Supplemental Materials

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Consistency Check

As a consistency check, in each study we measure attitudes using two different scales. On the opening page of each survey, we assess participants' attitudes toward the target issue on a trinary scale (e.g., "Implementing _____ would be beneficial to the US," "Implementing _____ would be harmful to the US," or "no opinion"). On a subsequent page, we assess participants' attitudes toward the target issue on a 7-point scale[1] (e.g., What is your attitude toward the statement, "Implementing _____ would be beneficial to the US"? *1 – Extremely opposed, 7 – Extremely in favor*). Participants who provide inconsistent answers (e.g., selecting "Implementing _____ would be beneficial to the US" as representing their attitude in the trinary question, then selecting "*1 – Extremely opposed*" in response to the same statement) are excluded from analysis as support-oppose framing cannot be reliably manipulated for participants reporting inconsistent attitudes. Moreover, participants indicating inconsistent attitudes are likely either (1) not paying attention during the study or (2) misunderstanding the questions being asked, and are thus more likely to contribute to noise rather than meaningful patterns.

[1] We used 101-point scales when measuring attitude change, in order to allow a more granular measure to detect attitude change.

Table S1: Methodological details by study

Study	Topic	Participant Role	Trinary attitude choices	Messages	Handling of no opinion participants[2]	Attention check	Attitude consistency check	DVs
1	Abortion	Message generators and recipients (randomly assigned)	Pro-life Pro-choice No opinion	Researcher generated counteratt. messages (see Main Text Fig. 1, OSF)	Prolific academic abortion attitudes prescreen; participants neutral toward abortion were prescreened out of survey	Which of the following statements did you read? *Researcher-generated message listed as correct answer*	What is your attitude toward the statement, [statement]? 7-point scale: *1 = Definitely opposed, 7 = Definitely in favor* Statements: Legalizing abortions after 6 weeks is bad Legalizing abortions after 6 weeks is good Participants saw either the statement they supported or the statement they opposed, depending on condition	Receptiveness Value congruence
2	Same-sex marriage, abortion, gun control	Message recipients	N/A See Main Text Figure 3 for stimuli	Researcher generated counteratt. messages (see Main Text Fig. 3)	All participants used in analysis	N/A	N/A	Support or oppose post selected
3	Junk food tax	Message recipients	Implementing a junk food tax would be good for the US, Implementing a junk food tax would be bad for the US, No opinion	Researcher generated counteratt. messages (see OSF)	All participants completed study and compensated. Data not used from no opinion participants.	Which of the following topics did you read messages about during the study? *Junk food tax*	Before you read their message, what is your attitude toward junk food taxes? 0 = Implementing a junk food tax would be good for the US, 100 = Implementing a junk food tax would be bad for the US Statements: See trinary attitude choices. Participants saw either the statement they supported or the statement they opposed, depending on condition	Receptiveness Attitude change

[2] Whether no opinion participants were collected or pre-screened out of each study was based on current tools available on Prolific academic (e.g., prescreening capabilities implemented between earlier and later run studies).

4	Abortion	Message recipients	Legalizing abortions after 6 weeks is bad Legalizing abortions after 6 weeks is good No opinion	Researcher generated counteratt. messages (see Main Text Table 3)	Prescreen feature implemented on Prolific Academic. No opinion participants screened out at beginning of survey, given partial compensation.	Which of the following statements did you read? *Researcher-generated message listed as correct answer*	Before reading message: What is your attitude toward the statement, [statement]? 7-point scale: *1 = Extremely opposed, 7 = Extremely in favor* Statements: See trinary attitude choices. Participants saw either the statement they supported or the statement they opposed, depending on condition	Receptiveness Value congruence Range of attitudes Extremity Perceptions of neutrality Certainty Interest in counterarguing Ease of counterarguing Perceived relevance Ease of processing Attention Communicator receptiveness
5	Legalizing abortions after 6 weeks, Legalizing same-sex marriage, Mask requirements, and Stricter gun control legislation	Message recipients	Assigned based on topic: Legalizing abortions after 6 weeks is [good/bad], No opinion. Legalizing same-sex marriage is [good/bad], No opinion. Having mask requirements during COVID is [good/bad], No opinion. Stricter gun control legislation is [good/bad], No opinion.	Researcher generated messages (proatt. or counteratt., depending on condition; see OSF)	All participants completed study and compensated. Data not used from no opinion participants.	Which of the following topics did you read about? *Assigned topic as correct answer*	Before reading message, What is your attitude toward the statement, [statement]? 1 = *extremely opposed,* 7 = *extremely in favor* Statements: See trinary attitude choices. Participants saw either the statement they supported or the statement they opposed, depending on condition	Value congruence Receptiveness
S1 A	Same-sex marriage	Message generators	Legalizing same-sex marriage is good for the US, Legalizing same-sex marriage is bad for the US, No opinion	Generated by participants themselves	Pre-test to identify non-indifferent participants. Individuals who were invited based on pre-test but then indicated indifference pre-screened out of study	How many noses does the average person have?	At end of study: What is your attitude toward the statement, [statement]? *1 = extremely opposed, 7 = extremely in favor* Statements: See trinary attitude choices. Participants saw either the statement they supported or the statement they opposed, depending on condition	Value Congruence Predicted receptiveness Own receptiveness Persuasion intentions (see OSF)
S1B	Same-sex marriage	Message recipients	Legalizing same-sex marriage is good for the US,	Study 1A messages (from	All participants completed study and compensated.	Which of the following arguments did you read?	Before reading message: What is your attitude toward the statement, [statement]? 100-point scale:	Receptiveness Desire for future interaction

			Legalizing same-sex marriage is bad for the US, No opinion	disagreeing individual)	Data not used from no opinion participants.	*Message from other participant listed as correct answer*	*0 = Extremely opposed, 100 = Extremely in favor* Statements: See trinary attitude choices. Participants saw either the statement they supported or the statement they opposed, depending on condition	
S2	Same-sex marriage, Abortion, Gun control	Message recipients	N/A See Figure S3 for sample stimulus	Researcher generated counteratt. messages (see OSF)	All participants used in analysis	N/A	N/A	Support or oppose post selected
S3	Taxes on the wealthy	Message recipients	N/A (No consistency check)	Researcher generated counteratt. messages (see OSF)	All participants completed study and compensated. Only liberals recruited. Data only used from participants who initially wanted increased taxes on the wealthy.	None	No consistency check	Receptiveness Attitude change
S4	Same-sex marriage	Message recipients	Legalizing same-sex marriage is good for the US, Legalizing same-sex marriage is bad for the US, No opinion	Study 1A messages (from disagreeing individual)	All participants completed study and compensated. Data not used from no opinion participants.	Which of the following statements did you read? *Message from other participant listed as correct answer*	At end of study, What is your attitude toward the statement, [statement]? *1 = extremely opposed, 7 = extremely in favor* Statements: See trinary attitude choices. Participants saw either the statement they supported or the statement they opposed, depending on condition	Receptiveness Positive impression Perceived extremity Perceived receptiveness
S5A	Abortion	Message recipients	Pro-life Pro-choice No opinion	Researcher generated counteratt. messages (see Main Text Table 3)	Prolific academic abortion attitudes prescreen; participants neutral toward abortion were prescreened out of survey	Which of the following statements did you read? *Message from other participant listed as correct answer*	Before reading message, What is your attitude toward the statement, [statement]? 1 = *extremely opposed,* 7 = *extremely in favor* Statements: Legalizing abortion after 6 weeks is bad or	Value congruence Receptiveness

							Legalizing abortion after 6 weeks is good. Which statement participants saw was determined by their condition assignment.	
S5B	Abortion	Message recipients	Pro-life Pro-choice No opinion	Researcher generated counteratt. messages (see Main Text Table 3)	Prolific academic abortion attitudes prescreen; participants neutral toward abortion were prescreened out of survey	Which of the following statements did you read? *Researcher-generated message listed as correct answer*	What is your attitude toward the statement, [statement]? 7-point scale: *1 = Definitely opposed, 7 = Definitely in favor* Statements: Legalizing abortions after 6 weeks is bad Legalizing abortions after 6 weeks is good Participants saw either the statement they supported or the statement they opposed, depending on condition	Value congruence Receptiveness Extremity – abortion in general Extremity – target statement
S6	Same-sex marriage, gun control, legalizing abortions after 6 weeks, taxes on the wealthy, universal health care, deporting "illegal immigrants"	Message generators	[topic] is good Neither/it's complicated [topic]	Generated by participants themselves	All participants used in analysis	N/A	N/A	
S7	Legalizing abortions after 6 weeks, Legalizing same-sex marriage, Mask requirements, and Stricter gun control legislation	Message Recipients	Assigned based on topic: Legalizing abortions after 6 weeks is [good/bad], No opinion. Legalizing same-sex marriage is [good/bad], No opinion. Having mask requirements during COVID is [good/bad], No opinion. Stricter gun control legislation is [good/bad], No opinion.	Researcher generated messages (proatt. or counteratt., depending on condition; see OSF)	All participants completed study and compensated. All participants had an opinion about one of the possible issues.	Which of the following topics did you read about? *Assigned topic as correct answer*	Before reading message, What is your attitude toward the statement, [statement]? 1 = *extremely opposed,* 7 = *extremely in favor* Statements: See trinary attitude choices.	

