Online appendix

Appendix 1a. NML intervention Study 1 depicting descriptive norms

HOW TO SELECT BALANCED NEWS: THE MAJORITY OF PEOPLE LOOK ACROSS THE BORDER

Online news today

With all the information and news that can be found online today, it is sometimes hard to decide what news to consume. We increasingly see that people's attitudes and perceptions toward certain political issues drive their selection of news. So, if the Left, Right, and Center think differently about an issue, they will likely select different news articles that confirm their stance on the issue and avoid news that is not in line with their attitude.

The problem

So-called *filter bubbles* occur when people are only exposed to news, ideas, and people that confirm their existing beliefs. People in a filter bubble may only see news on climate change, immigration, gun control, or other issues that they already agree with, limiting learning from other perspectives. These filter bubbles become even stronger with the algorithms of social media platforms and search engines.

When people see only one side of an issue, it creates a highly *polarized* political and social environment, fueling extremism and hatred of "The Other Side." People thus become less open to views that challenge their beliefs, also limiting their ability to see things from different perspectives and to challenge their own beliefs. Yet, 78% of people can resist these biases in news reporting by looking beyond their own biases, being aware of their own influence on the news they see.

What are most people doing?

Most citizens know that it is important to seek out news that offers *multiple viewpoints* about a given issue. To pursue a more accurate read on today's events and issues, at least 78% of people select a balanced media content to understand how the Left, Right, and Center think differently. We all know that there are always more perspectives to one issue and there may be no single right or wrong interpretation.

For example, regardless of the most dominant position toward stricter gun laws, most people actually read news with headlines that do not correspond to their own issue positions. They all know that it is important to look across the border. Thus, to fight polarization and ascertain how people of differing viewpoints are thinking about gun control, people are reading news about both the pros and cons of stricter gun laws.

To remember when selecting news:

The online news environment offers us a lot of choices in what we can consume, so we are all in charge of balancing our own news flow. To select *balanced news*:
- Most people consider if their own beliefs and biases could affect their news selection;
- Most people can avoid filter bubbles by selecting news with different perspectives;
- Most people also read news that is not in line with their political attitudes to get a more complete overview of all opinions out there.

Appendix 2a. NML intervention Study 1 depicting injunctive norms

HOW TO SELECT BALANCED NEWS: LOOK ACROSS THE BORDER

Online news today

With all the information and news that can be found online today, it is sometimes hard to decide what news to consume. We increasingly see that people's attitudes and perceptions toward certain political issues drive their selection of news. So, if the Left, Right, and Center think differently about an issue, they will likely select different news articles that confirm their stance on the issue and avoid news that is not in line with their attitude.

The problem

So-called *filter bubbles* occur when people are only exposed to news, ideas, and people that confirm their existing beliefs. People in a filter bubble may only see news on climate change, immigration, gun control, or other issues that they already agree with, limiting learning from other perspectives. These filter bubbles become even stronger with the algorithms of social media platforms and search engines.

When people see only one side of an issue, it creates a highly *polarized* political and social environment, fueling extremism and hatred of "The Other Side." People thus become less open to views that challenge their beliefs, also limiting their ability to see things from different perspectives and to challenge their own beliefs.

What can you do?

To better understand the world – and each other, it is important that you seek out news that offers *multiple viewpoints* about a given issue. To pursue a more accurate read on today's events and issues, we need to understand how the Left, Right, and Center think differently as there are always more perspectives to one issue and there may be no single right or wrong interpretation.

For example, regardless of your own position toward stricter gun laws, it is important to not only read news with headlines that confirm your stance of the issue but to also look across the border. Thus, to fight polarization and ascertain how people of differing viewpoints are thinking about gun control, people should read news that is both about the pros and cons of stricter gun laws.

To remember when selecting news:

The online news environment offers us a lot of choices in what we can consume, so we are in charge of balancing our own news flow. To select *balanced news*:
- consider if your own beliefs and biases could affect your news selection;
- try to avoid filter bubbles by selecting news with different perspectives;
- also read news that is not in line with your political attitudes to get a more complete overview of all opinions out there.

