

Supplementary File

Longitudinal Associations Between School Norms of Inclusion and Respect and Affective Polarization in Adolescence

Table S1. Sample Characteristics by School Context

Characteristic	Diverse School	Nondiverse School	Total Sample	p-value ¹
Cohort, n (%)				<0.001
7	82 (26%)	106 (20%)	188 (22%)	
8	76 (24%)	100 (19%)	176 (21%)	
9	89 (28%)	128 (25%)	217 (26%)	
10	70 (22%)	129 (25%)	199 (24%)	
11	0 (0%)	59 (11%)	59 (7.0%)	
Age, Mean $\pm$ SD	14.53 $\pm$ 1.48	14.63 $\pm$ 1.46	14.59 $\pm$ 1.47	0.3
Gender, n (%)				0.2
Female	138 (44%)	241 (46%)	379 (45%)	
Male	172 (54%)	256 (49%)	428 (51%)	
None	4 (1.3%)	14 (2.7%)	18 (2.1%)	
Other	3 (0.9%)	11 (2.1%)	14 (1.7%)	
wave_participation, n (%)				<0.001
Only wave 1	142 (45%)	168 (32%)	310 (37%)	
Waves 1 and 2	149 (47%)	279 (53%)	428 (51%)	
Only wave 2	26 (8.2%)	75 (14%)	101 (12%)	
SecondG_migrant, n (%)	227 (72%)	176 (34%)	403 (48%)	<0.001
ethno_cultural_category_unified, n (%)				<0.001
Central Asia	6 (1.9%)	14 (2.7%)	20 (2.4%)	
East Asia and Southeast Asia	1 (0.3%)	3 (0.6%)	4 (0.5%)	
Eastern Europe and Balkans	54 (17%)	101 (19%)	155 (18%)	
Germany	141 (44%)	312 (60%)	453 (54%)	
Latin America	1 (0.3%)	2 (0.4%)	3 (0.4%)	
Middle East and North Africa (MENA)	75 (24%)	47 (9.0%)	122 (15%)	
North America	1 (0.3%)	7 (1.3%)	8 (1.0%)	
South Asia	2 (0.6%)	2 (0.4%)	4 (0.5%)	
Sub-Saharan Africa	15 (4.7%)	5 (1.0%)	20 (2.4%)	
Western Europe	21 (6.6%)	29 (5.6%)	50 (6.0%)	
religiosity_grouped, n (%)				<0.001
Christianity	104 (33%)	307 (59%)	411 (49%)	
Islam	117 (37%)	59 (11%)	176 (21%)	
Judaism	1 (0.3%)	1 (0.2%)	2 (0.2%)	
No Religion	51 (16%)	137 (26%)	188 (22%)	
Non-Religious	0 (0%)	3 (0.6%)	3 (0.4%)	
Other Religions	44 (14%)	15 (2.9%)	59 (7.0%)	
LGBT_group, n (%)	23 (7.3%)	71 (14%)	94 (11%)	0.005
Refugees_group, n (%)	56 (18%)	52 (10.0%)	108 (13%)	0.001
Political_Orientation_4groups_wave1, n (%)				<0.001

Characteristic	Diverse School	Nondiverse School	Total Sample	p-value ¹
Conservative	7 (2.8%)	23 (6.0%)	30 (4.7%)	
Inconsistent	85 (33%)	165 (43%)	250 (39%)	
Anti-LGBT, pro-refugees	83 (33%)	33 (8.6%)	116 (18%)	
Pro-LGBT, anti-refugees	7 (2.8%)	39 (10%)	46 (7.2%)	
Liberal	72 (28%)	125 (32%)	197 (31%)	

Note. The table summarizes the demographic and opinion-based characteristics of students in the diverse school ($n = 317$) and nondiverse school ($n = 522$), as well as the total sample ($N = 839$). Continuous variables are presented as means with standard deviations, while categorical variables are shown as frequencies with percentages. Statistical differences between the schools were assessed using Welch's two-sample t -test for continuous variables and Pearson's Chi-squared test for categorical variables.

Table S2. Complete list of scales and items used in the study

Scale	Items	Response Scale
Prescriptive Inclusivity Norms	<i>Instructions: Think about your entire school (all grades and classes). To what extent do you believe that your fellow students at your school would agree with the following statements? Important: The following questions are not about your personal opinion, but about the opinion of your fellow students at your school!</i>	1 = Do not agree at all 2 = Do not agree 3 = Neither agree nor disagree 4 = Agree 5 = Fully agree
NO03_01	People should try to understand how people from other cultures, religions, or countries of origin see the world.	
NO03_02	People from different cultures, religions, or countries of origin should all be treated equally.	
NO03_03	Despite the differences between cultural, religious, or national groups in our school, all groups have a place in our school.	
NO03_04	Although the students at our school come from different cultures, religions, and countries of origin, we are all part of the same community.	
NO03_05	All people should be treated with respect, regardless of their culture, religion, or country of origin.	
NO03_06	When people have disagreements, they should discuss them in a friendly atmosphere.	
Descriptive Inclusivity Norms	<i>Instructions: When answering the following questions, think about your entire school (all grades and classes). How many of your fellow students at your school...</i>	1 = Nobody 2 = Few 3 = About half 4 = Most 5 = All