Study 4 Alternative Mediation Models

For Study 4, we explored the alternative serial mediation model in which the relationship between framing and value congruence was mediated by extremity. Oppose framing led to lower perceptions of extremity, ß = -.20, t(890) = -2.14, p = .002, which predicted greater value congruence, ß = -.28, t(890) = -8.66, p < .001, which in turn predicted greater receptiveness, ß = -.51, t(890) = -17.66 p < .001, ab = -.03, Z = -.283, p = .005. Although we cannot rule out the possibility that value congruence is a consequence of differences in perceived extremity, it is worth noting that the value-congruence-as-proximal-mediator model (reported in the main text) performs better empirically than this alternative model (ab = -.18 versus ab = -.03), and support-oppose framing had a stronger effect on value congruence (ß = -.36, t(890) = -5.53, p < .001) than on extremity (ß = .20, t(890) = 3.06, p = .002), suggesting value congruence as the proximal cause.

We also explored the alternative mediation model in which value congruence was a consequence rather than cause of increased receptiveness. Relative to support framing, oppose framing led to greater perceived receptiveness, ß = -.24, t(890) = -3.57, p < .001, which predicted greater value congruence, ß = .51, t(890) = 17.66, p < .001. There was a significant indirect effect through this pathway, ab = -.12, Z = -3.50, p < .001. Although we cannot rule out empirically the possibility that value congruence is a consequence of receptiveness, rather than a driver, it is worth noting that the value-congruence-as-mediator model (reported in the main text) performs better empirically than this alternative model (ab = -.18 versus ab = -.12), and support-oppose framing had a stronger effect on value congruence (ß = -.36, t(890) = -5.53, p < .001) than on receptiveness (ß = -.24, t(890) = -3.57, p < .001), suggesting value congruence as the proximal cause.

Finally, from a theoretical perspective there is also reason to believe that receptiveness is an outcome rather than driver of value congruence. Indeed, the value congruence (as a mediator) model is more parsimonious than the alternative model: If value congruence does not drive the difference in receptiveness for support- versus oppose-framed attitudes, then what does? This alternative model leaves a conceptual gap in the sequence for why support-oppose framing affects receptiveness in the first place. On the other hand, the value-congruence account leaves no such gap: The effects of support-oppose framing on receptiveness are shaped by differences in value congruence. This reasoning is consistent with the findings of Catapano and Tormala (2021).

Neutral Individuals Analysis

Throughout our experiments, we excluded participants who indicated that they were indifferent on the topic, either through pre-survey exclusions or exclusions after data collection. This exclusion criterion was consistent with our proposed theoretical account (i.e., a perceived 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 the absence of a clear opinion on an issue, are people more receptive to support or oppose framing? To explore this question, we collapsed across studies in which we had receptiveness data from neutral participants (Studies 3, 5, Supplemental Studies 1B, 3, 4; N = 1231; see Table S1). Among these participants, we found a significant effect such that support framing led to greater receptiveness than oppose framing, $t = 2.26$, $p = .02$[3]. Future work is necessary to understand whether this effect is robust and, if so, what drives it. For now, it appears that communicators' predictions that others will be more receptive to support than oppose framing might be accurate for neutral or agreeing others. However, when others disagree, and boosting their receptiveness is more pressing, communicators' predictions seem to be misguided.

[3] We used a mixed-effects model with random intercepts by study to account for the data being obtained in different studies with different topics and designs. Degrees of freedom for t-statistic is not reported due to statistician uncertainty surrounding their calculation and meaningfulness in mixed models (e.g., Baayen et al., 2008).

Supplemental Study 1A

Supplemental Study 1A manipulated support-oppose framing on a contentious issue (same-sex marriage) and measured its impact on the predicted receptiveness of disagreeing others. Unlike in Study 1, in Supplemental Study 1A we allowed participants to write their own messages to be sent to another participant, allowing a greater degree of external validity. Supplemental Study 1A 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.

Method

Participants ($N = 947$) indicated their attitudes toward same-sex marriage on a trinary scale (legalizing same-sex marriage is good for the US, bad for the US, or no opinion). Then, we randomly assigned participants to one of two conditions. In the support-framing condition, participants wrote a message about the statement they supported (i.e., the statement they selected on the attitude measure). In the oppose-framing condition, participants wrote a message about the statement they opposed (i.e., the statement they did not select). It is important to note that in both conditions, participants wrote a message about an attitude position that was consistent with their own view. Thus, participants who indicated a positive attitude toward same-sex marriage wrote a message about their support for the good statement or their opposition to the bad statement (depending on condition assignment). Conversely, participants who indicated a negative attitude toward same-sex marriage wrote a message about their support for the bad statement or their opposition to the good statement (depending on condition assignment). All

participants wrote a message about their own view on same-sex marriage, but it was framed in terms of the position they supported or opposed. Participants were told that their message would be shown to a future participant who disagreed with them (which we did in Supplemental Study 1B).

Once they had written the message, participants reported how receptive they thought the disagreeing other would be to their message. Predicted receptiveness was measured with a 2-item index (adapted from Catapano et al., 2019: "To what extent do you think that the message receiver would be [receptive/open-minded] to your arguments?" 1 = *not at all receptive/open-minded*, 7 = *extremely receptive/open-minded*; r = .81). In addition, participants reported how value congruent the focal position was for them (3-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*; α = .94) and how receptive they themselves would be to the message they had written if they received it from another person (2-item index; e.g., "To what extent would you be receptive to the arguments?" 1 = *not at all receptive*, 7 = *extremely receptive*; r = .89). Finally, participants completed an attention check, reported their attitude for the consistency check, and provided demographic information.[4]

Results

Support-oppose framing affected predicted receptiveness in others, felt receptiveness, and perceived value congruence. First, participants believed that a disagreeing other would be more receptive to their message in the support-framing condition (M = 3.15, 95% CI [3.02, 3.28])

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[4] For Supplemental Study 1A, we also preregistered and measured persuasion intentions. Predicted receptiveness and persuasion intentions were significantly correlated and displayed similar results. In the interest of clarity and concision, we focus on only on receptiveness throughout our studies. For interested readers, the measures and data for persuasion intentions are available on OSF.

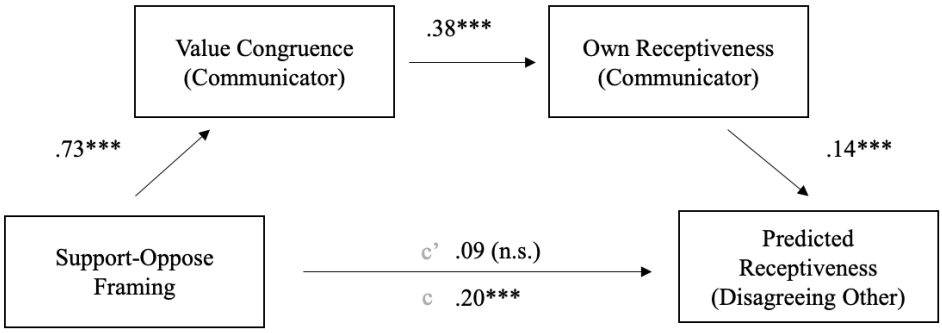
rather than oppose-framing condition (M = 2.85, 95% CI [2.71, 2.99]; $t(945) = 3.06$, $p = .002$, $d = .20$). In addition, participants reported that they themselves would be more receptive to the message they had written in the support-framing condition (M = 6.01, 95% CI [5.89, 6.12]) rather than oppose-framing condition (M = 4.07, 95% CI [3.87, 4.27]; $t(945) = 16.84$, $p < .001$, $d = 1.10$). Finally, the expressed position felt more value congruent to participants in the support-framing condition (M = 6.28, 95% CI [6.18, 6.38]) rather than oppose-framing condition (M = 4.94, 95% CI [4.73, 5.16]; $t(945) = 11.92$, $p < .001$, $d = .78$).[5]

To determine whether the effect of support-oppose framing on predicted receptiveness was driven by the proposed mediators, we used structural equation modeling. Support framing felt more value congruent to participants, ß = .73, $t(945) = 11.92$, $p < .001$, which predicted greater felt receptiveness, ß = .38, $t(945) = 12.53$, $p < .001$. Participants' receptiveness, in turn, was associated with greater predicted receptiveness in the disagreeing other (i.e., message recipient), ß = .14, $t(945) = 4.24$, $p < .001$. There was a significant indirect effect through this pathway, $ab = .02$, $Z = 2.61$, $p = .009$ (see Figure S1).

