes; see Figure 1), framed in terms of what the writer supported. Participants in the

Figure 1
Sample Stimulus From Study 1



Note. This sample stimulus shows a pro-choice support-framed position, which would be shown to a pro-life recipient.

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oppose-framing condition also read a counterattitudinal message ostensibly from the other participant but framed in terms of what the writer opposed. Once paired, participants were shown the communicator's ID number, position (framed in support or oppose terms), and message (see Figure 1).

After reading the message, recipients indicated how receptive they were to the message and then how value congruent the message was for them. Receptiveness and value congruence for recipients were measured using the same scales as for communicators, with the receptiveness measure modified to match the communicator and recipient roles (e.g., communicator: "To what extent would they be open-minded to your arguments?"; recipient: "To what extent were you open-minded to their arguments?"; for full survey, see additional online materials at https://osf.io/vtjyn). Finally, all participants completed an attention check and demographic information.

Results

We submitted the receptiveness data to a 2 × 2 analysis of variance with support-oppose framing and role (communicator or recipient) as the independent variables. There was no main effect of role, $F(1, 1378) = 2.03$, $p = .15$, or support-oppose framing, $F(1, 1378) = 3.00$, $p = .08$, on receptiveness (i.e., felt receptiveness for recipients and predicted receptiveness for communicators). However, we observed a significant interaction between these variables, $F(1, 1378) = 38.48$, $p < .001$ (see Figure 2, left panel). Communicators believed that recipients would be more receptive to support-framed messages ($M = 3.96$, 95% CI [3.76, 4.16]) than oppose-framed messages ($M = 3.21$, 95% CI [3.04, 3.38]), $F(1, 1378) = 31.27$, $p < .001$, $d = .43$. However, recipients were actually more receptive to oppose-framed messages ($M = 3.66$, 95% CI [3.46, 3.86]) than support-framed messages ($M = 3.24$, 95% CI [3.06, 3.42]), $F(1, 1378) = 10.07$, $p < .001$, $d = -.24$.

We submitted perceived value congruence to the same analysis. There was a significant main effect for role such that communicators reported greater perceived value congruence than recipients, $F(1, 1378) = 787.17$, $p < .001$, but there was no main effect for support-oppose framing, $F(1, 1378) = 0.10$, $p = .75$. Most importantly, we observed a significant interaction, $F(1, 1378) = 249.54$, $p < .001$ (see Figure 2, right panel). For communicators, value congruence felt higher for support-framed ($M = 6.11$, 95% CI [5.99, 6.23]) rather than oppose-framed ($M = 4.54$, 95% CI [4.30, 4.78]) messages, $F(1, 1378) = 128.98$, $p < .001$, $d = .83$. However, for message recipients, value congruence felt greater for oppose-framed ($M = 3.35$, 95% CI [3.12, 3.58]) rather than support-framed ($M = 1.85$, 95% CI [1.72, 1.97]) messages, $F(1, 1378) = 120.62$, $p < .001$, $d = -.87$.

Finally, we performed a moderated mediation analysis testing whether the effect of support-oppose framing on receptiveness was mediated by perceived value congruence and whether the link between support-oppose framing and perceived value congruence was moderated by role. To this end, we conducted structural equation modeling using the lavaan package in R (Rosseel, 2012) and following recommended bootstrapping procedures (Preacher et al., 2007).[2] The first leg of the model, which regressed perceived value congruence on support-oppose framing, role, and the Framing × Role interaction, yielded a significant interaction ($\beta = 1.29$, $Z = 15.97$, $p < .001$), suggesting that the effect of support-oppose framing on perceived value congruence differed for communicators and recipients. Support (vs. oppose) framing fostered greater perceived value congruence for communicators ($\beta = .66$, $Z = 10.88$, $p < .001$), but less perceived value congruence for recipients ($\beta = -.63$, $Z = -11.54$, $p < .001$). The second leg of the model showed that value congruence positively predicted receptiveness ($\beta = .23$, $Z = 8.03$, $p < .001$). The index of moderated mediation was significant ($\beta = .30$, $Z = 7.15$, $p < .001$).

Study 2

Study 1 provided evidence that although communicators believe that disagreeing others will be more receptive to support-framed positions (compared to oppose-framed positions), the opposite is in fact true, and both effects are mediated by perceived value congruence. In Supplemental Studies S1A and S1B, we replicated this finding using a different issue (same-sex marriage) and allowing communicators to write their own messages, meaning recipients received messages that had actually been written by communicators who disagreed with them. In addition, in Supplemental Study S1A, we provided evidence for the proposed serial mediation, whereby support-framed messages feel more value congruent for communicators, which predicts greater communicator receptiveness, which is in turn (incorrectly) projected onto disagreeing others. Finally, Supplemental Study S1B provided evidence for one downstream consequence of this effect: Disagreeing others are more willing to engage with communicators who use oppose-framed rather than support-framed messages.

Having demonstrated that communicators and recipients differ in their reactions to support-oppose framing, we now shift our focus to better understand the downstream consequences for recipients. To this end, in Study 2, we examined a behavioral consequence of felt receptiveness among recipients: willingness to engage with counterattitudinal content. Specifically, we recruited Reddit users[3] and created a simulated Reddit experience in which participants could choose which post to read and respond to. This measure offered a behavioral assessment of participants' willingness to engage with counterattitudinal content. To simulate an actual experience on Reddit as closely as possible, participants selected a post and read the post they selected but did not complete a self-report measure of receptiveness.

Method

We set a target sample size of 500 participants per cell (1,000 total), as in Study 1, yielding 80% power to detect a small effect ($\omega = .12$). We excluded participants who did not identify as liberal, consistent with our preregistration. The final sample consisted of 987 liberal Reddit users. First, participants indicated how often they used Reddit (participants who indicated "Never" were excluded from completing the survey) and reported their attitudes toward five social issues. Then, participants read:

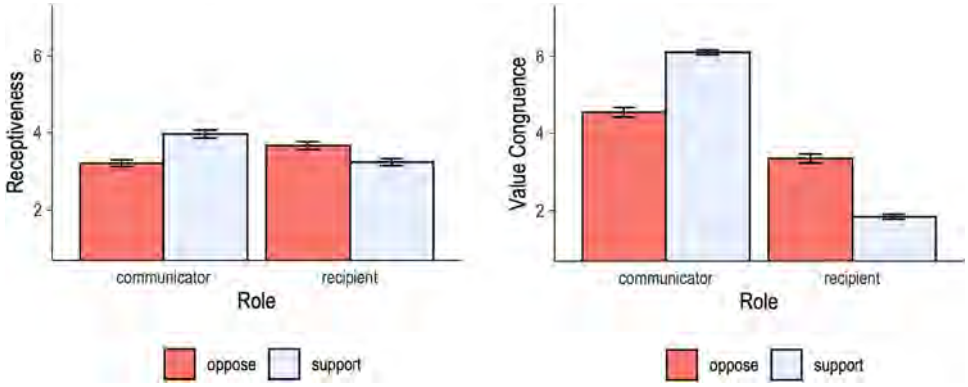
> On the following page, you will see a series of posts from the subreddit "PoliticalDiscussion." Please select which post you would like to read.

[2] In all subsequent mediation models, we use the same method.

[3] Reddit is an online discussion forum where users interact with specific communities around particular topics, including politics and specific political issues.