NO04_01	...show no interest when someone talks about their respective background?	
NO04_02	...call others out when they say something disrespectful or discriminatory?	
NO04_03	...welcome refugee students from war-torn countries into their circle of friends?	
NO04_04	...use discriminatory or racist words as jokes?	
Opinion-Based Polarization	<i>Instructions: Imagine the following situation: You and your fellow students are discussing political topics such as same-sex marriage, LGBTQIA+ rights, and refugees in Germany. Please think about your own views on these two topics and answer the following questions:</i>	Binary response options as shown below
PG13	Some of your classmates are in favor of same-sex marriages in Germany, others are against it. What is your opinion?	I am for same-sex marriages. I am against same-sex marriages.
PG14	Some of your classmates are in favor of allowing LGBTQIA+ persons to adopt and raise children, while others are against it. What is your opinion?	I am for LGBTQIA+ persons being allowed to adopt and raise children. I am against LGBTQIA+ persons being allowed to adopt and raise children.
PG15	Some of your classmates are in favor of allowing more refugees to come to Germany, while others are against it. What is your opinion?	I am for more refugees in Germany. I am against more refugees in Germany.
PG16	Some of your classmates think that refugees contribute to society in Germany, while others think that refugees only make things worse in Germany. What is your opinion?	I think refugees make things worse in Germany. I think refugees contribute to society in Germany.
Dialogue Orientation	<i>Instructions: Imagine now that you meet Lisa and you have a discussion about something where your opinions differ (e.g., refugees, same-sex marriages). How much would you in this discussion...</i>	5-point scale from 1 = Not at all to 5 = Very much

PG23_01_uni	...try to explain your own position to Lisa?	
PG23_02_uni	...try to convince Lisa to see things your way?	
PG23_03_uni	...try to get more information from Lisa about his perspective?	
Social Distance	<i>Instructions: How willing are you to contact and interact with young people like Lisa? Please indicate which answer applies to you.</i>	5-point scale from 1 = Very low willingness to 5 = Very high willingness
PG26_01_uni	How willing are you to sit next to Lisa in class?	
PG26_02_uni	How willing are you to introduce Lisa to your friends?	
PG26_03_uni	How willing are you to talk with Lisa about topics that are not political (e.g., music, games, sports, etc.)?	
PG26_04_uni	How willing are you to be seen by others when you hang out with Lisa?	
PG26_05_uni	How willing are you to be friends with Lisa?	
PG26_06_uni	How willing are you to invite Lisa to your home?	

Notes: Original items were in German and have been translated for publication. "Lisa" referenced in the Dialogue Orientation and Social Distance scales refers to a hypothetical peer with views opposing those of a (female) participant on relevant social issues.

Table S3. Exploratory Factor Analysis Results for Prescriptive Norms

Subset	Eigenvalue (MR1)	Variance Explained (%)	Loadings: NO03_01	Loadings: NO03_02	Loadings: NO03_03	Loadings: NO03_04	Loadings: NO03_05	Loadings: NO03_06
Diverse school, Wave 1	3.74	62%	0.83	0.82	0.82	0.79	0.66	0.80
Diverse school, Wave 2	4.34	72%	0.90	0.88	0.85	0.88	0.79	0.81
Nondiverse school, Wave 1	3.62	60%	0.83	0.86	0.81	0.74	0.66	0.74
Nondiverse school, Wave 2	3.65	61%	0.84	0.84	0.78	0.77	0.69	0.75

Table S4. Exploratory Factor Analysis Results for Descriptive Norms

Subset	Eigenvalues (MR1, MR2)	Variance Explained (%)	Loadings: NO04_01	Loadings: NO04_02	Loadings: NO04_03	Loadings: NO04_04
Diverse school, Wave 1	1.15, 1.13	29%, 28% (57%)	0.06, 1.00	0.24, 0.33	1.00, 0.04	0.30, 0.18
Diverse school, Wave 2	0.96, 0.75	24%, 19% (43%)	0.02, 0.70	0.11, 0.47	0.72, 0.00	0.66, 0.20
Nondiverse school, Wave 1	1.07, 1.01	27%, 25% (52%)	0.04, 0.12	-0.07, 1.00	0.26, 0.04	1.00, 0.01
Nondiverse school, Wave 2	0.71, 0.60	18%, 15% (33%)	0.79, -0.03	0.28, -0.01	-0.12, 0.60	0.05, 0.50

Table S5. Exploratory Factor Analysis Results for Dialogue Orientation

Item	Diverse school, Wave 1	Diverse school, Wave 2	Nondiverse school, Wave 1	Nondiverse school, Wave 2
PG23_01_uni	0.92	0.98	0.99	1.00
PG23_02_uni	0.62	0.69	0.54	0.51
PG23_03_uni	0.61	0.59	0.48	0.43
SS Loadings	1.60	1.77	1.51	1.45
Proportion Var	0.53	0.59	0.50	0.48
TLI	-Inf	-Inf	-Inf	-Inf
RMSR	0	0	0	0.01

Table S6. Exploratory Factor Analysis Results for Social Distance Items

Item	Diverse school, Wave 1	Diverse school, Wave 2	Nondiverse school, Wave 1	Nondiverse school, Wave 2
PG26_01_uni	0.68	0.72	0.69	0.60
PG26_02_uni	0.80	0.89	0.81	0.83
PG26_03_uni	0.86	0.69	0.84	0.89
PG26_04_uni	0.81	0.75	0.83	0.83
PG26_05_uni	0.79	0.82	0.86	0.90

PG26_06_uni	0.86	0.90	0.90	0.89
SS Loadings	3.86	3.82	4.08	4.14
Variance (%)	64%	64%	68%	69%
RMSEA	0.116 (90% CI: 0.084–0.152)	0.047 (90% CI: 0.00–0.104)	0.082 (90% CI: 0.055–0.111)	0.123 (90% CI: 0.094–0.154)
TLI	0.947	0.991	0.977	0.953

Table S7. Reliability coefficient.