Appendix 2. Simulated news website containing news items on refugees and the American job market

Appendix 3.

Table A3.1 Logistic regression models predicting balanced news selection

	Overall	Issue publics Overall[a]	Opposers	Supporters	Party affiliation Overall[b]	Republicans	Democrats
	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)	B (SE)
Injunctive norm[c]	.33 (.24)	-.12 (.34)	-.18 (.35)	.73* (.34)	-.18 (.42)	-.18 (.44)	.84* (.37)
Descriptive norm[c]	-.31 (.24)	-.92** (.36)	-.96** (.37)	.27 (.34)	-.73† (.41)	-.72† (.42)	.17 (.36)
Immigration attitude		.28 (.36)			.65* (.32)	.95* (.48)	.30 (.44)
Party affiliation		-.09 (.06)	-.03 (.10)	-.14 (.09)	-.88† (.45)		
Interaction injunctive PSA		.84† (.48)			1.01† (.56)		
Interaction descriptive PSA		1.10* (.49)			1.08* (.55)		
Hostile climate	-.27 (.24)	-.37 (.25)	-.71* (.32)	.22 (.39)	-.18 (.28)	-.22 (.40)	-.07 (.41)
Political interest	.07 (.06)	.05 (.06)	.09 (.09)	.05 (.09)	.03 (.07)	.02 (.11)	.05 (.09)
Media skepticism	.02 (.06)	-.05 (.07)	-.02 (.11)	-.13 (.10)	-.01 (.08)	-.01 (.12)	-.05 (.11)
Age	.00 (.05)	-.05 (.05)	-.11 (.08)	.00 (.07)	-.00 (.06)	.05 (.09)	-.04 (.08)
Education	-.01 (.03)	-.02 (.03)	-.02 (.05)	-.02 (.04)	-.01 (.04)	.07 (.06)	-.05 (.05)
Female	-.03 (.12)	-.05 (.13)	-.12 (.19)	.06 (.18)	-.07 (.15)	.10 (.22)	-.15 (.20)
Constant	.33 (.24)	-.12 (.34)	-.18 (.35)	.73* (.34)	-.18 (.42)	-.18 (.44)	.84* (.37)

†=$p< .10$, *=$p<.05$, **=$p<.01$, ***=$p<.001$

[a] In this column the interaction between the different intervention types and partisan attitude (opposing versus supporting refugees coming to the US) is depicted.

[b] In this column the interaction between the different intervention types and party affiliation (Republicans versus Democrats) is depicted.

[c] Reference category is the condition where no intervention was shown to participants.

Note: Cells contain unstandardized regression coefficients with standard errors.

Table A3.2 Logistic regression models predicting only incongruent news selection

	Overall	Issue publics			Party affiliation		
		Overall[a]	Opposers	Supporters	Overall[b]	Republicans	Democrats
	B (SE)	*B* (SE)	*B* (SE)	*B* (SE)	*B* (SE)	*B* (SE)	*B* (SE)
Injunctive norm[c]	.29 (.24)	-.19 (.35)	-.19 (.36)	.72* (.34)	.01 (.43)	.05 (.45)	.87* (.38)
Descriptive norm[c]	-.22 (.24)	-.78* (.34)	-.78* (.35)	.33 (.34)	-.46 (.41)	-.41 (.41)	.50 (.37)
Immigration attitude		-.39 (.37)			.19 (.32)	.47 (.49)	-.13 (.45)
Party affiliation		-.08 (.06)	.02 (.10)	-.17† (.09)	-.97* (.45)		
Interaction injunctive PSA		.91† (.49)			.84 (.57)		
Interaction descriptive PSA		1.06* (.48)			.94† (.55)		
Hostile climate							
Political interest	-.42† (.25)	-.42† (.25)	-.57† (.33)	-.07 (.40)	-.34 (.29)	-.31 (.41)	-.25 (.42)
Media skepticism	.08 (.06)	.07 (.06)	.14† (.09)	.04 (.09)	.02 (.07)	-.01 (.11)	.06 (.10)
	.00 (.06)	.01 (.07)	.02 (.10)	-.01 (.10)	.06 (.08)	.07 (.12)	.03 (.11)
Age							
Education	-.00 (.01)	-.00 (.01)	-.01 (.01)	-.00 (.01)	-.01 (.01)	-.01 (.01)	-.01 (.01)
Female	-.02 (.05)	-.04 (.05)	-.04 (.08)	-.04 (.07)	-.00 (.06)	.11 (.09)	-.08 (.08)
Constant	-.10 (.20)	-.08 (.21)	-.20 (.30)	.09 (.30)	-.12 (.24)	.15 (.36)	-.24 (.33)