Figure 2

Interaction Between Role and Framing on Receptiveness (Left) and Value Congruence (Right)



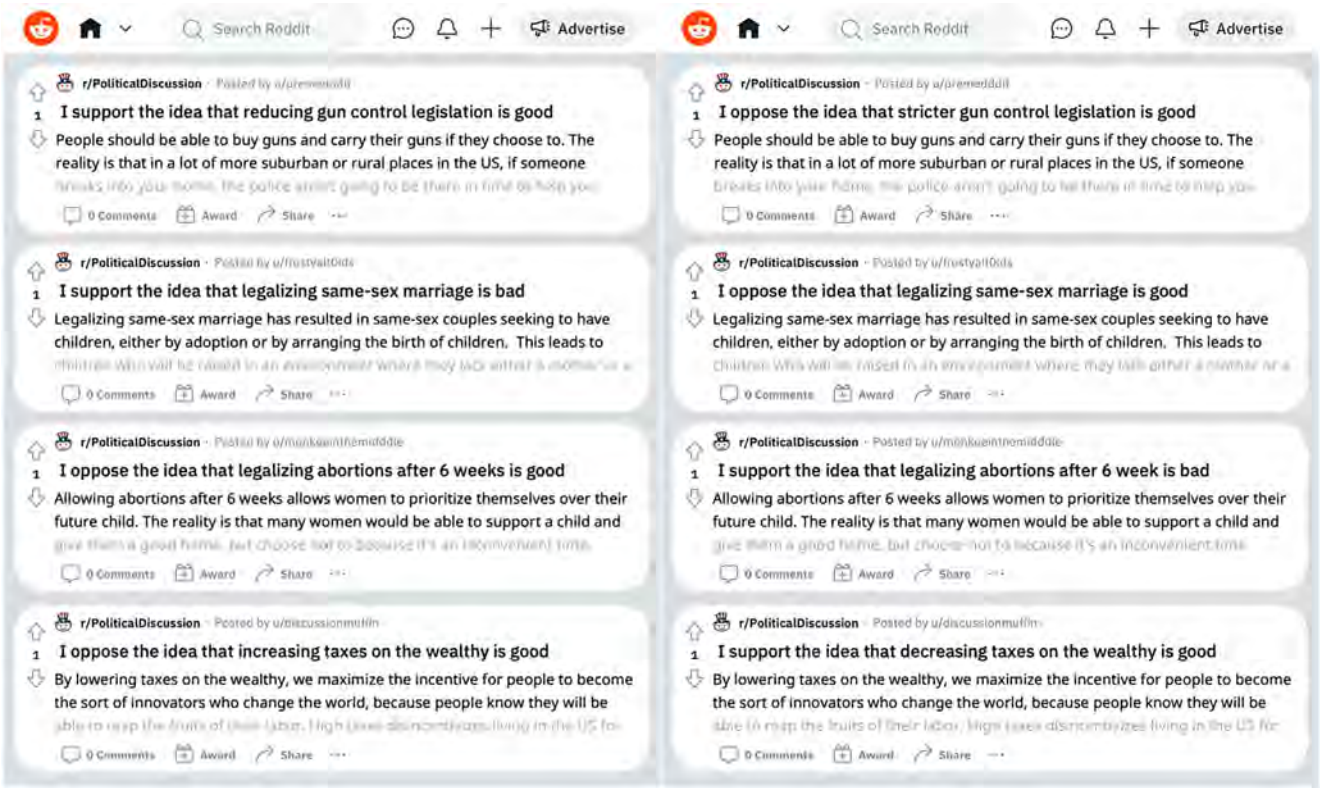
Note. See the online article for the color version of this figure.

The goal of the subreddit is discussion, so select the post you would be most willing to engage with the speaker in a productive discussion on. After reading the post and writing your response, you will be redirected back to complete the survey.

Participants were then directed to a page designed to resemble a Reddit discussion forum. On this page, participants saw four Reddit posts arguing positions that would be counterattitudinal for most liberals (against gun control legislation, same-sex marriage, abortion, and taxes on the wealthy; see Figure 3). All participants viewed the same content in the same order; regardless of whether posts were support- or oppose-framed, the same content followed the post title for all participants. However, we counterbalanced whether the first

Figure 3

Study 2 Stimuli



Note. Participants saw the same posts framed as either support-support-oppose-oppose (left) or oppose-oppose-support-support (right), depending on condition assignment. Note that aside from the support or oppose frame, the message content was identical across conditions. See the online article for the color version of this figure.

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two posts used support-framed titles and the second two used oppose-framed titles or vice versa. After clicking on the post they wanted to read, participants saw the full text of the post and had an opportunity to write a comment. Finally, participants were redirected back to the main survey, where they answered demographic questions.

Results

Consistent with the notion that recipients of counterattitudinal messages are more receptive to oppose framing than support framing, participants were more likely to choose an oppose-framed post and less likely to choose a support-framed post (527 [53.39%] oppose, 460 [46.61%] support) than would be expected based on chance (493.50 [50%] oppose, 493.50 [50%] support, $\chi^2 = 4.55$, $p = .03$).[4] Thus, the receptiveness effect for recipients in Study 1 appears to have implications for people's actual willingness to engage with counterattitudinal content.

Study 3

In Study 3, we assessed attitude change as an additional downstream consequence of receptiveness. In addition, Study 3 addressed a potential question about the previous studies: Could recipients in Studies 1 and 2 have misunderstood the communicator's attitude? As one possibility, it could be that participants interpreted the communicator's attitude as being more moderate or similar to their own when it was framed in oppose terms rather than support terms. For example, perhaps participants believed that the communicator opposed a position because it did not go far enough, meaning their attitude was actually aligned with participants' views. If message recipients were more receptive to oppose- versus support-framed messages simply due to a misunderstanding of the communicator's attitude, then oppose framing might not foster greater receptiveness in longer interactions in which communicators have more opportunity to clarify their views. To decrease the probability of this misinterpretation, we included an additional message clarifying the communicator's position in Studies 1 and 2. To further explore this possibility in Study 3, we used longer messages (three paragraphs; for full stimuli, see additional online materials at https://osf.io/vtjyn) that more fully articulated the communicator's position. This modification was designed to make the communicator's position unambiguous and reduce any potential risk that message recipients would misconstrue the communicator's attitude.

Method

We set a target sample size of 1,000 participants per cell (2,000 total), yielding 80% power to detect a small effect ($d = .14$, based on pilot testing), after allowing for a 20% exclusion rate. After preregistered exclusions (the same as in Study 1), 1,548 participants remained. Participants indicated their attitudes toward a junk food tax on a trinary scale and were assigned to the support- or oppose-framing condition as in the previous studies. Participants then indicated their initial attitudes on a 101-point scale (0 = *implementing a junk food tax would be good for the United States*, 100 = *implementing a junk food tax would be bad for the United States*).[5] Next, participants read a counterattitudinal essay ostensibly from another participant. As in our previous studies, all participants instead read one of two researcher-generated essays, depending on their original attitude. Essays were three paragraphs long and varied only in position framing (randomized to support or oppose framing). The remaining content and all of the argumentation were identical across conditions. Thus, the messages were clear about the opinion being expressed. After reading the message, participants reported their own receptiveness as in previous studies ($r = .74$). Participants then indicated their attitude on the same 0–100 scale as before. Finally, participants completed an attention check and provided demographic information.