[5] In Supplemental Study 1A, we employed the Evaluative Lexicon (EL; Rocklage et al., 2018) to explore potential differences in the messages written in the support- versus oppose-framing conditions. The EL is specifically designed to measure the emotionality, extremity, and valence of evaluative reactions and attitudes. We observed no difference in wordcount or extremity by condition, ps > .40. However, messages had a more positive valence in the support-framing condition (M = 5.74) than in the oppose-framing condition (M = 5.03), $t(556) = 3.13$, $p = .002$, and were marginally more emotional in the support-framing condition (M = 5.90) than in the oppose-framing condition (M = 5.63), $t(556) = 1.76$, $p = .08$. In the main text studies, we explore whether the receptiveness effect relies on these differences by holding message content constant and find that the effect persists in the absence of message differences.

Figure S1

Supplemental Study 1A Mediation Model of Support-Oppose Framing on Receptiveness



Note. Mediation model shows the effect of support-oppose framing on receptiveness through perceived value congruence and the communicator's own receptiveness in Study 1A. The notation c indicates the total effect of framing on predicted receptiveness; c' indicates the effect after controlling for mediators. Coefficients presented are standardized linear regression coefficients.
*** $p < .001$

To test alternative mediation models in Supplemental Study 1A, we focused on the two possible pathways wherein predicted receptiveness acts as a cause rather than consequence of message writer receptiveness. This possibility is consistent with prior findings that perceiving receptiveness in others can increase an individual's own receptiveness (Chen et al., 2010; Collins et al., 2021; Hussein & Tormala, 2021; Minson & Chen, 2021).

The first alternative pathway we explored was the model in which support-oppose framing predicts value congruence (as in our proposed model), which leads to a boost in perceived receptiveness in others, which then predicts one's own felt receptiveness. As in our proposed model, support framing led to greater value congruence, ß = .73, $t(945) = 11.92$, $p <$ .001. However, this effect did not significantly predict recipient receptiveness, ß = .028. Recipient receptiveness predicted writer receptiveness, ß = .08, Z = 2.84, $p = .004$. The indirect effect through this pathway was not significant, $ab = .002$, Z = .74, $p = .46$; thus, the data did not support this model. As a variation on this pathway, we also explored the model in which support-oppose framing predicts value congruence (as in our proposed model), which leads to a boost in

perceived receptiveness in others (i.e., removing the last link). The indirect effect through this pathway was also not significant, $ab = .02$, $Z = 0.84$, $p = .40$.

The second alternative pathway we explored was the model in which support-oppose framing has a direct effect on predicted recipient receptiveness, which in turn increases the message writer's felt receptiveness, which then predicts value congruence. Support framing increased predicted receptiveness, ß = .20, $Z = 3.01$, $p = .003$, which was associated with increased writer receptiveness, ß = .09, $Z = 3.03$, $p = .002$. In turn, writer receptiveness predicted value congruence, ß = .27, $Z = 6.20$, $p < .001$. There was a small but significant indirect effect, $ab = .005$, $Z = 2.10$, $p = .03$. Although we cannot rule out empirically the possibility that value congruence was a consequence rather than driver of changes in receptiveness, it is worth noting that the predicted value congruence model (reported in the main text) performed better empirically than this alternative model (ab = .02 versus ab = .005). In addition, from a theoretical perspective there is reason to believe that receptiveness is an outcome rather than driver of value congruence (see Study 4 Alternative Mediation Models).

Supplemental Study 1B

Supplemental Study 1A suggested that communicators believe that disagreeing others will be more receptive to messages framed in terms that the communicator supports rather than opposes. However, past research suggests that communicators are not always well-calibrated to others' felt receptiveness (Yeomans et al., 2020). In Supplemental Study 1B, we examined whether recipients of the messages generated in Supplemental Study 1A would be more receptive to the support-framed arguments (as predicted by communicators) or the oppose-framed arguments (as predicted by our value-congruence account). Unlike in our main-text studies, in Supplemental Study 1B, participants read real messages from other participants who had previously taken the study (in Supplemental Study 1A).

In addition, we tested the effect of support-oppose framing on desire for future interaction with individuals holding opposing views, which is an important downstream consequence of felt receptiveness that has received considerable attention in recent research (Minson & Chen, 2021). People often avoid interacting with disagreeing others (Chen & Rohla, 2018; Gerber et al., 2012), particularly in the context of rising political polarization (Pew Research Center, 2017). In Supplemental Study 1B, we explored whether increased receptiveness due to a shift in support-oppose framing could mitigate this issue.

Method

Participants ($N = 1498$) indicated their attitudes toward same-sex marriage using the same scale as in Supplemental Study 1A. Then, we randomly paired each participant in Supplemental Study 1B with a corresponding participant from Supplemental Study 1A who disagreed with them on the target issue. Participants in the support-framing condition in Supplemental Study 1B read counterattitudinal messages from participants who disagreed with them and had been

assigned to the support-framing condition in Supplemental Study 1A (i.e., the position was presented in terms of what the writer supported). Participants in the oppose-framing condition in Supplemental Study 1B read counterattitudinal messages from participants who disagreed with them and had been assigned to the oppose-framing condition in Supplemental Study 1A (i.e., the position was presented in terms of what the writer opposed).[6] Once paired, participants were shown the communicator's ID number, position (framed in support or oppose terms), and message (see Main Text Figure 1).

After reading the message, Supplemental Study 1B participants reported their own receptiveness to the message they received using two items adapted from Supplemental Study 1A (e.g., "To what extent were you receptive to their arguments?" 1 = *not at all receptive*, 7 = *extremely receptive*; $r = .71$). We also measured participants' desire for future interaction with disagreeing others. This index consisted of three items (How willing would you be to read another message from participant [number] / engage in a discussion with participant [number] about this topic? *1 = Not at all willing, 7 = Extremely willing*; How willing would you be to discuss this topic with a different participant who disagrees with you? [i.e., someone who is in support of/against the statement, (statement)]? *1 = Not at all, 7 = Very much;* $\alpha = .86$). Finally, participants completed an attention check and provided demographic information.

Results

We began by conducting a factor analysis to determine whether (1) the willingness to engage items tapped into a single construct, and (2) this construct was empirically separable

[6] Because more than 50% of participants in Supplemental Studies 1A and 1B reported positive attitudes towards same-sex marriage, in Supplemental Study 1B we randomly showed participants a subset of the positive messages from Supplemental Study 1A (i.e., not every positive message was seen) and reused negative messages for multiple participants.

from receptiveness. The analysis yielded two factors explaining a total of 70.10% of the variance for the five items (see Table S2). The first factor consisted of the three willingness to engage items and explained 39.90% of the variance. The second factor consisted of the two receptiveness items (receptiveness and openness) and explained an additional 30.20% of the variance. In sum, the factor analysis was consistent with a two-factor solution and suggested that the willingness-to-engage items and the receptiveness items tapped into distinct constructs.

Table S2.