Factor	School	Wave	Alpha	Omega	Pearson's r
Prescriptive Norms	1	1	0.91	0.93	
	1	3	0.94	0.96	
	3	1	0.9	0.93	
	3	3	0.9	0.93	
Descriptive Positive Norms	1	1			0.34
	1	3			0.33
	3	1			0.12
	3	3			0.22
Descriptive Negative Norms	1	1			0.31
	1	3			0.47
	3	1			0.26
	3	3			0.29
Dialogue Orientation	1	1	0.75	0.78	
	1	3	0.79	0.81	
	3	1	0.69	0.74	
	3	3	0.65	0.73	
Social Distance	1	1	0.91	0.93	
	1	3	0.91	0.94	
	3	1	0.93	0.95	
	3	3	0.93	0.95	

Note: School = 1 refers to the diverse school and School = 3 refers to the nondiverse school.

Table S8. Descriptive Statistics for Prescriptive Inclusivity Norms Items by School and Wave

School	Wave	Item	vars	n	mean	sd	median	trimmed	mad	min	max	range	skew	kurtosis	se
1	1	NO03_01	1	271	3.908	1.107	4	4.055	1.483	1	5	4	-0.815	-0.103	0.067
1	1	NO03_02	1	271	3.937	1.112	4	4.101	1.483	1	5	4	-0.923	0.157	0.068

1	1	NO03_03	1	$\frac{2}{71}$	3.7 34	1.0 73	4	3.843	1.4 83	1	5	4	- 0.5 89	- 0.19 6	0.0 65
1	1	NO03_04	1	$\frac{2}{71}$	3.7 75	1.1 11	4	3.899	1.4 83	1	5	4	- 0.6 80	- 0.22 6	0.0 67
1	1	NO03_05	1	$\frac{2}{71}$	3.3 28	1.1 18	3	3.373	1.4 83	1	5	4	- 0.2 41	- 0.53 5	0.0 68
1	1	NO03_06	1	$\frac{2}{71}$	3.6 83	1.0 76	4	3.774	1.4 83	1	5	4	- 0.4 84	- 0.39 0	0.0 65
1	3	NO03_01	1	$\frac{1}{68}$	3.7 44	1.0 94	4	3.875	1.4 83	1	5	4	- 0.7 66	0.16 7	0.0 84
1	3	NO03_02	1	$\frac{1}{68}$	3.7 14	1.0 67	4	3.824	1.4 83	1	5	4	- 0.5 92	- 0.05 0	0.0 82
1	3	NO03_03	1	$\frac{1}{68}$	3.6 07	1.0 89	4	3.706	1.4 83	1	5	4	- 0.5 36	- 0.11 5	0.0 84
1	3	NO03_04	1	$\frac{1}{68}$	3.6 67	1.0 36	4	3.757	1.4 83	1	5	4	- 0.4 94	- 0.08 3	0.0 80
1	3	NO03_05	1	$\frac{1}{68}$	3.4 17	1.0 86	3	3.485	1.4 83	1	5	4	- 0.4 01	- 0.20 8	0.0 84
1	3	NO03_06	1	$\frac{1}{68}$	3.5 77	1.0 75	4	3.669	1.4 83	1	5	4	- 0.5 16	- 0.07 2	0.0 83
3	1	NO03_01	1	$\frac{4}{27}$	3.6 96	1.0 12	4	3.799	1.4 83	1	5	4	- 0.7 35	0.35 0	0.0 49
3	1	NO03_02	1	$\frac{4}{27}$	3.6 65	0.9 90	4	3.746	1.4 83	1	5	4	- 0.6 14	0.09 5	0.0 48
3	1	NO03_03	1	$\frac{4}{28}$	3.5 65	0.9 88	4	3.631	1.4 83	1	5	4	- 0.5 73	0.09 9	0.0 48

Characteristic							Diverse School			Nondiverse School			Total Sample		p-value ¹	
3	1	NO03_04	1	4 2 8	3.5 98	0.9 44	4	3.660	1.4 83	1	5	4	- 0.5 41	0.19 6	0.0 46	
3	1	NO03_05	1	4 2 7	3.3 40	1.0 50	3	3.376	1.4 83	1	5	4	- 0.4 05	- 0.33 4	0.0 51	
3	1	NO03_06	1	4 2 8	3.4 35	0.9 40	4	3.456	1.4 83	1	5	4	- 0.4 02	- 0.09 0	0.0 45	
3	3	NO03_01	1	3 4 8	3.4 71	1.0 17	4	3.532	1.4 83	1	5	4	- 0.4 80	0.05 4	0.0 55	
3	3	NO03_02	1	3 4 8	3.5 23	1.0 53	4	3.593	1.4 83	1	5	4	- 0.4 81	- 0.16 0	0.0 56	
3	3	NO03_03	1	3 4 8	3.3 22	0.9 72	3	3.364	1.4 83	1	5	4	- 0.4 89	0.15 8	0.0 52	
3	3	NO03_04	1	3 4 8	3.4 34	0.9 95	3	3.479	1.4 83	1	5	4	- 0.4 57	0.00 4	0.0 53	
3	3	NO03_05	1	3 4 8	3.2 93	0.9 87	3	3.318	1.4 83	1	5	4	- 0.3 77	- 0.04 9	0.0 53	
3	3	NO03_06	1	3 4 8	3.2 50	0.9 83	3	3.250	1.4 83	1	5	4	- 0.1 87	- 0.18 1	0.0 53	

Note: School = 1 refers to the diverse school and School = 3 refers to the nondiverse school.