Results

As hypothesized, participants who read an oppose-framed message reported greater receptiveness ($M = 5.03$, 95% CI [4.91, 5.15]) than participants who read a support-framed message ($M = 4.74$, 95% CI [4.62, 4.87]), $t(1546) = -3.15$, $p = .002$, $d = -.16$. We calculated attitude change as the number of points participants moved on the attitude scale in the direction of the arguments they received, such that higher numbers indicated greater attitude change. We found a significant indirect effect on attitude change through receptiveness, such that oppose framing led to greater receptiveness than support framing ($\beta = -.16$), $t(1546) = -3.15$, $p = .002$, which in turn predicted greater attitude change ($\beta = .47$), $t(1546) = 20.75$, $p < .001$, $ab = -.08$, $Z = -3.07$, $p = .002$.[6]

Study 4

Studies 1–3 provided convergent evidence that, contrary to people's intuitions, disagreeing others can be more receptive to messages presenting oppose- rather than support-framed positions.

[4] For three of the four issues, we collected data on participant attitudes before they selected posts. The fourth was not included due to researcher error. All posts were counterattitudinal for 86.55% of the participants, as intended. Excluding all participants who selected a proattitudinal or neutral post ($N = 43$), participants were still more likely to choose an oppose-framed post than would be expected based on chance (508 [53.8%] oppose, 436 [46.2%] support, $\chi^2 = 5.49$, $p = .019$). Among the participants who selected a proattitudinal post ($N = 24$; 2.5% of the full sample), we found a directional but nonsignificant effect such that they were more likely to select a support-framed post than an oppose-framed post (8 [33.3%] oppose, 16 [66.7%] support, $\chi^2 = 2.67$, $p = .10$), consistent with the results of Study 5.

[5] The scale was anchored at 0 = *good* (left side) and 100 = *bad* (right side) for consistency with the initial question asking about attitudes toward junk food taxes, where "good" was on the left side. We do not believe that the scale ordering affects the results of this study, as the order was consistent across conditions. Moreover, in Supplemental Study S3, we use the topic of taxes on the wealthy, where 0 = *should definitely be lower* and 100 = *should definitely be higher*, and find consistent results.

[6] Although oppose-framed messages ($M = 18.90$, 95% CI [16.96, 20.85]) led to directionally more attitude change than support-framed messages ($M = 16.98$, 95% CI [15.08, 18.87]), the total effect of support-oppose framing on attitude change was not significant ($\beta = -.07$), $t(1546) = -1.39$, $p = .16$, $\beta = -.07$. One contributor to the nonsignificant total effect is likely the large number of participants who would show little to no attitude change for a value-laden issue in an experimental session after reading three paragraphs. Among participants who identified as neither liberal nor conservative ($N = 317$), who may have been less entrenched in their views due to weaker partisan social identities (Greene, 2000), we found a significant difference such that support-framed messages ($M = 13.07$, 95% CI [9.46, 16.69]) resulted in less attitude change than oppose-framed messages ($M = 19.61$, 95% CI [15.24, 23.98], $\beta = -.24$), $t(315) = -2.27$, $p = .02$, $d = -.26$.

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We also conducted conceptual replications of Study 2 (Supplemental Study S2) and Study 3 (Supplemental Study S3). These studies fully replicated the results of the reported studies. In addition, in Supplemental Study S4, we examined another downstream consequence of receptiveness: partisan hostility. We found that, relative to support framing, oppose framing reduced partisan hostility in the form of enhanced perceptions of the communicator (i.e., outgroup member).

In Study 4, we continued to explore the value-congruence mechanism for the effect of support-oppose framing on recipients' receptiveness. We also explored several alternative mechanisms. One possibility we examined is whether message recipients view support and oppose framing as representing different underlying attitudes or even a different range of attitudes that the communicator might endorse. For instance, perhaps saying "I disagree that [X] is a bad thing" (oppose framing) could include the possibility that one is positive or neutral toward [X], whereas saying "I agree that [X] is a good thing" (support framing) clearly indicates that one is positive toward [X]. Do support and oppose framing differ in the extent to which they appear to allow for neutral positions? Could such a difference explain increased receptiveness to oppose-framed messages? Because participants in our earlier studies read messages containing arguments in addition to the communicator's stated position, it seems unlikely that they perceived the communicator's underlying attitude as substantially different across conditions. Nevertheless, to ensure that participants viewed the communicator's attitude similarly, in Study 4, we measured the range of attitude positions participants believed the communicator would endorse (i.e., the number of different possible attitudes the communicator might hold), along with perceptions of the communicator's attitude extremity (i.e., the difference between the mean perceived attitude and the scale midpoint), neutrality (i.e., participants' perceptions of whether the communicator might be neutral on the topic), and certainty (i.e., how certain the communicator was perceived to be about their attitude).

We also assessed a series of other possibilities. For example, maybe participants report greater receptiveness because they perceive oppose-framed positions as easier to counterargue or have a greater desire to counterargue them. In other words, perhaps participants indicate that they are receptive and open to dialogue because they want to counterargue and prove the other side wrong (as in the case of defensive confidence; see Albarracín & Mitchell, 2004), rather than because they are open to considering alternative ideas. To test this possibility, we measured interest in and perceived ease of counterarguing. In addition, it could be that oppose-framed messages garner greater attention due to greater perceived relevance or ease of processing, which then drives differences in receptiveness. To test these potential accounts, we measured attention, perceived relevance, and ease of processing. Alternatively, there could be something about oppose framing that makes the communicator seem more receptive, which in turn boosts the recipient's receptiveness. To assess this possibility, we asked participants to report their perceptions of the communicator's receptiveness.

Finally, in Study 4, we also modified our design to address the possibility that participants were attending only to the statement (e.g., "legalizing abortions after 6 weeks is good") rather than the communicator's support or opposition toward the statement (e.g., "I am against the position legalizing abortions after 6 weeks is good") and therefore misunderstood the communicator's overall attitude and failed to realize that the communicator disagreed with them in both conditions. To address this possibility, immediately after participants read about the communicator's position, we asked them whether the communicator took a position that agreed or disagreed with their own view. Participants were only allowed to continue the survey after correctly answering that the other participant disagreed with them, thus ensuring that all participants attended to the communicator's support or opposition toward the statement and did not simply encode the statement itself.

Method

We set a target sample size of 600 participants per cell (1,200 total), yielding 80% power to detect a small effect ($d = .18$), after allowing for a 20% exclusion rate. After preregistered exclusions (as in Studies 1 and 3), 892 participants remained. The design for Study 4 closely resembled Study 1's recipient condition. Participants reported their attitudes toward abortion on a trinary scale ("legalizing abortion after 6 weeks is bad," "legalizing abortion after 6 weeks is good," or "no opinion") and then were randomly assigned to the support- or oppose-framing condition. In the support-framing (oppose-framing) condition, participants read a message, ostensibly from someone who disagreed with them, that was framed in support (oppose) terms. Before reading the message, participants indicated their attitude toward the statement that the communicator would be discussing ("legalizing abortion after 6 weeks is bad" or "legalizing abortion after 6 weeks is good") on a 7-point scale (1 = *definitely opposed*, 7 = *definitely in favor*). Then, participants were shown the communicator's position and message. The message was counterattitudinal for all and did not differ across support- and oppose-framing conditions (beyond the framing; see Table 2).