Factor analysis for receptiveness and willingness to engage indices

		Factor 1	Factor 2
Willingness to engage	How willing would you be to engage in a discussion with participant [number] about this topic?	**.855**	.248
	How willing would you be to discuss this topic with a different participant who disagrees with you?	**.813**	.122
	To what extent would you be willing to read another message from participant [number]?	**.704**	.340
Receptiveness	To what extent were you receptive to their arguments?	.269	**.824**
	To what extent were you open-minded to their arguments?	.186	**.799**
	Eigenvalue	1.995	1.510
	Percent of total variance	39.90%	30.20%
	Total variance		**70.10%**

As hypothesized, participants who read an oppose-framed message felt more receptive (M = 2.94, 95% CI[2.81, 3.07]) than participants who read a support-framed message (M = 2.56, 95% CI[2.43, 2.70]), $t(1496) = -4.02$, $p < .001$, $d = .21$. Furthermore, participants who read an oppose-framed message were more willing to engage in future interaction with disagreeing others (M = 4.07, 95% CI[3.94, 4.19]) compared to those who read a support-framed message (M = 3.78, 95% CI[3.63, 3.93]), $t(1496) = -2.91$, $p = .004$, $d = .15$.[7] Mediation analysis was consistent with the proposed pathway: Oppose framing led to greater receptiveness than support

[7] Using two separate analyses instead of the index, participants were more willing to engage with both the participant who had written the original message, $t(1496) = -2.87$, $p = .004$, and a different individual who disagreed with them, $t(1496) = -2.45$, $p = .015$.

framing, ß = -.21, $t(1496) = -4.02$, $p < .001$, which predicted greater desire for future interaction, ß = .46, $t(1496) = 20.02$, $p < .001$, $ab = -.09$, $Z = -3.90$, $p < .001$.

For Supplemental Study 1B, we also explored the alternative mediation model in which desire for future interaction is a cause rather than consequence of increased receptiveness. Oppose framing led to lower desire for future interaction than support framing, ß = -.15, t(1496) = -2.91, $p = .004$, which predicted greater receptiveness, ß = .46, $t(1496) = 20.02$, $p < .001$, $ab = -.07$, $Z = -2.93$, $p = .003$. Although we cannot rule out (empirically) the possibility that receptiveness is a consequence of changes in desire for future engagement, rather than a driver, it is worth noting that the predicted-receptiveness-as-mediator model performs slightly better empirically than this alternative model ($ab = -.09$ versus $ab = -.07$), and support-oppose framing had a stronger effect on receptiveness (ß = -.21, $t(1496) = -4.02$, $p < .001$) than on desire for future engagement (ß = -.15, t(1496) = -2.91, p = .004), suggesting receptiveness as the proximal cause. This model is also consistent with past theorizing suggesting that receptiveness is a precursor to desire for future engagement (e.g., Minson & Chen, 2021).

Discussion

Supplemental Study 1B suggested that message recipients are more receptive to oppose-framed messages than to support-framed messages, which leads to an increased desire for future interaction. Is it possible that this effect was driven by participants who did not follow instructions and wrote arguments that did not align with their indicated attitudes? In other words, perhaps some participants wrote messages in Supplemental Study 1A that did not match their reported attitudes (e.g., indicating that they had a positive attitude toward same sex marriage but then writing a negative message), and thus actually wrote messages that were proattitudinal to participants to Supplemental Study 1B. If so, and if this tendency occurred mostly in the oppose-

framing condition, it is possible that it could have affected our observed results. To examine this question, we ran a follow-up study, in which we replicated Supplemental Study 1B but added a question asking participants whether the message they received aligned with the author's indicated attitude. Specifically, we asked all participants, "Are the message and position you read consistent? For example, if the other participant said that they support the statement that legalizing same-sex marriage is bad, then their message should be about why they think legalizing same-sex marriage is bad." (*Yes–they are consistent; No–they are inconsistent/don't make sense together; Neither–they didn't write a message, or the message is non-sensical, meaningless, or impossible to understand*). After excluding all participants who did not select "*Yes–they are consistent"*, we still found a significant effect such that message recipients were less receptive to support-framed messages than to oppose-framed messages. We also ran a supplemental analysis of Supplemental Studies 1A and 1B, in which we excluded any responses that were designated as inconsistent in Supplemental Study 1B. The effect of support-oppose framing on receptiveness and the proposed mediations persisted. Below we detail the follow-up study and results.

Supplemental Study 1B Follow-up

Method

Participants ($N = 894$) completed the same study as described in Supplemental Study 1B with two differences. First, Supplemental Study 1B included behavioral intentions measures, whereas the follow-up study did not. Second, the follow-up study included an additional question asking whether the message was consistent with the stated position and made sense: "Are the message and position you read consistent? For example, if the other participant said that they support the statement that legalizing same-sex marriage is bad, then their message should be

about why they think legalizing same-sex marriage is bad." (*Yes–they are consistent; No–they are inconsistent/don't make sense together; Neither–they didn't write a message, or the message is non-sensical, meaningless, or impossible to understand*).

Results

As hypothesized, but contrary to the predictions of message writers, message recipients were less receptive to support-framed positions (M = 2.52, 95% CI [2.37, 2.67]) than they were to oppose-framed positions (M = 2.85, 95% CI [2.67, 3.03]; $t(892) = -2.75$, $p = .006$, $d = .18$). This effect held after including only messages that were indicated to be consistent (participant selected "*Yes—they are consistent*") ($M_{support}$ = 2.52, 95% CI [2.34, 2.69]; M_{oppose} = 2.81; 95% CI [2.60, 3.02]; $t(673) = -2.09$, $p = .04$, $d = .16$).[8]

Discussion

In our follow-up study, we asked participants to indicate whether the argument that they read (written by a participant in Supplemental Study 1A) was consistent with their stated attitude. In the analyses that follow, we reanalyzed Supplemental Studies 1A and 1B after excluding inconsistent arguments.

Supplemental Study 1A Results (N = 838)

Support-oppose framing affected predicted receptiveness in others, felt receptiveness, and perceived value congruence. First, participants believed that a disagreeing other would be more receptive to their message in the support-framing condition (M = 3.13, 95% CI [3.00, 3.26]) rather than oppose-framing condition (M = 2.81, 95% CI [2.66, 2.96]; $t(836) = 3.19$, $p = .001$, d

[8] This exclusion removed 24% of the sample, leaving 675 participants for analysis. We view this as a conservative test, in that only responses designated as consistent were used in the analysis (which may exclude some responses that were difficult to understand, but may have still been arguing for the correct position). In our main studies, we used researcher-generated arguments to ensure that all arguments would be aligned with the correct position and allow us to retain the full sample.

= .22). In addition, participants reported that they themselves would be more receptive to the message they had written in the support-framing condition (M = 6.01, 95% CI [5.89, 6.14]) rather than oppose-framing condition (M = 4.12, 95% CI [3.90, 4.34]; $t(836) = 15.38$, $p < .001$, d = 1.07). Finally, the expressed position felt more value congruent to participants in the support-framing condition (M = 6.30, 95% CI [6.20, 6.39]) rather than oppose-framing condition (M = 4.98, 95% CI [4.75, 5.21]; $t(836) = 11.15$, $p < .001$, d = .77).

When examining the proposed mediation pathway, support framing felt more value congruent to participants, ß = .72, $t(836) = 11.14$, $p < .001$, which predicted greater felt receptiveness, ß = .39, $t(836) = 12.24$, $p < .001$. Participants' receptiveness, in turn, was associated with greater predicted receptiveness in the disagreeing other (i.e., message recipient), ß = .12, $t(836) = 3.55$, $p < .001$. There was a significant indirect effect through this pathway, ab = .02, $Z = 2.10$, $p = .036$.

Supplemental Study 1B Results (N = 371)[9]

As hypothesized, participants who read an oppose-framed message felt more receptive (M = 3.19, 95% CI[2.88, 3.49]) than participants who read a support-framed message (M = 2.73, 95% CI[2.48, 2.98]), $t(369) = -2.31$, $p = .02$, d = .24. Furthermore, participants who read an oppose-framed message were more willing to engage in future interaction with disagreeing others (M = 4.26, 95% CI[3.97, 4.56]) compared to those who read a support-framed message (M = 3.78, 95% CI[3.52, 4.04]), $t(369) = -2.42$, $p = .02$, d = .25. Mediation analysis was consistent with the proposed pathway: Oppose framing led to greater receptiveness than support framing, ß

[9] As noted in-text, across samples more participants believed that same-sex marriage should be allowed rather than banned. As a result, each argument stating that same-sex marriage should be banned was shown to multiple participants in Supplemental Study 1B. In our reanalysis of Supplemental Study 1B, any argument that was considered inconsistent by one recipient was considered inconsistent, and all participants who viewed the "inconsistent" argument were excluded from analysis. This conservative strategy led to a particularly high number of exclusions. In our main studies, we instead used controlled arguments, which allowed us to avoid these exclusions.