Table S9. Descriptive Statistics for Descriptive Inclusivity Norms Items by School and Wave

School	Wave	Item	vars	n	mean	sd	median	trimmed	mad	min	max	range	skew	kurtosis	se
1	1	NO04_01	1	2 7 3	2.7 44	1.1 60	3	2.699	1.4 83	1	5	4	0.2 96	- 0.77 6	0.0 70
1	1	NO04_02	1	2 7 3	3.3 37	1.2 11	3	3.420	1.4 83	1	5	4	- 0.3 79	- 0.74 2	0.0 73

Sch ool	wa ve	Item	va rs	n	me an	sd	medi an	trimm ed	ma d	mi n	m ax	ran ge	ske w	kurto sis	se
1	1	NO04 _03	1	2 7 3	2.9 16	1.1 43	3	2.918	1.4 83	1	5	4	0.0 32	- 0.88 9	0.0 69
1	1	NO04 _04	1	2 7 3	2.5 71	1.0 89	2	2.521	1.4 83	1	5	4	0.3 95	- 0.48 5	0.0 66
1	3	NO04 _01	1	1 6 8	2.8 45	1.1 37	3	2.809	1.4 83	1	5	4	0.2 55	- 0.65 2	0.0 88
1	3	NO04 _02	1	1 6 8	3.5 65	1.1 30	4	3.647	1.4 83	1	5	4	- 0.3 84	- 0.53 5	0.0 87
1	3	NO04 _03	1	1 6 8	2.9 58	1.2 30	3	2.949	1.4 83	1	5	4	- 0.0 94	- 0.89 6	0.0 95
1	3	NO04 _04	1	1 6 8	2.7 98	1.1 08	3	2.772	1.4 83	1	5	4	0.0 87	- 0.50 1	0.0 86
3	1	NO04 _01	1	4 2 8	2.5 42	0.9 29	2	2.532	1.4 83	1	5	4	0.4 11	- 0.49 3	0.0 45
3	1	NO04 _02	1	4 2 8	3.1 82	1.0 24	3	3.189	1.4 83	1	5	4	- 0.1 99	- 0.71 6	0.0 49
3	1	NO04 _03	1	4 2 8	3.2 41	1.0 67	3	3.250	1.4 83	1	5	4	- 0.2 81	- 0.66 3	0.0 52
3	1	NO04 _04	1	4 2 8	2.6 66	0.9 27	3	2.657	1.4 83	1	5	4	0.2 67	- 0.31 7	0.0 45
3	3	NO04 _01	1	3 4 5	2.4 75	0.9 80	2	2.430	1.4 83	1	5	4	0.5 68	- 0.12 7	0.0 53
3	3	NO04 _02	1	3 4 5	3.0 52	1.0 47	3	3.029	1.4 83	1	5	4	0.0 48	- 0.72 3	0.0 56

Sch ool	wa ve	Item	va rs	n	me an	sd	medi an	trimm ed	ma d	mi n	m ax	ran ge	ske w	kurto sis	se
3	3	NO04 _03	1	3 4 5	3.3 62	1.0 73	4	3.394	1.4 83	1	5	4	- 0.3 89	- 0.57 5	0.0 58
3	3	NO04 _04	1	3 4 5	2.6 75	0.9 67	3	2.682	1.4 83	1	5	4	0.1 83	- 0.42 4	0.0 52

13 *Note: School = 1 refers to the diverse school and School = 3 refers to the nondiverse school.*

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15 **Table S10.** Descriptive Statistics for Dialogue Orientation Items by School and Wave

Sch ool	wa ve	Item	va rs	n	me an	sd	medi an	trimm ed	ma d	m in	m ax	ran ge	ske w	kurto sis	se
1	1	PG23_01 _uni	1	2 8 1	3.6 19	1.2 96	4	3.773	1.4 83	1	5	4	- 0.6 35	- 0.58 2	0.0 77
1	1	PG23_02 _uni	1	2 8 1	3.4 66	1.2 70	3	3.582	1.4 83	1	5	4	- 0.4 50	- 0.70 7	0.0 76
1	1	PG23_03 _uni	1	2 8 1	3.1 85	1.2 99	3	3.231	1.4 83	1	5	4	- 0.2 27	- 0.85 9	0.0 77
1	3	PG23_01 _uni	1	1 5 9	3.5 16	1.1 41	3	3.620	1.4 83	1	5	4	- 0.4 07	- 0.24 4	0.0 90
1	3	PG23_02 _uni	1	1 5 9	3.3 52	1.1 20	3	3.426	1.4 83	1	5	4	- 0.2 35	- 0.22 9	0.0 89
1	3	PG23_03 _uni	1	1 5 9	3.2 77	1.1 41	3	3.341	1.4 83	1	5	4	- 0.2 72	- 0.37 0	0.0 91
3	1	PG23_01 _uni	1	4 3 5	3.8 69	1.2 48	4	4.066	1.4 83	1	5	4	- 0.9 74	- 0.02 6	0.0 60
3	1	PG23_02 _uni	1	4 3 5	3.4 83	1.2 97	4	3.602	1.4 83	1	5	4	- 0.5 15	- 0.77 2	0.0 62