To rule out the possibility that participants were attending only to the statement (e.g., "legalizing abortions after 6 weeks is good") rather than the communicator's attitude toward the statement (e.g., "I am against the position legalizing abortions after 6 weeks is good"), we asked them whether the communicator took a position that agreed or disagreed with their own. Participants were only allowed to continue the survey after correctly answering that the other participant disagreed with them.[7] After reading the assigned message, participants reported their receptiveness to the message ($r = .72$) and rated the message on value congruence ($r = .92$), using the same measures as in our previous studies. Participants also completed measures assessing several alternative accounts (see Table 3 for descriptions of and results for each measure). Finally, participants completed an attention check (where they selected which message the speaker had sent) and provided demographic information.

Results

Participants who read messages with support-framed positions were less receptive ($M = 3.32$, 95% CI [3.14, 3.50]) than those who read messages with oppose-framed positions ($M = 3.76$, 95% CI [3.60, 3.93]), $t(890) = -3.57$, $p < .001$, $d = -.24$. Participants also saw support-framed positions as less value congruent ($M = 1.98$, 95% CI [1.86, 2.10]) than oppose-framed positions ($M = 2.54$, 95% CI [2.39, 2.70]), $t(890) = -5.53$, $p < .001$, $d = -.37$.

[7] All participants were able to correctly answer this question and advance.

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Table 2
Study 4 Stimuli by Attitude and Condition

Participant attitude	Support-oppose condition	Message-position framing	Message
Pro-life	Support	I am in support of the statement, "legalizing abortions after 6 weeks is good."	Allowing abortions after 6 weeks allows women in bad situations to get abortions.
Pro-life	Oppose	I am against the statement, "legalizing abortions after 6 weeks is bad."	The reality is that most women do not even know that they are pregnant by Week 6. If we do not allow abortions after 6 weeks, that means that many women (as well as teenage girls) will be forced to have children that they are not ready for and cannot support well. It is better to allow women to decide when they are ready to have kids and be better able to give those children a good home.
Pro-choice	Support	I am in support of the statement, "legalizing abortions after 6 weeks is bad."	Allowing abortions after 6 weeks allows women to prioritize themselves over their future child. The reality is that many women would be able to support a child and give them a good home, but choose not to because it is an inconvenient time. There are also plenty of great families that want to adopt. If we allow abortions, it means that instead of giving a baby to a family that wants it, the baby will never be born. It is better to limit abortions to give those children a chance at great lives, either with their bio parents or adopted.
Pro-choice	Oppose	I am against the statement, "legalizing abortions after 6 weeks is good."	

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Next, we tested whether perceived value congruence mediated the effect of support-oppose framing on receptiveness. Relative to support framing, oppose framing led to greater perceived value congruence ($\beta = -.36$), $t(890) = -5.53$, $p < .001$, which predicted greater receptiveness ($\beta = .51$), $t(890) = 17.67$, $p < .001$. There was a significant indirect effect through this pathway ($ab = -.18$, $Z = -5.79$, $p < .001$).

As noted, we also assessed several alternative mechanisms (see Table 3). We found a significant effect of support-oppose framing on perceptions of the communicator's attitude, such that recipients perceived communicators who used support framing as more certain, more extreme, and less likely to be neutral (by selecting the midpoint on the 7-point scale) than communicators who used oppose framing.[8] Consistent with our preregistration, we conducted a mediation analysis including value congruence and the alternative mediators that showed significant differences (certainty, extremity, and neutrality on a 7-point scale [0 = *neutrality excluded*, 1 = *neutrality included*], ps $< .05$) as parallel mediators of the effect of support-oppose framing on recipient receptiveness. Including all four potential mediators simultaneously, there was a significant indirect effect through value congruence ($ab = -.18$, $Z = -5.26$, $p < .001$). Thus, value congruence mediated the effect of support-oppose framing even after controlling for alternative mechanisms. In contrast, we did not find a significant indirect effect through perceived certainty ($ab = 0.01$, $Z = 1.38$, $p = .17$), extremity ($ab = -0.004$, $Z = -0.60$, $p = .55$),[9] or neutrality ($ab = -0.009$, $Z = -1.39$, $p = .17$). Taken together, this pattern of results suggests that support-oppose framing can affect perceptions of communicators' attitudes, but these perceptions are not the primary drivers of the observed effect on receptiveness.

Study 5

Study 4 provided further evidence for value congruence as a mechanism driving the effect of support-oppose framing on felt receptiveness. In addition, we found that support-oppose framing affects perceptions of communicator certainty, extremity, and neutrality. However, these differences did not seem to drive the observed effect on receptiveness, and the value-congruence mechanism persisted even after controlling for these factors. In addition, greater receptiveness to oppose-framed messages did not appear to be driven by a desire to counterargue. Indeed, oppose-framed messages elicited marginally *less* interest in counterarguing (and less perceived ease of counterarguing) than support-framed messages, and receptiveness and counterarguing inclination were negatively correlated. Finally, support-oppose framing did not affect measures of processing including attention, perceived relevance, and ease of processing. In Supplemental Study S5A, we conducted a replication of Study 4 focusing solely on the value-congruence mediation, which replicated the results. In Supplemental Study S5B,

[8] As shown in Table 3, we also found marginally significant effects of support-oppose framing on counterarguing. Participants reported that they were more inclined to counterargue and perceived counterarguing as easier when they had received support-framed rather than oppose-framed messages. Consistent with our conceptualization of receptiveness, receptiveness was negatively predicted by both interest in counterarguing ($\beta = -0.07$), $t(890) = -2.32$, $p = .02$, and perceived ease of counterarguing ($\beta = -0.10$), $t(890) = -3.18$, $p = .001$. This pattern of results suggests that participants were not indicating that they were receptive because they wanted to counterargue and prove the other side wrong.

[9] See the Supplemental Materials for a discussion of an alternative sequential mediation pathway in which framing predicts extremity, which predicts value congruence, and in turn, receptiveness.

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Table 3
Alternative Mechanisms Explored in Study 4