= -.24, $t(369) = 2.31$, $p = .02$, which predicted greater desire for future interaction, ß = .41, $t(369) = 8.77$, $p < .001$, $ab = -.10$, $Z = -2.18$, $p = .03$.

Supplemental Study 2

Supplemental Study 2 was a conceptual replication of Study 2.

Method

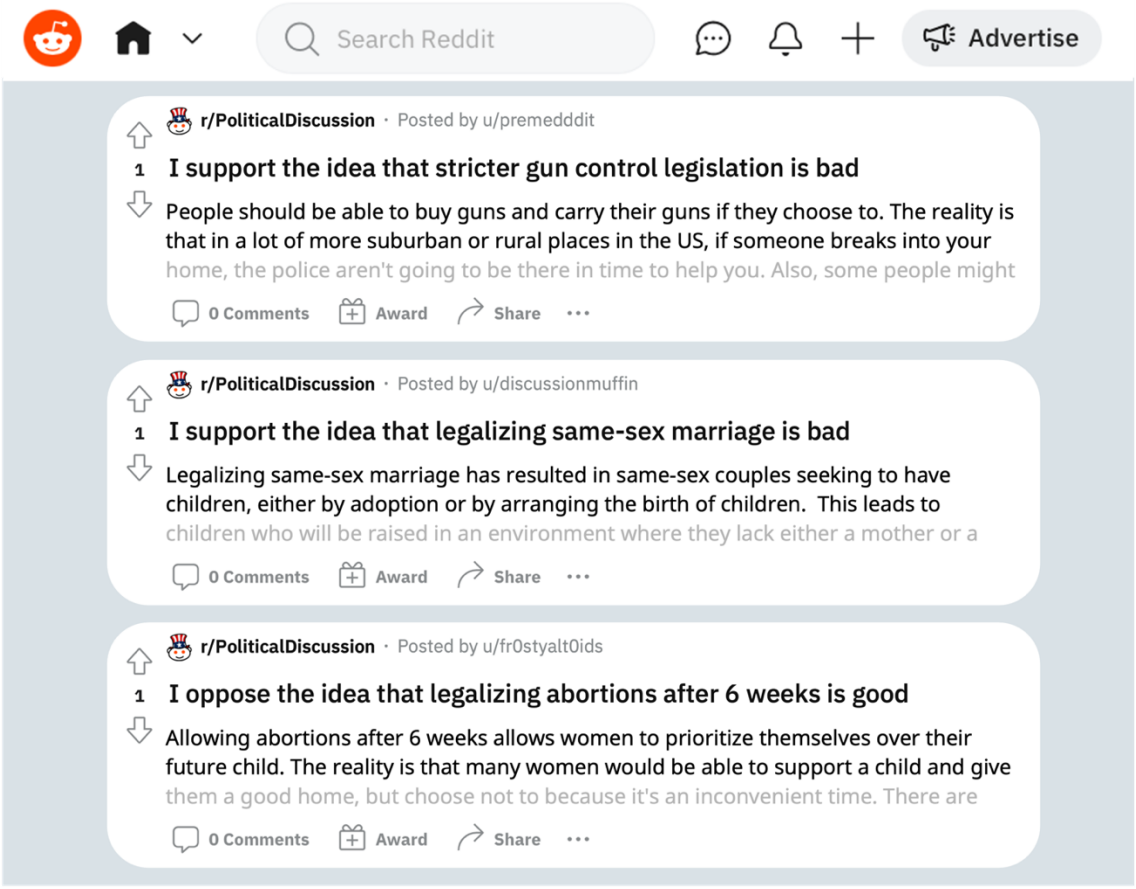
Participants ($N = 950$) completed the same study as described in Study 2 with one difference. Instead of using viewing four messages (two support, two oppose), participants viewed three messages (two support, one oppose) (see Figure S2). We used more support-framed posts than oppose-framed posts based on past research showing that people are more likely to share support-framed attitudes, including on social media. For example, Catapano and Tormala (2021, Study 1) found that Twitter users were 40 times more likely to express their views using support rather than oppose terms. Otherwise, the procedure was identical to Study 3.

Results

First, as intended, all three posts were counterattitudinal for most participants (86.10% all counterattitudinal, 0.5% all proattitudinal). Most germane to our predictions, participants were more likely to choose the oppose post (371 oppose, 579 support; 38.94% choosing oppose) than would be expected based on chance (317 oppose, 633 support; 33.33% choosing oppose), $\chi 2 = 14.00$, $p < .001$.

Figure S2

Sample Study S2 Stimulus



Supplemental Study 3

Supplemental Study 3 was a conceptual replication of Study 3.

Method

In Supplemental Study 3, liberals (N = 1531) were asked to indicate their initial attitudes toward taxes on the wealthy on a 101-point scale (*0 = should definitely be lower*; *100 = should definitely be higher*). Participants who already believed that taxes on the wealthy should be lower were excluded, so that all participants saw a counterattitudinal argument for why taxes on the wealthy should be lower. In Supplemental Study 3, we did not employ consistency or attention checks. Otherwise, the design for Supplemental Study 3 closely resembled Study 3. Participants read a counterattitudinal essay ostensibly from another participant (that was actually one of two researcher-generated essays, depending on their original attitude, as in Study 3; see OSF for full stimuli). After reading the message, participants reported their own receptiveness to the message as in previous studies. Participants then indicated their attitude on the same 101-point scale as before. Finally, participants provided demographic information.

Results

As hypothesized, participants who read an oppose-framed message reported greater receptiveness (M = 4.31, 95% CI[4.19, 4.43]) than participants who read a support-framed message (M = 4.08, 95% CI[3.96, 4.21]), $t(1529) = -2.62$, $p = .008$, $d = -.13$. We calculated attitude change as the number of points participants moved on the attitude scale in the direction of the arguments 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, ß = -.22, $t(1529) = -2.62$, $p = .009$, which in

turn predicted greater attitude change, ß = .31, $t(1529) = 12.58$, $p < .001$, $ab = -.04$, $Z = -2.42$, $p = .015$[10].

[10] Although oppose-framed messages ($M = 4.70$, $SD = 12.1$) led to directionally more attitude change than support-framed messages ($M = 4.27$, $SD = 12.4$), the direct effect of support-oppose framing on attitude change was not significant, ß = -.03, $t(1529) = -.70$, $p = .48$. One contributor to the non-significant direct 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.

Supplemental Study 4

In Supplemental Study 4, we assessed another consequence of receptiveness: reduced partisan hostility. Partisan hostility is a major contributor to political polarization (Pew Research Center, 2022). There is a growing tendency for people to reject the moral compass of the opposing side (Feinberg & Willer, 2015) and characterize disagreeing others negatively on numerous attributes that are not directly related to their political views (Concha, 2019; Hartman et. al., 2023; Hart, 2018; Iyengar et al., 2012). Moreover, partisans increasingly see not only the opposing party but any individual who supports the opposing party in a negative light (Pew Research Center, 2022). Recent research suggests that receptive individuals have more positive evaluations of outgroups and individual outgroup members (Minson & Chen, 2021), suggesting that receptiveness might offer a partial remedy to partisan hostility. In addition, the increased willingness to engage in future interactions with disagreeing others points to the possibility that outgroups may be viewed less negatively as a result of support-oppose framing and subsequent receptiveness changes. To explore whether support-oppose framing affects partisan hostility, we replicated Supplemental Study 1B and measured participants' evaluations of the disagreeing other. We predicted that, relative to support framing, oppose framing would reduce partisan hostility in the form of enhanced perceptions of the disagreeing other (i.e., outgroup member). In addition to measuring negative partisanship, we also measured perceptions of extremity and communicator receptiveness.

Method

Participants (N = 736) were paired with disagreeing others from Supplemental Study 1A who wrote messages on the topic of same-sex marriage. Once paired, participants were shown the message writer's ID number, position (framed in support or oppose terms), and message (see

Main Text Figure 1. After reading the message they were assigned, each participant answered a series of questions assessing their own receptiveness to the message (as in previous studies), and their perceptions of the message writer in terms of overall positive impression, perceived extremity, and perceived receptiveness. Overall positive impression was assessed using a single item (How negatively or positively do you feel toward participant [number], *1 = Extremely negatively, 7 = Extremely positively*). Perceived extremity was assessed using two items (How extreme do you believe participant [number] is in their beliefs? *1 = Not at all extreme, 7 = Very extreme*; What do you think participant [number]'s attitude is on this issue? *0 = Extremely negative toward same-sex marriage, 100 = Extremely positive toward same-sex marriage*, recoded as distance from 50 as a measure of extremity). Because the two extremity items were not well correlated (r = .52), analysis was conducted independently. Finally, perceptions of writer receptiveness were assessed using a two-item index (How [receptive/openminded] do you think participant [number] would be to your position on this issue? *1 = Not at all receptive/openminded, 7 = Extremely receptive/openminded*).