†=*p*< .10, *=*p*<.05, **=*p*<.01, ***=*p*<.001

[a] In this column the interaction between the different intervention types and partisan attitude (opposing versus supporting refugees coming to the US) is depicted.

[b] In this column the interaction between the different intervention types and party affiliation (Republicans versus Democrats) is depicted.

[c] Reference category is the condition where no intervention was shown to participants.

Note: Cells contain unstandardized regression coefficients with standard errors.

Appendix 4a. NML intervention Study 2 tailored on issue publics –opposing immigration

In designing targeted NML messages, we integrate references to both injunctive and descriptive norms. Descriptive norms are needed to affectively target receivers based on their ideology and political preferences (Haenschen & Jennings, 2019) – whereas injunctive norms are useful to specify the desired behavioral change. For an effective cultivation of personal relevance and group norms, it is thus important to describe the actual behavior of people's in-group whilst specifying what is expected of them.

SELECTING BALANCED NEWS:

More people who are against welcoming refugees to the US seek out multiple viewpoints in their media diets

The problem

We are generally wired to approach information that is in line with our beliefs. So-called *filter bubbles* occur when people are only exposed to news that confirms their existing beliefs. People in a filter bubble may only see news on immigration that they already agree with, limiting their understanding of the issue and learning from other perspectives they disagree with.

When people see only one side of an issue, it creates a highly *polarized* political and social environment, fueling extremism and hatred of "The Other Side." Even though people do not have to be persuaded or convinced by other viewpoints, they can learn more about society and other people by looking across the border.

Yet, more and more people who oppose welcoming refugees to the US can resist these biases in news selection by also reading about why others support welcoming refugees to the US.

What can we do?

It is important to seek out news that offers *multiple viewpoints* about a given issue as there are always more perspectives to one issue. To pursue a more accurate read on the issue of immigration, those who oppose welcoming refugees to the US commonly select balanced media content to also understand how those with a different stance on immigration think about the issue.

Thus, to obtain a complete understanding of different viewpoints on the issue and to fight polarization, these people do not only read news about the potential dangers of immigration policies welcoming refugees, but also on reasons why refugees should be allowed in the US.

To remember when selecting news:

The online news environment offers us a lot of choices in what we can consume, so we are in charge of balancing our own news flow. To select *balanced news*:

- consider if your own beliefs and biases could affect your news selection;
- try to avoid filter bubbles by selecting news with different perspectives;
- also read news that is not in line with your political attitudes to get a more complete overview of all opinions out there, even if you disagree.

Appendix 4b. NML intervention Study 2 tailored on issue publics – supporting immigration

SELECTING BALANCED NEWS:

More people who support welcoming refugees to the US seek out multiple viewpoints in their media diets

The problem

We are generally wired to approach information that is in line with our beliefs. So-called *filter bubbles* occur when people are only exposed to news that confirms their existing beliefs. People in a filter bubble may only see news on immigration that they already agree with, limiting their understanding of the issue and learning from other perspectives they disagree with.

When people see only one side of an issue, it creates a highly *polarized* political and social environment, fueling extremism and hatred of "The Other Side." Even though people do not have to be persuaded or convinced by other viewpoints, they can learn more about society and other people by looking across the border.

Yet, more and more people who support welcoming refugees to the US can resist these biases in news selection by also reading about why others are *against* welcoming refugees to the US.