Alternative mechanism	Measure	Scale	Result
Range of attitudes (number of options selected)	Participant [number] indicated their attitude toward abortion on the same scale you answered on previously.	1 = *extremely opposed to the statement, "[statement]"* 7 = *extremely in favor of the statement, "[statement]"*	β = −0.09, $t(890) = -1.36$, $p = .18$ $M_{support} = 1.23$, 95% CI [1.17, 1.28] $M_{oppose} = 1.28$, 95% CI [1.22, 1.34]
Extremity (difference between mean attitude rating and scale midpoint)	Which of the following options might represent their attitude toward the statement [statement]?		**β = 0.20, $t(890) = 3.06$, $p = .002$** $M_{support} = 2.60$, 95% CI [2.54, 2.66] $M_{oppose} = 2.45$, 95% CI [2.38, 2.52][a]
Perceptions of neutrality—whether 4 was selected as a possible value	Select all that you think they might have chosen.		**$\chi^2 = 8.05$, $p = .005$** (3% oppose and .4% support selected neutral as possibility)
Perceived certainty	How certain do you think participant [number] is about their attitude toward this issue?	1 = *not at all certain* 7 = *extremely certain*	**β = 0.22, $t(890) = 3.31$, $p < .001$** $M_{support} = 6.29$, 95% CI [6.19, 6.39] $M_{oppose} = 6.04$, 95% CI [5.92, 6.15]
Perceptions of neutrality—trinary measure	Do you think that participant [number] is neutral (i.e., neither supports nor opposes) toward the issue of allowing abortion?	*Yes (they are probably neutral)* *Not sure* *No (they are probably not neutral)*	$\chi^2 = 4.24$, $p = .12$ (support: 1% Y, 4% NS, 94% N; oppose: 3% Y, 6% NS, 91% N)
Interest in counterarguing	To what extent were you interested in counterarguing (challenging or refuting) participant [number]'s message?	1 = *did not counterargue at all* 7 = *counterargued a lot*	β = 0.12, $t(890) = 1.80$, $p = .07$ $M_{support} = 4.21$, 95% CI [4.02, 4.41] $M_{oppose} = 3.97$, 95% CI [3.78, 4.15]
Ease of counterarguing	To what extent do you think it would be easy to counterargue (challenge or refute) participant [number]'s message?	1 = *extremely difficult* 7 = *extremely easy*	β = 0.11, $t(890) = 1.68$, $p = .09$ $M_{support} = 4.72$, 95% CI [4.55, 4.90] $M_{oppose} = 4.50$, 95% CI [4.33, 4.69]
Perceived relevance	How relevant to you was the information in the message?	1 = *not at all relevant* 7 = *extremely relevant*	β = −.07, $t(890) = -1.09$, $p = .28$ $M_{support} = 3.69$, 95% CI [3.50, 3.87] $M_{oppose} = 3.82$, 95% CI [3.65, 4.00]
Ease of processing	How easy or difficult was it for you to understand and process participant [number]'s position and message?	1 = *extremely difficult* 7 = *extremely easy*	β = 0.005, $t(890) = 0.08$, $p = .94$ $M_{support} = 5.79$, 95% CI [5.65, 5.93] $M_{oppose} = 5.79$, 95% CI [5.65, 5.92]
Attention	How much attention did you pay to the message?	1 = *did not pay attention at all* 7 = *paid a lot of attention*	β = 0.02, $t(890) = 0.36$, $p = .72$ $M_{support} = 6.66$, 95% CI [6.59, 6.73] $M_{oppose} = 6.64$, 95% CI [6.57, 6.71]
Communicator receptiveness ($r = .77$)	How [receptive/open] do you think participant [number] is to arguments that disagree with their own position?	1 = *not at all [receptive/open]* 7 = *extremely [receptive/open]*	β = −0.09, $t(890) = -1.30$, $p = .19$ $M_{support} = 2.57$, 95% CI [2.44, 2.70] $M_{oppose} = 2.69$, 95% CI [2.56, 2.83]

Note. Significant effects appear in bold. CI = confidence interval; NS = not sure; Y = yes; N = no.
[a] Note that these values indicate that most participants believed the communicator was extreme on the topic based on seeing their argument ($M_{oppose} = 1.55$, $M_{support} = 6.60$ on a 1–7 scale).

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we conducted an additional replication of Study 4 in which we further addressed extremity as a potential alternative explanation. We found consistent evidence for the value-congruence mechanism and additional evidence that perceptions of extremity did not drive the observed differences in receptiveness.

In Study 5, we provided further evidence for the value-congruence account using a moderation approach. Specifically, if the divergent effects for communicators and disagreeing others stem from opposite perceptions of what is value congruent across disagreeing groups, this effect should reverse when recipients hold the same attitude and values as the communicator. In other words, if this effect is indeed driven by value congruence, then when message recipients have the same values as communicators they should act in the same way as communicators—that is, express greater receptiveness to support- than oppose-framed positions. To explore this possibility in Study 5, we varied whether participants received a message that ostensibly was from another participant with aligned or misaligned values, by varying whether the message was consistent or inconsistent with the recipient's own attitude. We expected to observe an interaction between support-oppose framing and communicator alignment on receptiveness and perceived value congruence. Specifically, when message recipients had the same values as the communicator, we expected a reversal of our effect, such that message recipients would be more receptive to support-framed messages, as we have observed with communicators. On the other hand, when message recipients had different values from the communicator, we expected that message recipients would instead be more receptive to oppose-framed messages, as seen in our previous studies.

Method

We set a target sample size of 400 participants per cell (1,600 total), yielding 80% power to detect a small simple effect ($d = .21$), after allowing for a 10% exclusion rate. After preregistered exclusions (as in previous studies), 1,162[10] participants remained. We asked participants, "Which of the following topics do you consider yourself indifferent towards (i.e., no opinion/neither in favor of nor against)?" and showed them four topics: legalizing abortions after 6 weeks, legalizing same-sex marriage, mask requirements during the COVID-19 pandemic, and stricter gun control legislation. Participants could choose as many issues as was appropriate or select "none of the above." Multiple issues were used to ensure generalizability of findings across issues and to maximize the number of usable participants. Then, participants were randomly assigned to an issue on which they had an opinion and were asked to indicate their attitude toward that issue on a trinary attitude measure (see Supplemental Table S1 for all possible statements viewed by participants). Participants who reported inconsistent attitudes (e.g., said they were not indifferent toward mask requirements on the first question, but said they were indifferent on the second question) were redirected out of the study.

Following these attitude measures, participants were randomly assigned to the support- or oppose-framing condition, as in previous studies. However, unlike in previous studies, they were also randomly assigned to a communicator-alignment condition such that some participants received a message from a values-aligned communicator and others received a message from a values-misaligned communicator (for an example, see Table 4). Participants in the values-aligned condition received a message from a communicator who held the same attitude as the participant, whereas participants in the values-misaligned condition received a message from a communicator who held an attitude inconsistent with their own attitude.

After random assignment, we told participants that they had been matched with a participant from a previous survey and would be reading a message from that participant. Before reading the message, participants indicated their attitude toward the statement that the individual would be addressing. Then, they read the other participant's position and message. Positions took the following form: "I am [in support of/against] the statement [topic phrase] is [good/bad]." The message followed and was determined by each participant's own attitude and condition assignment. Messages were researcher-generated and did not change for support versus oppose framing. After reading the position and message, participants reported their receptiveness ($r = .81$) and perceived value congruence ($r = .98$) on the same scales as in the previous studies and then completed an attention check and provided demographic information.

Results

We began our analysis with the receptiveness index. On this index, there was no interaction between support-oppose framing and topic, $F(3, 1154) = 1.52$, $p = .21$, nor a three-way interaction between support-oppose framing, topic, and communicator alignment (values-aligned vs. misaligned), $F(3, 1146) = 1.36$, $p = .25$. Thus, consistent with our preregistration, we collapsed across the four topics and submitted the receptiveness data to a 2×2 analysis of variance with support-oppose framing and communicator alignment as the independent variables. First, participants were more receptive to values-aligned communicators ($M = 6.11$, 95% CI [6.00, 6.21]) than values-misaligned communicators ($M = 3.55$, 95% CI [3.41, 3.69]), $F(1, 1158) = 811.38$, $p < .001$. There was no main effect of support ($M = 4.89$, 95% CI [4.72, 5.06]) versus oppose ($M = 4.72$, 95% CI [4.56, 4.88]) framing, $F(1, 1158) = 2.45$, $p = .12$. Most importantly, we observed a significant interaction between support-oppose framing and communicator alignment, $F(1, 1158) = 23.30$, $p < .001$ (see Figure 4). As hypothesized, for values-aligned communicators, support framing produced greater receptiveness ($M = 6.39$, 95% CI [6.27, 6.50]) than did oppose framing ($M = 5.81$, 95% CI [5.64, 5.99]), $F(1, 1158) = 20.09$, $p < .001$, $d = .45$. However, for values-misaligned communicators, support framing produced less receptiveness ($M = 3.40$, 95% CI [3.21, 3.60]) than did oppose framing ($M = 3.70$, 95% CI [3.49, 3.90]), $F(1, 1158) = 5.41$, $p = .02$, $d = -.17$, as in our previous experiments.