Results

Participants had a more negative view of message writers who used support framing (M = 2.68, 95% CI [2.54, 2.82]) rather than oppose framing (M = 3.03, 95% CI [2.88, 3.18]; $t(734) = -3.45$, $p < .001$, $d = .25$). In addition, participants viewed message writers as more extreme on both extremity measures when they read support-framed messages ($M_{\text{extremity-explicit}}$ = 5.47, 95% CI [5.30, 5.64]; $M_{\text{extremity-distancefrom50}}$= 41.39, 95% CI [40.20, 42.58]) compared to oppose-framed messages ($M_{\text{extremity-explicit}}$ = 5.06, 95% CI [4.88, 5.25]; $t_{\text{extremity-explicit}}(734) = 3.17$, $p = .001$, $d = .23$; $M_{\text{extremity-distancefrom50}}$ = 38.45, 95% CI [37.15, 39.74]; $t_{\text{extremity-distancefrom50}}(734) = 3.29$, $p = .001$, $d = .24$). Participants also believed that message writers using support framing were less

receptive (M = 1.90, 95% CI [1.78, 2.02]) than message writers using oppose framing (M = 2.26, 95% CI [2.10, 2.41]; $t(734) = -3.50$, $p < .001$, $d = .25$). Finally, participants were less receptive to support-framed messages ($M = 2.61$, 95% CI [2.44, 2.78]) than oppose-framed messages ($M = 3.03$, 95% CI [2.84, 3.22]), $t(734) = -3.25$, $p = .001$, $d = .24$). In the main-text Study 4, we measure both extremity and communicator receptiveness as alternative mechanisms, and examine whether they mediate the effect of support-oppose framing on receptiveness after controlling for the proposed value-congruence mechanism.

Supplemental Study 5A

In Supplemental Study 5A, we replicated the value-congruence mediation evidence provided in Study 4.

Method

Participants ($N = 754$) reported their attitudes toward abortion by indicating whether they considered themselves "pro-life", "pro-choice", or "neither."[11] Then participants were randomly assigned to support- or oppose-framing conditions. In the support-framing condition, participants read a message from someone who disagreed with them that was framed in support terms (e.g., "I am in support of the position that legalizing abortions after 6 weeks is good;" see Table 3 in the main text). In the oppose-framing condition, participants read a message from someone who disagreed with them that was framed in oppose terms. Before reading the message, participants indicated their attitude towards the statement that the message writer would be discussing ("legalizing abortion after 6 weeks is bad" or "legalizing abortion after 6 weeks is good") on a 7-point scale (1 = *extremely opposed;* 7 = *extremely in favor)*. Then, participants were shown the message writer's position (framed in support or oppose terms) and message. The message presented to each participant was based on the participant's own attitude and did not differ across support- and oppose-framing conditions (see Table 3 in the main text). All participants read a counterattitudinal message; only the framing of the position differed. After reading the assigned message, participants reported their receptiveness toward the message and rated the message on value congruence, using the same measures as our previous studies. Finally, participants completed an attention check and provided demographic information.

[11] These answer choices were used rather than the trinary scale options from our other studies to allow us to use Prolific Academic's prescreening for abortion attitudes.

Results

Participants who read messages with support-framed positions were less receptive (M = 2.95, 95% CI [2.78, 3.11]) than those who read messages with oppose-framed positions (M = 3.18, 95% CI [3.02, 3.35]); $t(752) = 1.98$, $p = .048$, $d = .14$. Participants also saw support-framed positions as less value congruent (M = 1.60, 95% CI [1.49, 1.71]) than oppose-framed positions (M = 2.07, 95% CI [1.91, 2.24]; $t(752) = -4.59$, $p < .001$, $d = .34$). We tested whether perceived value congruence mediated the effect of support-oppose framing on receptiveness, using recommended bootstrapping procedures. Oppose framing, relative to support framing, led to greater perceived value congruence, ß = -.33, $t(752) = -4.59$, $p < .001$, which predicted greater receptiveness, ß = .43, $t(752) = 13.01$, $p < .001$. There was a significant indirect effect through this pathway, $ab = .14$, $Z = -4.89$, $p < .001$.

Supplemental Study 5B

To further explore extremity in Supplemental Study 5B, we controlled for perceived extremity in two additional ways. First, we explicitly stated the communicator's extremity. Second, we measured perceptions of the communicator's extremity both in terms of the statement being discussed and their attitude toward the issue (abortion) more generally.

Method

Participants (N = 689) reported their attitudes toward abortion by indicating whether they considered themselves "pro-life", "pro-choice", or "no opinion."[12] Then participants were randomly assigned to the support- or oppose-framing condition. In the support-framing condition, participants read a message from someone who disagreed with them that was framed in support terms (e.g., "I am in support of the position that legalizing abortions after 6 weeks is good;" see Table 3 in the main text). In the oppose-framing condition, participants read a message from someone who disagreed with them that was framed in oppose terms. Before reading the message, participants indicated their attitude towards the statement that the message writer 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)*.

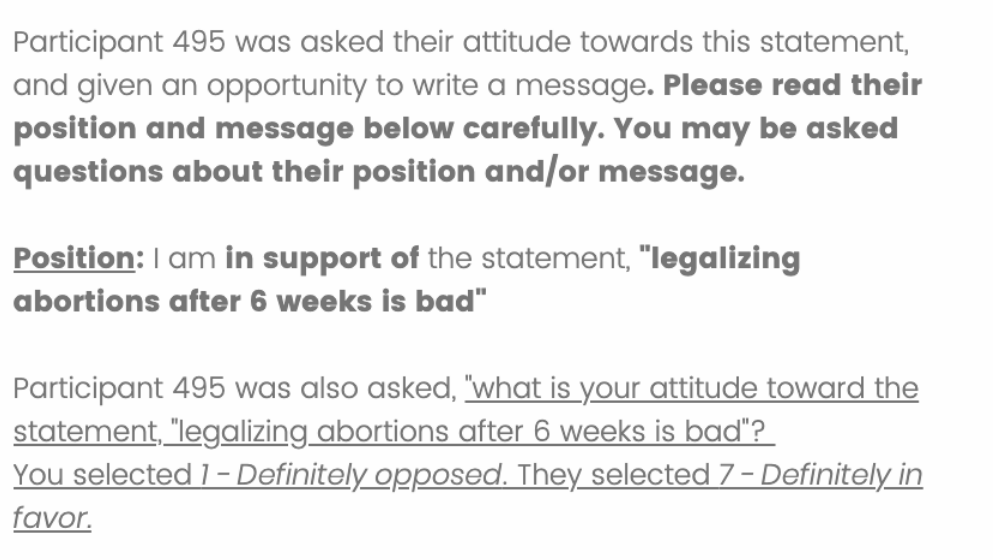
Then, participants were shown the message writer's position, attitude, and message. The message writer's position (counterattitudinal for the participant) was framed in either support or oppose terms, depending on condition assignment. In the support-framing condition, the message writer's position was stated to be "*7 – definitely in favor*" of the target statement*,* whereas in the oppose-framing condition the message writer's position was stated to be "*1 – definitely opposed*" to the target statement (see Figure S3). Participants were also reminded of their own reported

[12] These answer choices were used rather than the trinary scale options from our other studies to allow us to use Prolific Academic's prescreening for abortion attitudes.

attitude on the same scale. The message presented to each participant was based on the participant's own attitude and did not differ across support- and oppose-framing conditions (see Table 3 in the main text). All participants read one of two possible counterattitudinal messages (depending on their original position); only the framing of the position differed. After reading the assigned message, participants reported their receptiveness toward the message and rated the message on value congruence using the same measures as in our previous studies. Participants also reported perceived extremity in terms of the statement being discussed (What was participant [##'s] attitude toward the statement, "[statement]"? *1 = definitely opposed, 7 = definitely in favor*, recoded as the absolute value of the distance from 4) and abortion in general (What was participant [##]'s attitude toward abortion? *1 = definitely pro-choice, 7 = definitely pro-life*, recoded as the absolute value of the distance from 4). Finally, participants completed an attention check and provided demographic information.