Sch ool	wa ve	Item	va rs	n	me an	sd	medi an	trimm ed	ma d	m in	m ax	ran ge	ske w	kurto sis	se
3	1	PG23_03 _uni	1	4 3 5	3.2 83	1.2 88	3	3.352	1.4 83	1	5	4	- 0.4 00	- 0.83 7	0.0 62
3	3	PG23_01 _uni	1	3 3 3	3.9 37	1.1 35	4	4.097	1.4 83	1	5	4	- 0.9 00	0.14 2	0.0 62
3	3	PG23_02 _uni	1	3 3 3	3.5 92	1.1 47	4	3.700	1.4 83	1	5	4	- 0.4 87	- 0.34 1	0.0 63
3	3	PG23_03 _uni	1	3 3 3	3.3 99	1.1 77	3	3.498	1.4 83	1	5	4	- 0.3 89	- 0.41 8	0.0 64

16 *Note:* School = 1 refers to the diverse school and School = 3 refers to the non-diverse school.

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18 **Table S11.** Descriptive Statistics for Social Distance Items by School and Wave

Sch ool	wa ve	Item	va rs	n	me an	sd	medi an	trimm ed	ma d	m in	m ax	ran ge	ske w	kurto sis	se
1	1	PG26_01 _uni	1	2 8 1	3.0 71	1.3 66	3	3.089	1.4 83	1	5	4	- 0.1 53	- 1.08 8	0.0 81
1	1	PG26_02 _uni	1	2 8 1	2.8 19	1.1 77	3	2.791	1.4 83	1	5	4	- 0.0 66	- 0.66 5	0.0 70
1	1	PG26_03 _uni	1	2 8 1	2.6 87	1.2 43	3	2.618	1.4 83	1	5	4	0.1 17	- 0.86 1	0.0 74
1	1	PG26_04 _uni	1	2 8 1	2.3 91	1.2 80	2	2.262	1.4 83	1	5	4	0.4 45	- 0.84 0	0.0 76
1	1	PG26_05 _uni	1	2 8 1	2.6 16	1.2 82	3	2.520	1.4 83	1	5	4	0.2 45	- 0.93 4	0.0 77
1	1	PG26_06 _uni	1	2 8 1	2.6 55	1.2 41	3	2.582	1.4 83	1	5	4	0.1 70	- 0.87 4	0.0 74

Sch ool	wa ve	Item	va rs	n	me an	sd	medi an	trimm ed	ma d	m in	m ax	ran ge	ske w	kurto sis	se
1	3	PG26_01 _uni	1	1 5 9	3.1 07	1.0 71	3	3.132	0.0 00	1	5	4	- 0.1 50	- 0.05 8	0.0 85
1	3	PG26_02 _uni	1	1 5 9	3.0 13	1.0 91	3	3.016	0.0 00	1	5	4	- 0.0 83	- 0.02 9	0.0 87
1	3	PG26_03 _uni	1	1 5 9	2.9 62	1.1 69	3	2.953	0.0 00	1	5	4	- 0.1 64	- 0.43 7	0.0 93
1	3	PG26_04 _uni	1	1 5 9	2.6 86	1.1 65	3	2.628	0.0 00	1	5	4	0.0 04	- 0.51 5	0.0 92
1	3	PG26_05 _uni	1	1 5 9	2.8 62	1.1 16	3	2.837	0.0 00	1	5	4	- 0.1 08	- 0.29 6	0.0 89
1	3	PG26_06 _uni	1	1 5 9	2.8 99	1.1 43	3	2.876	0.0 00	1	5	4	- 0.0 57	- 0.35 4	0.0 91
3	1	PG26_01 _uni	1	4 3 5	3.4 14	1.2 77	3	3.516	1.4 83	1	5	4	- 0.4 67	- 0.70 7	0.0 61
3	1	PG26_02 _uni	1	4 3 5	2.9 06	1.2 17	3	2.883	1.4 83	1	5	4	- 0.0 80	- 0.82 6	0.0 58
3	1	PG26_03 _uni	1	4 3 5	2.7 59	1.2 29	3	2.716	1.4 83	1	5	4	- 0.0 10	- 0.88 6	0.0 59
3	1	PG26_04 _uni	1	4 3 5	2.4 16	1.2 51	2	2.312	1.4 83	1	5	4	0.3 84	- 0.90 1	0.0 60
3	1	PG26_05 _uni	1	4 3 5	2.6 14	1.2 15	3	2.553	1.4 83	1	5	4	0.1 61	- 0.88 4	0.0 58
3	1	PG26_06 _uni	1	4 3 5	2.6 83	1.2 56	3	2.622	1.4 83	1	5	4	0.1 17	- 0.98 5	0.0 60