What can we do?

It is important to seek out news that offers *multiple viewpoints* about a given issue as there are always more perspectives to one issue. To pursue a more accurate read on the issue of immigration, those who support welcoming refugees to the US commonly select balanced media content to also understand how those with a different stance on immigration think about the issue.

Thus, to obtain a complete understanding of different viewpoints on the issue and to fight polarization, these people do not only read news about why refugees should be allowed in the US, but also on the potential dangers of such immigration policies.

To remember when selecting news:

The online news environment offers us a lot of choices in what we can consume, so we are in charge of balancing our own news flow. To select *balanced news*:

- consider if your own beliefs and biases could affect your news selection;
- try to avoid filter bubbles by selecting news with different perspectives;
- also read news that is not in line with your political attitudes to get a more complete overview of all opinions out there, even if you disagree.

Appendix 4c. NML intervention Study 2 tailored on party affiliation – Republican

SELECTING BALANCED NEWS:
More Republicans in the US seek out multiple viewpoints in their media diets on refugee news

The problem
We are generally wired to approach information that is in line with our beliefs. So-called *filter bubbles* occur when people are only exposed to news that confirms their existing beliefs. People in a filter bubble may only see news on immigration that they already agree with, limiting their understanding of the issue and learning from other perspectives they disagree with.

When people see only one side of an issue, it creates a highly *polarized* political and social environment, fueling extremism and hatred of "The Other Side." Even though people do not have to be persuaded or convinced by other viewpoints, they can learn more about society and other people by looking across the border.

Yet, more and more Republicans can resist these biases in news selection by also reading about the perspectives of Democrats when it comes to welcoming refugees to the US.

What can we do?
It is important to seek out news that offers *multiple viewpoints* about a given issue as there are always more perspectives to one issue. To pursue a more accurate read on the issue of immigration, Republicans commonly select balanced media content to also understand how those with a different stance on immigration think about the issue.

Thus, to obtain a complete understanding of different viewpoints on the issue and to fight polarization, Republicans do not only read news about, for example, the potential dangers of immigration policies welcoming refugees, but also on reasons why refugees should be allowed in the US.

To remember when selecting news:
The online news environment offers us a lot of choices in what we can consume, so we are in charge of balancing our own news flow. To select *balanced news*:
- consider if your own beliefs and biases could affect your news selection;
- try to avoid filter bubbles by selecting news with different perspectives;
- also read news that is not in line with your political attitudes to get a more complete overview of all opinions out there, even if you disagree.

Appendix 4d. NML intervention Study 2 tailored on party affiliation – Democrats

SELECTING BALANCED NEWS:

More Democrats in the US seek out multiple viewpoints in their media diets on refugee news

The problem

We are generally wired to approach information that is in line with our beliefs. So-called *filter bubbles* occur when people are only exposed to news that confirms their existing beliefs. People in a filter bubble may only see news on immigration that they already agree with, limiting their understanding of the issue and learning from other perspectives they disagree with.

When people see only one side of an issue, it creates a highly *polarized* political and social environment, fueling extremism and hatred of "The Other Side." Even though people do not have to be persuaded or convinced by other viewpoints, they can learn more about society and other people by looking across the border.

Yet, more and more Democrats can resist these biases in news selection by also reading about the perspectives of Republicans when it comes to welcoming refugees to the US.

What can we do?

It is important to seek out news that offers *multiple viewpoints* about a given issue as there are always more perspectives to one issue. To pursue a more accurate read on the issue of immigration, Democrats commonly select balanced media content to also understand how those with a different stance on immigration think about the issue.

Thus, to obtain a complete understanding of different viewpoints on the issue and to fight polarization, Democrats do not only read news about, for example, why refugees should be allowed in the US, but also on the potential dangers of such immigration policies.

To remember when selecting news:

The online news environment offers us a lot of choices in what we can consume, so we are in charge of balancing our own news flow. To select *balanced news*:
- consider if your own beliefs and biases could affect your news selection;
- try to avoid filter bubbles by selecting news with different perspectives;
- also read news that is not in line with your political attitudes to get a more complete overview of all opinions out there, even if you disagree.