We also analyzed the effects of support-oppose framing and communicator alignment on perceived value congruence. In this case, there were significant main effects for both support-oppose framing, $F(1, 1158) = 21.43$, $p < .001$, and communicator alignment, $F(1, 1158) = 1604.06$, $p < .001$. However, these main effects were qualified by an interaction, $F(1, 1158) = 40.21$, $p < .001$. For

[10] We intended to recruit 1,600 participants, consistent with our preregistration. Unfortunately, the final sample size was smaller due to a glitch in Qualtrics, which we were unable to replicate in any of our testing (and therefore unable to fix), in which a subset of participants said that they were not shown the message or subsequent pages. This error resulted in 1,277 participants total who were able to complete the survey, before preregistered exclusions. In studies run after Study 5 (e.g., Study 4), we increased the sample size to allow for a higher exclusion rate.

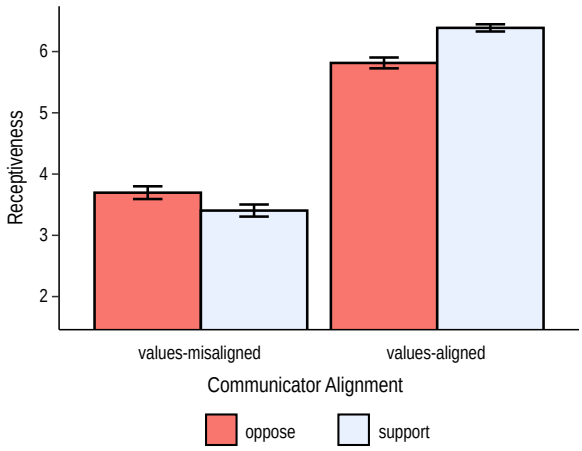
Table 4
Study 5 Stimuli by Condition for Gun Control Issue

Message recipient's attitude	Support-oppose condition	Values-aligned or values-misaligned	Stimulus position (i.e., communicator position)
Stricter gun control legislation is good.	Support	Values-aligned	I am in support of the statement, "stricter gun control legislation is good."
		Values-misaligned	I am in support of the statement, "stricter gun control legislation is bad."
	Oppose	Values-aligned	I am against the statement, "stricter gun control legislation is bad."
		Values-misaligned	I am against the statement, "stricter gun control legislation is good."
Stricter gun control legislation is bad.	Support	Values-aligned	I am in support of the statement, "stricter gun control legislation is bad."
		Values-misaligned	I am in support of the statement, "stricter gun control legislation is good."
	Oppose	Values-aligned	I am against the statement, "stricter gun control legislation is good."
		Values-misaligned	I am against the statement, "stricter gun control legislation is bad."

values-aligned communicators, perceived value congruence was greater in the support-framing (M = 6.33, 95% CI [6.20, 6.46]) rather than the oppose-framing (M = 5.34, 95% CI [5.11, 5.57]) condition, $F(1, 1158) = 59.15$, $p < .001$, $d = .61$. However, for values-misaligned communicators, there was directionally greater perceived value congruence in the oppose-framing ($M = 2.31$, 95% CI [2.13, 2.49]) rather than the support-framing ($M = 2.15$, 95% CI [2.00, 2.31]) condition, although the latter simple effect did not reach statistical significance, $F(1, 1158) = 1.49$, $p = .22$, $d = -.11$.[11]

Finally, we performed a moderated mediation analysis testing whether the effect of support-oppose framing on receptiveness was mediated by perceived value congruence and whether the link between support-oppose framing and perceived value congruence was moderated by communicator alignment (see Figure 5 for the full model). The first leg of the model, which regressed perceived value congruence on support-oppose framing, communicator alignment, and the Framing × Communicator Alignment interaction, yielded a significant interaction ($\beta = .48$, $Z = 6.23$, $p < .001$), suggesting that the effect of support-oppose framing on perceived value congruence depended on whether the communicator was values-aligned or values-misaligned. Support (vs. oppose) framing led to greater perceived value congruence for aligned communicators ($\beta = .41$, $Z = 7.36$, $p < .001$), but this effect tended to reverse for misaligned communicators ($\beta = -.06$, $Z = -1.29$, $p = .20$). The second leg of this pathway showed that perceived value congruence predicted receptiveness ($\beta = .82$, $Z = 48.19$, $p < .001$). The moderated mediation for this pathway was significant ($\beta = .39$, $Z = 6.18$, $p < .001$).

Figure 4
Interaction Between Communicator Alignment and Support-Oppose Framing on Receptiveness



Note. See the online article for the color version of this figure.

Transparency and Openness

All procedures were approved by relevant Institutional Review Boards. For all studies, materials, data, R analysis code, analysis output, and preregistrations of methods, hypotheses, and analyses are available in the additional online materials at https://osf.io/vtjyn (Catapano, 2025). We report all data exclusions, all manipulations, and all measures across studies. There are no deviations from preregistrations to report.

General Discussion

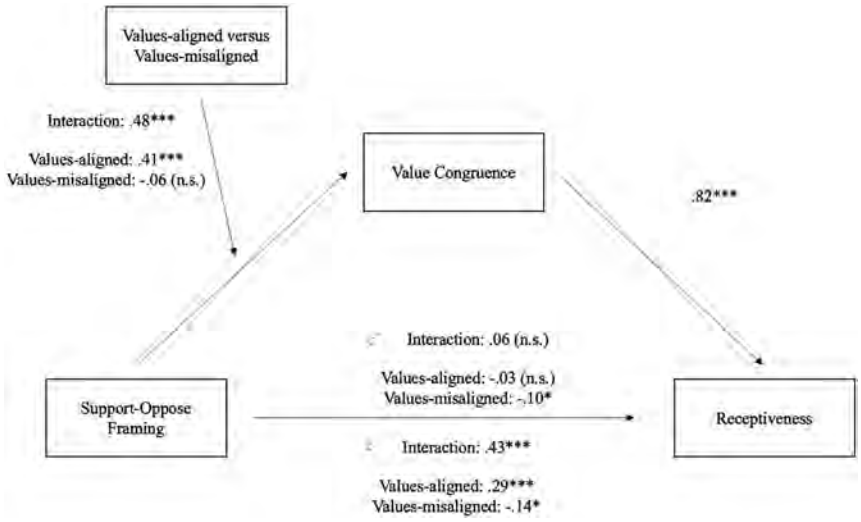
Five preregistered studies, seven preregistered conceptual replications, and two additional Supplemental Studies (described in Table 5; total N = 14,619) reveal a misperception among communicators attempting to communicate with disagreeing others. Communicators believe that disagreeing others will be more receptive

[11] We believe that this nonsignificant effect is likely due to insufficient power. Because the study used a 2 × 2 design, we set a target sample size of 1,600. However, our final sample size was closer to 1,200 (see Footnote 10), resulting in 300 participants per cell for the two-cell support versus oppose framing comparison for values-misaligned communicators. This sample size resulted in under 70% power for an effect size of .2 (consistent with our reported effect sizes). The primary goal of this study was to show the 2 × 2 interaction on receptiveness, as preregistered at https://aspredicted.org/HPN_PVY. It is also worth noting that we find a significant effect of support-oppose framing on value congruence for values-misaligned communicators in Studies 1 and 4, as well as in Supplemental Studies S5A and S5B; see also "Single Paper Meta-Analysis" in the Supplemental Materials.