Sch ool	wa ve	Item	va rs	n	me an	sd	medi an	trimm ed	ma d	m in	m ax	ran ge	ske w	kurto sis	se
3	3	PG26_01 _uni	1	3 3 3	3.3 06	1.1 65	3	3.378	1.4 83	1	5	4	- 0.2 92	- 0.52 7	0.0 64
3	3	PG26_02 _uni	1	3 3 3	2.9 43	1.1 62	3	2.929	1.4 83	1	5	4	- 0.0 85	- 0.56 8	0.0 64
3	3	PG26_03 _uni	1	3 3 3	2.8 11	1.1 15	3	2.809	1.4 83	1	5	4	- 0.1 56	- 0.52 3	0.0 61
3	3	PG26_04 _uni	1	3 3 3	2.5 74	1.1 56	3	2.528	1.4 83	1	5	4	0.0 26	- 0.78 6	0.0 63
3	3	PG26_05 _uni	1	3 3 3	2.7 36	1.1 04	3	2.727	1.4 83	1	5	4	- 0.1 09	- 0.54 9	0.0 61
3	3	PG26_06 _uni	1	3 3 3	2.7 45	1.1 48	3	2.730	1.4 83	1	5	4	- 0.0 77	- 0.72 3	0.0 63

19 *Note: School = 1 refers to the diverse school and School = 3 refers to the nondiverse school.*

20

21 **Table S12.** Descriptive Statistics for Scale Score Items by School and Wave

Sc hoo l	w av e	Scale	v ar s	n	m ea n	sd	me dia n	trim med	m ad	m i n	m a x	ra ng e	sk ew	kurt osis	se
1	1	Prescriptive_Norms_ Avg	1	2 7 1	3. 72 8	0. 90 8	3.8 33	3.79 1	0. 98 8	1	5	4	- 0. 63 8	0.2 96	0. 05 5
1	1	Descriptive_Norms_ Positive_Avg	1	2 7 3	3. 04 0	0. 97 1	3.0 00	3.04 8	0. 74 1	1	5	4	- 0. 07 7	- 0.2 13	0. 05 9
1	1	Descriptive_Norms_ Negative_Avg	1	2 7 3	2. 74 4	0. 90 4	3.0 00	2.71 7	0. 74 1	1	5	4	0. 28 9	0.1 25	0. 05 5
1	1	AP_dialogue_Avg	1	2 8 1	3. 42 3	1. 05 3	3.3 33	3.50 5	0. 98 8	1	5	4	- 0.	- 0.0 90	0. 06 3

Sc hoo l	w av e	Scale	v ar s	n	m ea n	sd	me dia n	trim med	m ad	m i n	m a x	ra nge	sk ew	kurt osis	se
													57 6		
1	1	AP_social_Avg	1	2 8 1	2. 70 6	1. 05 6	3.0 00	2.69 1	0. 98 8	1	5	4	- 0. 02 2	- 0.6 39	0. 06 3
1	3	Prescriptive_Norms_Avg	1	1 6 8	3. 62 1	0. 94 1	3.6 67	3.67 9	0. 98 8	1	5	4	- 0. 54 2	0.4 17	0. 07 3
1	3	Descriptive_Norms_Positive_Avg	1	1 6 8	3. 20 5	0. 92 4	3.0 00	3.21 3	0. 74 1	1	5	4	- 0. 15 1	0.1 46	0. 07 1
1	3	Descriptive_Norms_Negative_Avg	1	1 6 8	2. 87 8	1. 00 4	3.0 00	2.89 0	0. 74 1	1	5	4	- 0. 09 0	- 0.2 43	0. 07 7
1	3	AP_dialogue_Avg	1	1 5 9	3. 38 2	0. 94 9	3.3 33	3.44 4	0. 49 4	1	5	4	- 0. 58 7	0.6 28	0. 07 5
1	3	AP_social_Avg	1	1 5 9	2. 92 1	0. 93 5	3.0 00	2.93 8	0. 49 4	1	5	4	- 0. 22 4	0.3 63	0. 07 4
3	1	Prescriptive_Norms_Avg	1	4 2 7	3. 55 0	0. 80 6	3.6 67	3.58 6	0. 74 1	1	5	4	- 0. 54 3	0.6 37	0. 03 9
3	1	Descriptive_Norms_Positive_Avg	1	4 2 8	2. 86 2	0. 73 2	3.0 00	2.85 3	0. 74 1	1	5	4	0. 01 4	- 0.1 17	0. 03 5
3	1	Descriptive_Norms_Negative_Avg	1	4 2 8	2. 95 3	0. 79 2	3.0 00	2.96 9	0. 74 1	1	5	4	- 0. 18 5	- 0.0 07	0. 03 8