Appendix 5. Post-hoc data collection comparing stimuli Study 1 and 2

In the effort of tailoring the PSAs, the descriptive norm became quite prominent as it, for example, was appeared in the title. To see if the injunctive norm in these tailored PSAs was still picked up by the respondents, a post-hoc data collection was performed. An U.S. Amazon Mechanical Turk sample of 99 adults was randomly exposed to one of the following PSAs: (1) PSA with injunctive norms from Study 1, (2) PSA with descriptive norms from Study 1, (3) the PSA from Study 2 altered to have no partisan or issue cues, (4) the PSA tailored on the level of issue publics from Study 2, or (5) the PSA tailored on the level of partisan ideology from Study 2. To test how the PSAs from the different studies were perceived by respondents we compared their reactions to these PSAs on the injunctive and descriptive norms. Respondents were asked to indicated on a 7-point Likert scale to what extent the PSA they were just exposed to talked about what people *should do* (M1, testing the injunctive norm perception) or what people *actually do* (M2, testing the descriptive norm perception). Table A1 shows that the injunctive and descriptive PSA from Study 1 significantly differed on both questions in the direction one would expected. For the first question about what people *should do*, there were no difference between the PSAs from Study 2 and the injunctive PSA from Study 1, indicating that injunctive norms in the tailored PSAs came across as strongly as in the injunctive PSA. For the second question about what people *actually do* (M2), it can be observed that the responses to the PSA tailored on political ideology (Study 2) did not differ significantly from the responses to the descriptive PSA (Study 2). However, the descriptive norm in the untailored PSA and the PSA tailored on issue publics from Study 2 were perceived less strong than the descriptive PSA. A reason for this difference might be that, for accuracy reasons, the PSAs in Study 2 talked about "more and more people" while the PSA from Study 1 talked about the "majority."

Table A5. Post hoc test comparing PSAs from Study 1 and 2

	PSA injunctive norm	PSA descriptive norm	PSA Study 2 untailored	PSA tailored to opposers	PSA tailored to supporters	PSA tailored to Democrats	PSA tailored to Republicans	
M1: "The PSA I just read talks about what people *should do*."	5.60[a] (1.00)	4.40[b] (1.64)	6.11[a] (0.74)	6.00[a] (1.00)	6.25[a] (0.75)	5.80[a] (1.23)	5.33[a] (1.23)	$F_{(6, 99)}=$ 5.28***
M2: "The PSA I just read talks about what people *actually do*."	4.30[a] (1.87)	5.90[b] (0.97)	4.4[a] (1.64)	4.33[a] (1.73)	4.17[a] (2.21)	4.70 [a b] (1.34)	4.89[a b] (0.60)	$F_{(6, 99)}=$ 2.57*

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

Note: Cells contain mean scores with standard deviation.

Note. Means with differing subscripts in the rows differ significantly at the p < .05 level based on ANOVAs.

Appendix 6

Table A6. Logistic regression models predicting balanced and incongruent news selection

	Balanced	Incongruent
	B (SE)	*B* (SE)
PSA tailored on issue publics		
Tailored to opposers	.38 (.26)[†]	.56(29)*
Tailored to supporters	.61 (.27)**	.83 (.31)**
PSA tailored on party affiliation		
Tailored to Republicans	-.02 (.26)	.24 (.27)
Tailored to democrats	.50 (.86)*	.64 (.30)*
Hostile opinion climate	-.11 (.05)*	-.14 (.06)*
Political interest	-.01 (.05)	.08 (.05)
Media skepticism	-.12 (.06)*	.13 (.06)*
Age	-.01(.01)	.01(.01)
Education	.02(.05)	-.04(.05)
Gender	-.14(.19)	.28(.19)
Constant	-.12 (.14)	-.65 (.44)

[†]$=p< .10$, *$=p<.05$, **$=p<.01$, ***$=p<.001$

Note: Cells contain unstandardized regression coefficients with standard errors.