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Figure 5

Study 5 Moderated Mediation Model of Support-Oppose Framing on Receptiveness



Note. The figure shows a moderated mediation model for the effect of support-oppose framing on receptiveness through perceived value congruence in Study 5. The notation *c* indicates the total effect of framing on predicted receptiveness; *c′* indicates the direct effect after controlling for mediators. Coefficients presented are standardized linear regression coefficients. n.s. = nonsignificant.
* $p < .05$. *** $p < .001$.

to them and their message if they frame their position in support rather than oppose terms. One contributor to this effect is that communicators perceive a message articulating their own position in support rather than oppose terms as more congruent with their own values (Study 1). This value congruence is associated with greater felt receptiveness, which predicts increased perceptions of receptiveness in others (Supplemental Study S1A). However, disagreeing others are actually *less* receptive to support- rather than oppose-framed messages. This decreased receptiveness is associated with lower desire for future interaction with the communicator (Supplemental Study S1B), more partisan hostility (Supplemental Study S2), and decreased willingness to select counterattitudinal information to read (Study 2, Supplemental Study S2). It also predicts less attitude change in response to support-framed messages (Study 3, Supplemental Study S3).

This support-oppose framing effect on receptiveness is mediated by value congruence: Disagreeing others view oppose-framed messages as more value congruent than support-framed messages, which predicts greater receptiveness (Studies 1, 4, and 5, Supplemental Studies S5A and S5B). Although support-oppose framing impacts other perceptions (e.g., perceptions of extremity), the mediation through value congruence persists after controlling for alternative mechanisms (which do not appear to mediate the effect themselves; Study 4, Supplemental Study S5B). Supporting this value-congruence account, the effect of support-oppose framing on receptiveness reverses when the communicator and message recipient share the same values (Study 5). When communicators and message recipients share the same values, recipients express greater receptiveness for support-framed messages than oppose-framed messages. That is, they appear to respond in the same way as communicators.

Of course, this research is not without limitations. In Table 5, we discuss potential limitations of the present work and describe supplemental studies and analyses that provide preliminary insight into some of the issues raised. Despite these limitations, the current research makes an important contribution. Indeed, a growing body of work seeks to understand receptiveness as a significant contributor to attitude change and interpersonal and intergroup relations (for a review, see Tormala & Rucker, 2025). Understanding contributors to receptiveness—or lack thereof—is particularly important due to growing political polarization, further perpetuated by "conflict spirals" whereby unreceptiveness begets further unreceptiveness (Pruitt, 1995; Weingart et al., 2015). The current research suggests that even something as simple as how people frame their position—in terms of what they support or what they oppose—can affect disagreeing others' receptiveness to it. We identified a miscalibration effect: People believe that disagreeing others will be more receptive to their position if they frame it in support rather than oppose terms, but in fact, the opposite appears to be true. As a result, communicators use messages that recipients perceive as incongruent with their own values, even though support- and oppose-framed positions can, in at least some cases, reflect the same underlying attitude. This misprediction sheds light on yet one more factor that might be contributing, in at least a small way, to societal divisiveness and political polarization. Taken together, our findings advance previous research on receptiveness (e.g., Minson & Chen, 2022), framing effects (e.g., Nelson et al., 1997), mispredictions (e.g., Yang et al., 2021), and the friction that can arise when people fail to correctly take the perspective of others (e.g., Eyal et al., 2018).

Interestingly, just like individual communicators, social movements frequently use support framing that could be further alienating

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Table 5
Potential Limitations and Future Directions

Limitation	Explanation of potential limitation	Opportunity for future research
Cross-cultural generalizability	Participants were recruited from the United States to consider political issues that are contentious in the United States. In different cultures, there may be different norms around the use of support and oppose framing, which may affect how people view both their own position and disagreeing others' positions.	Explore how perceptions and consequences of support–oppose framing differ cross-culturally.
Generalizability	Our experiments were conducted in an online context. Although online forums have become an increasingly important platform for communication, conversational dynamics can differ in real-time in-person interactions. In addition, we only explore these interactions among strangers; therefore, we cannot empirically speak to whether these effects will hold among closer relationships.	Explore the impact of support–oppose framing in real-time in-person dialogues. In addition, explore the impact of support–oppose framing in different relational situations.
Bipolar attitudes	Our studies focused on bipolar attitudes, which allowed us to create clean study designs whereby supporting an issue or idea generally implies opposing its converse. Moreover, we focused on politically polarized issues, given their increasing prevalence in modern society.	Explore how support–oppose framing affects receptiveness for issues that are not bipolar or politically charged.
Neutral attitudes	We excluded participants who indicated that they were neutral on the topic. This exclusion criterion was consistent with our proposed theoretical account (i.e., a value-congruence account). However, it is an open question whether support or oppose framing leads to greater receptiveness among individuals who are neutral or indifferent on the topic at hand. In addition, we cannot speak to how support–oppose framing may be perceived in isolation (i.e., in the absence of additional information clarifying the speaker's position) and whether oppose framing is more likely to be viewed as neutral than support framing in the absence of clarifying arguments.	Collapsing across studies in which we had receptiveness data from neutral participants, we found a significant effect such that support framing led to greater receptiveness than oppose framing ($t = 2.26$, $p = .02$; see Supplemental Materials). Future work is necessary to understand whether this effect is robust and, if so, what drives it. Future work is also necessary to understand how support- and oppose-framed positions are viewed in the absence of clarifying arguments and how this may change perceptions of neutrality.
Organic differences in framing	The current work used controlled experiments to isolate the effect of support–oppose framing in the absence of other language differences. This helps rule out third-variable accounts, but it prevents us from making statements about differences between support- and oppose-framed language that might arise when these frames are used in less controlled settings. In addition, we are unable to speak to when people are more likely to form and express support- versus oppose-framed attitudes.	To shed initial light on this question, we conducted Supplemental Study 6 ($N = 993$), in which we randomly assigned participants to use support or oppose framing to write about one of six different topics. We found no differences in overall word count, extremity, or emotionality of their text. Differences in the specific words used across conditions are reported in Supplemental Figure S4. More targeted work could shed additional light on this question.
Language valence	Past research suggests that positively valenced language leads to greater receptiveness than negatively valenced language (Yeomans et al., 2020). How can we reconcile the current evidence on the advantages of oppose framing with previous evidence on the disadvantages of negativity? The seeming disconnect between these findings highlights opportunities for future research—for example, exploring whether oppose framing is actually perceived as more negative.	As an initial investigation of this question, we conducted an exploratory study (Supplemental Study 7) in which participants evaluated the perceived valence of otherwise equivalent support- versus oppose-framed messages. We found no differences in perceived valence based on support–oppose framing, $t(552) = .94$, $p = .35$, $d = .079$. Future research exploring this matter further would be worthwhile.
Perceptions of communicators	The current work examined perceptions of communicator extremity, receptiveness, and certainty. However, support–oppose framing may affect other aspects of communicator perception.	Explore how support–oppose framing affects other communicator perceptions such as trust, knowledgeability, and likability.