Sc hoo l	w av e	Scale	v ar s	n	m ea n	sd	me dia n	trim med	m ad	m i n	m a x	ra ng e	sk ew	kurt osis	se
3	1	AP_dialogue_Avg	1	4 3 5	3. 54 5	1. 00 3	3.6 67	3.65 1	0. 98 8	1	5	4	- 0. 87 6	0.4 44	0. 04 8
3	1	AP_social_Avg	1	4 3 5	2. 79 8	1. 05 9	3.0 00	2.79 2	1. 23 6	1	5	4	- 0. 00 6	- 0.7 55	0. 05 1
3	3	Prescriptive_Norms_Avg	1	3 4 8	3. 38 2	0. 82 1	3.3 33	3.41 0	0. 74 1	1	5	4	- 0. 46 9	0.8 19	0. 04 4
3	3	Descriptive_Norms_Positive_Avg	1	3 4 5	2. 76 4	0. 79 2	3.0 00	2.74 2	0. 74 1	1	5	4	0. 24 5	0.4 54	0. 04 3
3	3	Descriptive_Norms_Negative_Avg	1	3 4 5	3. 01 9	0. 82 0	3.0 00	3.04 5	0. 74 1	1	5	4	- 0. 28 1	0.3 31	0. 04 4
3	3	AP_dialogue_Avg	1	3 3 3	3. 64 3	0. 88 5	3.6 67	3.69 8	0. 98 8	1	5	4	- 0. 71 2	0.7 93	0. 04 9
3	3	AP_social_Avg	1	3 3 3	2. 85 2	0. 97 5	3.0 00	2.87 0	0. 74 1	1	5	4	- 0. 19 5	- 0.2 25	0. 05 3

Note: School = 1 refers to the diverse school and School = 3 refers to the nondiverse school.

Table S13. Univariate Normality Results for main variable's items (Shapiro-Wilk Test)

Test	Item	Statistic	P_Value	Normal
Shapiro-Wilk	NO03_01	0.8755	0.001	NO
Shapiro-Wilk	NO03_02	0.8780	0.001	NO
Shapiro-Wilk	NO03_03	0.8885	0.001	NO

Test	Item	Statistic	P_Value	Normal
Shapiro-Wilk	NO03_04	0.8868	0.001	NO
Shapiro-Wilk	NO03_05	0.9026	0.001	NO
Shapiro-Wilk	NO03_06	0.8989	0.001	NO
Shapiro-Wilk	NO04_01	0.8917	0.001	NO
Shapiro-Wilk	NO04_02	0.9123	0.001	NO
Shapiro-Wilk	NO04_03	0.9098	0.001	NO
Shapiro-Wilk	NO04_04	0.9045	0.001	NO
Shapiro-Wilk	PG23_01_uni	0.8349	0.001	NO
Shapiro-Wilk	PG23_02_uni	0.8802	0.001	NO
Shapiro-Wilk	PG23_03_uni	0.8899	0.001	NO
Shapiro-Wilk	PG26_01_uni	0.8915	0.001	NO
Shapiro-Wilk	PG26_02_uni	0.8930	0.001	NO
Shapiro-Wilk	PG26_03_uni	0.8840	0.001	NO
Shapiro-Wilk	PG26_04_uni	0.8681	0.001	NO
Shapiro-Wilk	PG26_05_uni	0.8876	0.001	NO
Shapiro-Wilk	PG26_06_uni	0.8922	0.001	NO

Multivariate Normality Results (Henze-Zirkler Test)

Test	Statistic	P_Value	Normal
Henze-Zirkler	2.166	0	NO

Table S14. Univariate Normality Results for Scales (Shapiro-Wilk Test)

Test	Item	Statistic	P_Value	Normal
Shapiro-Wilk	AP_social_Avg	0.9582		NO
Shapiro-Wilk	Prescriptive_Norms_Avg	0.9605		NO
Shapiro-Wilk	Descriptive_Norms_Positive_Avg	0.9587		NO

Test	Item	Statistic	P_Value	Normal
Shapiro-Wilk	Descriptive_Norms_Negative_Avg	0.9589		NO
Shapiro-Wilk	AP_dialogue_Avg	0.9295		NO

Multivariate Normality Results for Scales (Henze-Zirkler Test)				
Test		Statistic	P_Value	Normal
Henze-Zirkler		4.303	0	NO

Table S15. Detailed results of mixed linear models predicting outcomes from political opinion groups and time

Variable	Political Group Effect	Time Effect	Interaction Effect	ICC
Prescriptive Inclusivity Norms	$F(3, 643) = 3.87$, $p = .009$	$F(1, 547) = 2.19$, $p = .140$	$F(3, 556) = 0.64$, $p = .589$	.17
Positive Descriptive Norms	$F(3, 644) = 2.95$, $p = .032$	$F(1, 571) = 0.01$, $p = .944$	$F(3, 578) = 1.02$, $p = .384$	.06
Negative Descriptive Norms	$F(3, 643) = 4.82$, $p = .002$	$F(1, 551) = 0.58$, $p = .447$	$F(3, 557) = 0.71$, $p = .547$	.16
Dialogue Orientation	$F(3, 636) = 8.94$, $p < .001$	$F(1, 498) = 2.88$, $p = .090$	$F(3, 501) = 0.37$, $p = .775$	.34
Social Distance	$F(3, 638) = 3.82$, $p = .010$	$F(1, 507) = 2.61$, $p = .107$	$F(3, 511) = 0.68$, $p = .565$	.31

Table S16. Estimated marginal means, effect sizes, and significance patterns by political ideology and time

Variable	Wave	Conservative	Anti-LGBTQIA+/Pro-Refugees	Pro-LGBTQIA+/Anti-Refugees	Liberal
Prescriptive Norms	1	3.19 (0.16) ^a	3.63 (0.08) ^b [$d = -0.56$]	3.51 (0.13) ^{ab}	3.63 (0.06) ^b [$d = -0.57$]
	2	2.90 (0.12) ^a	3.63 (0.10) ^b [$d = -0.93$]	3.19 (0.12) ^a	3.51 (0.08) ^b [$d = -0.78$]