Figure S3

Extremity information provided to participants in Study S5B



Results

Participants who read messages with support-framed positions were less receptive (M = 3.22, 95% CI [3.01, 3.43]) than those who read messages with oppose-framed positions (M = 3.54, 95% CI [3.36, 3.72]); $t(687) = -2.32$, $p = .02$, $d = .18$. Participants also saw support-framed positions as less value congruent (M = 1.72, 95% CI [1.58, 1.86]) than oppose-framed positions (M = 2.61, 95% CI [2.41, 2.81]; $t(687) = -6.96$, $p < .001$, $d = .53$). 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, ß = -.52, $t(687) = -6.96$, $p < .001$, which predicted greater receptiveness, ß = .40, $t(687) = 11.56$, $p < .001$. There was a significant indirect effect through this pathway, $ab = -.21$, $Z = -5.93$, $p < .001$.

As noted, we also assessed perceptions of the communicator's extremity. Consistent with our preregistration, we analyzed each extremity measure separately. We did not find a significant difference in perceived extremity between support-framed (M = 2.74, 95% CI [2.67, 2.80]) and opposed-framed (M = 2.71, 95% CI [2.64, 2.77]) positions when extremity was measured for abortion in general, $t(686) = .59$, $p = .55$, so we did not include this item in subsequent analyses. However, we did find a significant difference when perceived extremity was measured for the target statement, such that participants perceived the communicator's attitude to be less extreme in the oppose-framed (M = 2.81, 95% CI [2.75, 2.86]) than the support-framed condition (M = 2.93, 95% CI [2.90, 2.97]), $t(687) = 3.57$, $p < .001$[13]. We then conducted a mediation analysis including both perceived extremity for the target statement and value congruence in the model as parallel mediators of the effect of support-oppose framing on receptiveness. Including both

[13] For interested readers, the correlation between value congruence and extremity toward abortion in general was $r = -.21$, $p < .001$. The correlation between value congruence and extremity for the target statement was $r = -.28$, $p < .001$. Thus, the constructs were correlated but distinct.

potential mediators simultaneously, there was a significant indirect effect through value congruence, $ab = -.20$, $Z = -5.88$, $p < .001$, but not perceived extremity, $ab = -.01$, $Z = -1.21$, $p = .23$. Thus, although there was evidence for the notion that participants viewed the communicator's attitude as differentially extreme across conditions, this perception did not play a mediating role in the receptiveness effect, and the mediating pathway through value congruence remained significant when controlling for the pathway through perceived extremity.

Supplemental Study 6

We controlled for differences in what communicators said across the support- and oppose-framed conditions, but one interesting question for future research is how using support versus oppose might change communicators' messages. To shed initial insight on this question, we conducted Supplemental Study 6.

Method

We recruited 993 participants and randomly assigned them to use support or oppose framing to write about one of six different topics (abortion, gun control, immigration, same-sex marriage, taxes on the wealthy, universal health care). First, participants indicated their attitude on each of the six possible topics and were assigned to a topic that they indicated they were not indifferent toward. Then, they were asked to write about why they [support/oppose] the idea that the statement [topic phrase] is [good/bad]. All participants were asked to write about a position consistent with their own stated attitude. In order to make support-oppose framing salient as they were writing their argument, participants were told to choose one of three possible statements as the first sentence of their argument: (1) I [support/oppose] the idea that [topic phrase] is [good/bad]; (2) I am [in favor of/against] the idea that [topic phrase] is [good/bad]; (3) I [agree/disagree] that [topic phrase] is [good/bad].

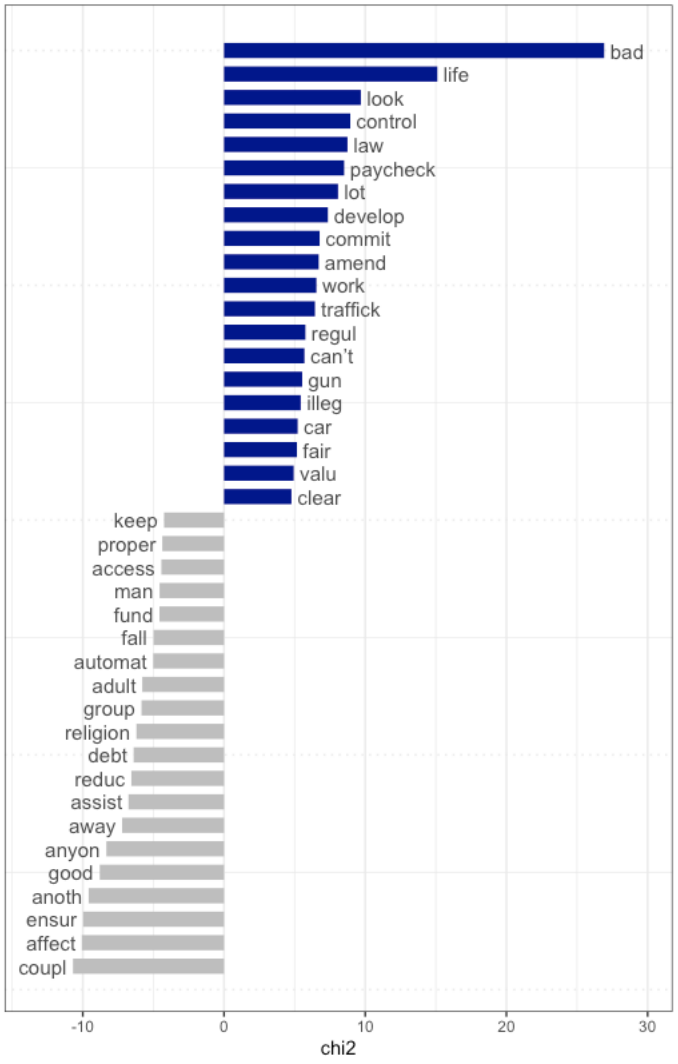
Results

Using the Evaluative Lexicon (as we did in Supplemental Study 1A) on this more varied dataset, we found no differences in overall wordcount, extremity, or emotionality. However, we found that messages in the support condition were coded as more positive by the algorithm. For a more granular examination of differences between support and oppose-framed messages, we completed a relative frequency analysis using the quanteda package in R. This method collapses

across all words with common roots (for example, oppose, opposes, opposing, and opposition would be represented as oppos-). It then examines the relative frequencies of words to see which are used significantly more in each category. We removed all words that participants were required to use from the prompt (support: agree, support, favor; oppose: disagree, oppose, against) from our analysis. Figure S4 presents the most representative words for each category. Oppose-framed messages were more likely to discuss what is "bad," whereas support-framed messages were more likely to discuss what is "good". Oppose-framed messages also appeared more likely to discuss regulations (e.g., law, commit, regul-, illeg-), whereas support-framed messages seemed more person focused (e.g., couple, anyone, adult, -man). Future, more targeted work would be useful to shed additional light on this question.

Figure S4

Representative words for support versus oppose framed messages. Oppose-framed message words in dark blue, support-framed message words in light gray.



Supplemental Study 7

In Supplemental Study 7, we tested whether oppose framing is viewed as more negative than support framing.

Method

The design for Supplemental Study 7 closely modeled Study 5. As in Study 5, we asked participants ($N = 554$), "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. Then participants were randomly assigned to an issue on which that they had an opinion and were asked to indicate their attitude toward that issue. Participants who reported inconsistent attitudes were redirected out of the study. As in Study 5, participants in Supplemental Study 7 were randomly assigned to the support- or oppose-framing condition and a communicator alignment condition (values-aligned communicator or values-misaligned communicator). 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 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 indicated the valence of the message using a two-item index (How negative or positive does this message seem? *1 = Extremely negative, 7 = Extremely positive;* To what extent does this message express negative or positive emotions? *1 = Extremely negative emotions, 7 = Extremely positive emotions; r* = .88). Finally, participants answered demographic questions.

Results

Because the study was exploratory in nature, instead of preregistering specific hypotheses, we preregistered an analysis strategy. First, we conducted an ANOVA examining the interactive effect of topic, framing, and communicator alignment (aligned versus misaligned) on valence ratings. There was not a significant three-way interaction ($F(3, 538) = 2.16$, $p = .09$), so we moved on to examine the interaction between framing and communicator alignment. There was no interaction between framing and communicator alignment on perceived valence, $F(2, 550) = 0.06$, $p = .81$. Finally, we compared support and oppose framing and did not find a main effect on perceived valence, $t(552) = 0.94$, $p = .35$. Thus, this study provided no evidence for a difference in perceived valence across support and oppose framing.