(*table continues*)

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Table 5 (*continued*)

Limitation	Explanation of potential limitation	Opportunity for future research
Additional contributing mechanisms	Although Study 4 rules out numerous alternative mechanisms, there are still additional mechanisms yet to be explored. For example, another possible contributor is what is presented as the "default perspective." Perhaps arguments that are presented using the same construal that an individual uses (i.e., arguments that we show to be more value congruent) are also perceived more positively because they present the position in a way that centers the individual's own position as the "default perspective" and something that must be argued against.	Future research is necessary to explore the potential role of this default perspective and how it relates to value congruence, as well as other potential contributing mechanisms.

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the opposition. Of the 138 social movements listed on Wikipedia, less than 20% are framed in terms of what they oppose (Wikipedia, 2023). Most movements are instead framed in terms of what they support—pro-life, pro-choice, Black Lives Matter, men's rights activists, and so on. For movements or activists whose primary goals are to engage or speak to like-minded individuals, support framing is likely to be helpful in fostering receptiveness. However, for those hoping to persuade or connect with disagreeing others, this framing may be somewhat counterproductive. Indeed, although support framing might feel unobjectionable—for example, everyone agrees that life is good—the current research suggests that it can lower receptiveness among disagreeing others. It misses the opposition's point; that is, it mismatches the opposition's construal of the issue at hand. Thus, by framing their position and arguments in terms of what they oppose, social movements might better speak to those who disagree with them and foster more productive dialogues.

It is important to acknowledge that the effect sizes in our studies were modest. An internal single-paper meta-analysis assessing the framing effect on recipients across studies revealed small but reliable effects on both value congruence (difference = .71, SE = .11; $\text{estimate}_{\text{support}}$ = 1.86, SE = .16; $\text{estimate}_{\text{oppose}}$ = 2.57, SE = .16; $d = -.44$) and receptiveness (difference = .34, SE = .33; $\text{estimate}_{\text{support}}$ = 3.17, SE = .21; $\text{estimate}_{\text{oppose}}$ = 3.52, SE = .21; $d = -.20$), the two variables that were measured in the same way across studies (see the Supplemental Materials for full analysis and discussion). Although the average effect on receptiveness was small, small but reliable effects can be theoretically important when seeking to understand complex psychological phenomena, especially when considered over large numbers of individuals. Furthermore, at scale, using many small interventions across large numbers of people can cumulatively offer a practical strategy for chipping away at societal problems. Our argument is not that support-oppose framing in isolation is likely to have an enormous impact on outgroup animosity or polarization on society's most divisive issues. We simply submit that support-oppose framing might help enhance communication between disagreeing groups.

In closing, growing divisiveness touches numerous areas of public and private life. In medicine and public health, for example, ideological divides influenced many individuals' health decisions and support for policies during the COVID-19 pandemic (Tyson, 2020). Within organizations, political disagreement has become an unavoidable part of work life that contributes to negative outcomes in the workplace (Reeves et al., 2021). Even in familial relationships, divergent political values impact communication and relationships (Warner et al., 2021), and people end friendships over political differences (Cox, 2021). Across all of these spheres, conversations rooted in unreceptiveness have the potential to harm interpersonal relationships (Kennedy & Pronin, 2008; Warner et al., 2021), which affects individual, group, and societal well-being. Understanding the many factors that bolster or inhibit receptiveness is critical to navigating disagreeing views in a manner that bridges rather than further divides us. The current research highlights a seemingly minor attitudinal nuance—support-oppose framing—that we hope adds useful insight in this domain.

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Appendix A

Preregistrations and Participant Information

Study	Preregistration	Recruited	*N* after preregistered exclusion	Female (%)	M_{age} (SD_{age})
1	https://aspredicted.org/W5XX-66N4.pdf	1,991	1,382	57.96	40.98 (13.74)
2	https://aspredicted.org/W1H_PS5	997	987	48.01	34.38 (10.91)
3	https://aspredicted.org/6P7_81X	2,403[a]	1,548	48.64	42.19 (13.77)
4	https://aspredicted.org/MPYB_843S.pdf	1,041[b]	892	56.39	42.60 (14.71)
5	https://aspredicted.org/HPN_PVY	1,277	1,162	69.79	30.15 (11.26)
S1A	https://aspredicted.org/1W7_XWH	999	947	51.11	34.84 (12.43)
S1B	https://aspredicted.org/4P5_N5J	1,999	1,498	49.33	34.28 (12.44)
S2	https://aspredicted.org/1Y8_W4Y	950	946	49.79	34.37 (11.31)
S3	https://aspredicted.org/SZ3_7PC	1,585	1,531	53.96	38.50 (13.45)
S4	https://aspredicted.org/5B8_J8B	999	736	42.66	36.71 (13.07)
S5A	https://aspredicted.org/6ZZ_FSY	999	754	75.33	27.96 (9.45)
S5B	https://aspredicted.org/9SN_2WX	996	689	49.06	40.27 (14.14)
S6	N/A (exploratory)	993	993	50.25	40.19 (13.95)
S7	https://aspredicted.org/GTQ_Y54	603	554	49.10	39.02 (13.93)
Total			14,619		

Note. N/A = not available.

[a] For the topic of junk food taxes, 759 participants indicated indifference toward the topic in the initial trinary attitude question. Because Prolific Academic does not have a filter for this attitude and did not have the option to employ custom screeners when this survey was run, all participants were allowed to complete the survey including indifferent participants. We use these indifferent participants for analysis on our General Discussion exploratory analysis, but not for our primary analysis, consistent with our preregistration. [b] A total of 1,221 participants were recruited (consistent with our preregistration); however, only 1,041 completed the survey because participants who indicated indifference toward the target issue were prescreened and paid for their time and did not complete the survey.

Appendix B

Full Indices

Communicator and Recipient Receptiveness (Study 1)

Communicators

To what extent would they be receptive to your arguments?
1 = *not at all*, 7 = *extremely receptive*
To what extent were you open-minded to their arguments?
1 = *not at all*, 7 = *extremely open-minded*

Recipients

To what extent were you receptive to their arguments?
1 = *not at all*, 7 = *extremely receptive*
To what extent were you open-minded to their arguments?
1 = *not at all*, 7 = *extremely open-minded*

Recipient Receptiveness (Studies 3–5)

To what extent were you receptive to their arguments?
1 = *not at all receptive*, 7 = *extremely receptive*
To what extent were you open-minded to their arguments?
1 = *not at all open-minded*, 7 = *extremely open-minded*

Value Congruence (Studies 1, 4, and 5)

To what extent is this message congruent with your own values?
1 = *definitely incongruent*, 7 = *definitely congruent*
To what extent does this message fit your worldview?
1 = *definitely does not fit with my worldview*, 7 = *definitely fits with my worldview*

(*Appendices continue*)

To what extent does this message reflect your personal morals?

1 = *definitely does not reflect my morals*, 7 = *definitely does reflect my morals*

Time 1/Time 2 Attitude

Before you read their message, what is your attitude toward junk food taxes?

0 = *implementing a junk food tax would be good for the United States*, 100 = *implementing a junk food tax would be bad for the United States*

After reading participant [#]'s message where they [support/oppose] the statement [statement], what is your attitude toward junk food taxes?

0 = *implementing a junk food tax would be good for the United States*, 100 = *implementing a junk food tax would be bad for the United States*

For full indices, see additional online materials at https://osf.io/vtjyn.

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