Single Paper Meta-analysis

For our single paper meta-analysis (SPM), we included (1) all studies in the main manuscript that measured at least one of the target variables (i.e., receptiveness or value congruence), (2) all supplemental studies that measured at least one of the target variables, and (3) two additional studies that were preregistered and run on the full target sample size, which measured receptiveness and were included in previous versions of the manuscript but removed in the review process[14]. We opted to include studies that were not reported in the final manuscript or supplement due to criticisms of single paper metanalyses as unreliable due to selective study reporting (e.g., Vosgerau et al., 2018). We conducted our SPM using two techniques. First, we conducted a SPM using McShane and Böckenholt (2017)'s SPM tool, which calculates contrast estimates by experiment and overall. Second, we computed an overall Cohen's *d* across studies[15].

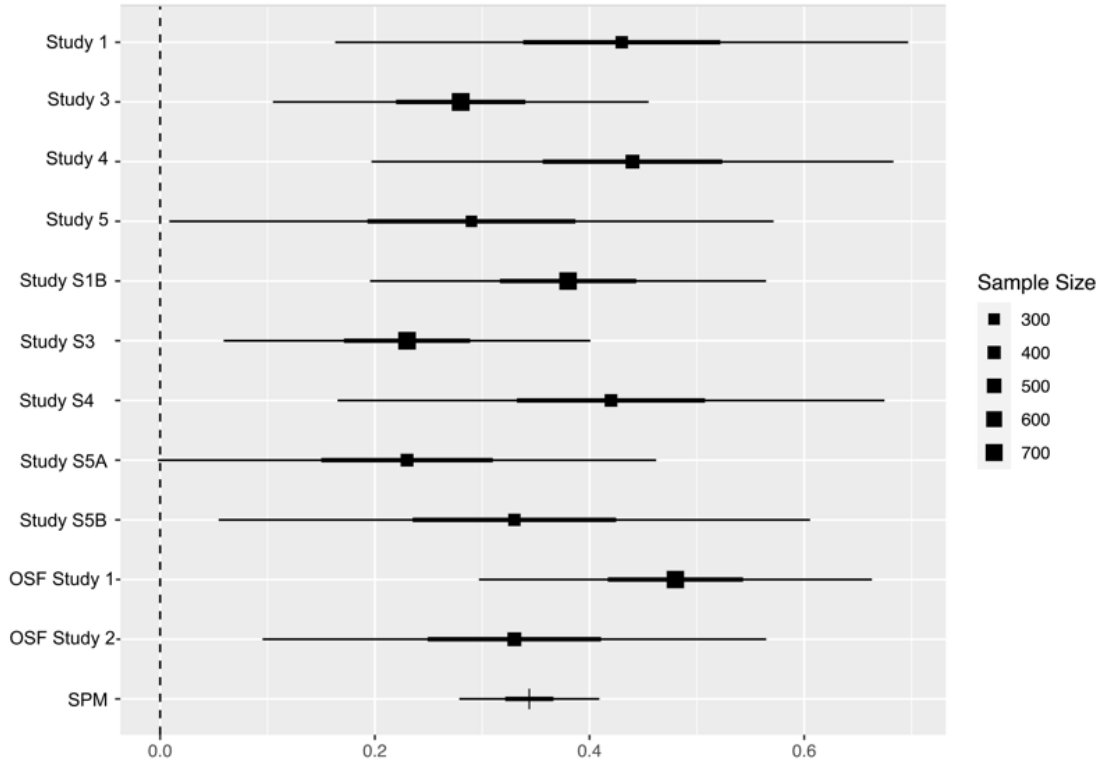
Receptiveness

Figure S5 shows contrast estimates for receptiveness by study. We found an overall difference between support- and oppose-framing of .34, SE = 0.33 ($Estimate_{support}$ = 3.17, SE = .21; $Estimate_{oppose}$ = 3.52, SE = .21). Using this method, we found substantial hetereogeneity between studies (heterogeneity variance = 0.49, SD = 0.70, I^2 = 99.10, 95% CI [98.95, 99.23]). Using only the studies reported in the main manuscript and supplemental materials, we found similar results ($Estimate_{difference}$ = .32, SE = .04, $Estimate_{support}$ = 3.35, SE = .22, $Estimate_{oppose}$ = 3.67, SE = .22, heterogeneity variance = .45, SD = .67, I^2 = 98.99%, 95% CI [98.79, 99.15]). The overall Cohen's *d* was -.20 across all eleven studies measuring receptiveness, or -.18 across the nine reported studies.

[14] The preregistrations, data, and analysis code for these two studies is available on OSF. The two studies essentially replicate the results of Supplemental Study 1B and Supplemental Study 4.
[15] Due to large sample sizes, the reported Cohen's *d*'s are essentially equivalent to Hedge's *g*.

Figure S5

Support-oppose receptiveness difference estimates

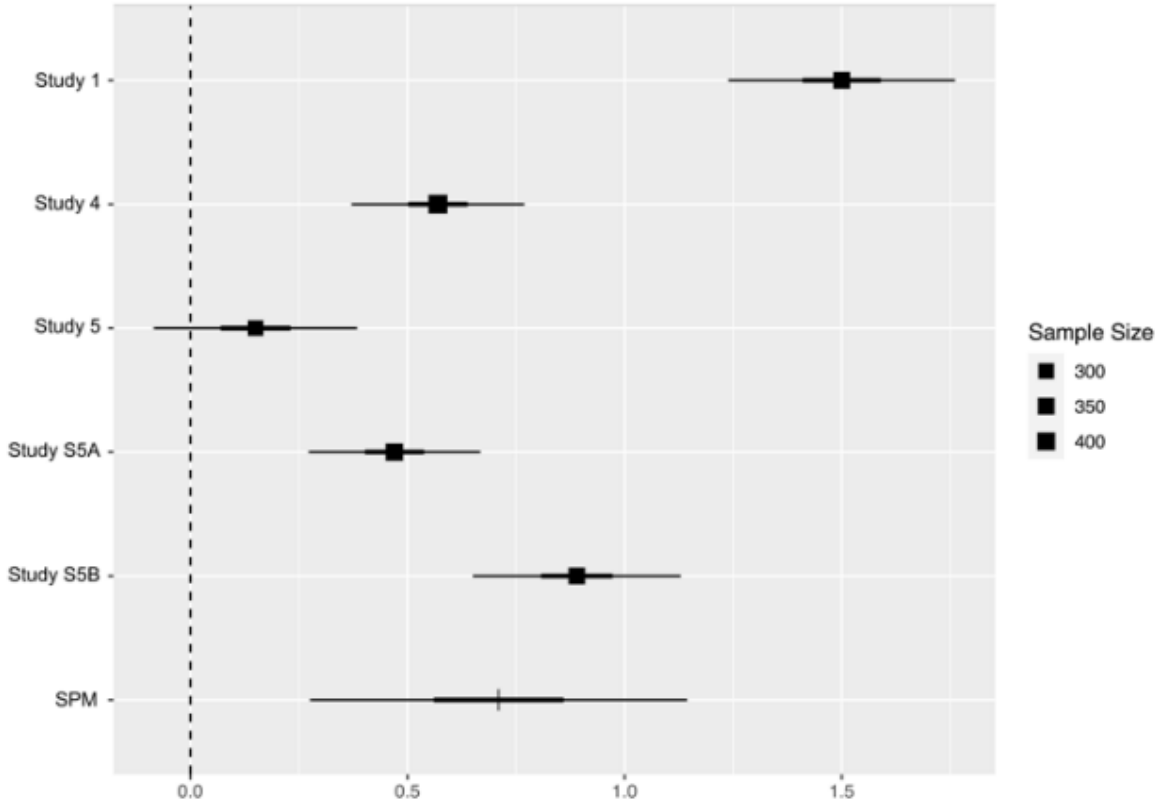


Value Congruence

Figure S6 shows contrast estimates for value congruence by study. We found an overall difference between support- and oppose-framing of .71, SE = 0.22 ($Estimate_{support}$ = 1.86, SE = .16; $Estimate_{oppose}$ = 2.57, SE = .16). Using this method, we found substantial hetereogeneity between studies (heterogeneity variance = 0.12, SD = 0.35, I^2 = 93.69, 95% CI [90.11, 95.97]). The overall Cohen's *d* was -.44 across all five studies that measured value congruence.

Figure S6.

Support-oppose value congruence difference estimates



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