Positive Descriptive Norms	1	2.66 (0.15) ^a	2.92 (0.08) ^{ab}	2.72 (0.13) ^a	3.02 (0.06) ^b [<i>d</i> =-0.44]
	2	2.68 (0.12) ^a	3.25 (0.10) ^b [<i>d</i> =-0.70]	2.66 (0.11) ^a	2.93 (0.08) ^{ab}
Negative Descriptive Norms	1	3.33 (0.16) ^a	2.72 (0.08) ^b [<i>d</i> =0.78]	3.02 (0.13) ^{ab}	2.80 (0.06) ^b [<i>d</i> =0.68]
	2	3.18 (0.13) ^a	2.65 (0.11) ^b [<i>d</i> =0.68]	3.16 (0.12) ^a	2.92 (0.08) ^{ab}
Dialogue Orientation	1	3.01 (0.17) ^a	3.18 (0.09) ^a	3.62 (0.14) ^b [<i>d</i> =-0.78]	3.79 (0.07) ^b [<i>d</i> =-1.00]
	2	3.37 (0.14) ^a	3.31 (0.12) ^a	3.73 (0.13) ^b	3.91 (0.09) ^b [<i>d</i> =-0.69]
Social Distance	1	2.14 (0.19) ^a	2.43 (0.09) ^a	2.87 (0.15) ^b [<i>d</i> =-0.86]	2.58 (0.07) ^{ab}
	2	2.51 (0.15) ^a	2.59 (0.12) ^a	2.92 (0.14) ^b [<i>d</i> =-0.48]	2.61 (0.10) ^{ab}

Notes: Values represent means (standard errors). Different subscripts (^a,^b) within rows indicate significant differences between groups ($p < .05$). Effect sizes (Cohen's *d*) are reported in square brackets for significant differences from the conservative group or between adjacent groups. Positive *d* values indicate higher scores for the first group in the comparison, negative *d* values indicate higher scores for the second group.

Table S17. Correlation matrix between variables for Time 1 and 2:

Variable	1	2	3	4	5	6	7	8	9
1. PN T1	1***								
2. PN T2	0.3***	1***							
3. DN-P T1	0.34***	0.18***	1***	0.14					
4. DN-P T2	0.22***	0.4***	0.14**	1***					
5. DN-N T1	-0.11**	-0.23***	0.1**	-0.2***	1***				
6. DN-N T2	-0.12*	-0.14**	-0.02	0.01	0.23***	1***			

Variable	1	2	3	4	5	6	7	8	9
7. DO T1	0.12**	0.1*	0.13***	0.03	0.04	0.1*	1***		
8. DO T2	-0.02	0.15**	0.08	0.02	0	0.05	0.32***	1***	
9. SD T1	0.14***	0.13*	0.07*	0.03	-0.01	-0.07	0.24***	0.05	1***
10. SD T2	0.02	0.18***	-0.01	0.11*	-0.07	-0.02	0.11*	0.17***	0.3***

41 Note: PN = Prescriptive norms. DN-P = Positive descriptive norms. DN-N = Negative descriptive norms. DO =
42 Dialogue orientation. SD = Social distance. T1 = Time 1. T2 = Time 2.

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

44 Prescriptive inclusivity norms showed significant positive associations with descriptive positive norms at both Time 1 ($r =$
45 $.34, p < .001$) and Time 2 ($r = .40, p < .001$), while exhibiting negative relationships with descriptive negative norms, most
46 notably at Time 2 ($r = -.23, p < .001$). Temporal stability varied across norm types: descriptive positive norms showed
47 relatively weak stability ($r = .14, p < .01$), while descriptive negative norms exhibited moderate stability ($r = .23, p < .001$).
48 Dialogue intentions and social distance demonstrated significant positive correlations at both waves (Time 1: $r = .24, p <$
49 $.001$; Time 2: $r = .17, p < .01$), indicating that greater dialogue willingness was consistently related to lower social distance,
50 although effect sizes remained small.

51 The relationships between normative perceptions and polarization measures revealed consistent patterns. Prescriptive
52 inclusivity norms showed small but significant positive correlations with both dialogue intentions (Time 1: $r = .12, p < .05$;
53 Time 2: $r = .15, p < .05$) and social distance (Time 1: $r = .14, p < .01$; Time 2: $r = .18, p < .01$). Descriptive positive norms
54 demonstrated weaker associations, correlating significantly only with dialogue intentions at Time 1 ($r = .13, p < .05$), while
55 descriptive negative norms showed no significant associations with either polarization measure.

56 Cross-wave analyses revealed modest longitudinal relationships, with Time 1 prescriptive norms showing small but
57 significant associations with Time 2 polarization measures (dialogue: $r = .10, p < .05$; social distance: $r = .13, p < .05$),
58 suggesting potential temporal precedence of normative perceptions in shaping intergroup attitudes.

59

60 **Table S18.** Detailed Results: Mixed-Linear Models Predicting Prescriptive Norms by Time and
61 Opinion-Based Political Group:

Prescriptive_Norms_Avg								
Predictors	Estimates	std. Error	std. Beta	standardized std. Error	CI	standardized CI	p	df
(Intercept)	3.191	0.156	- 0.336	0.177	2.885 – 3.496	- 0.684 – 0.012	<0.001	643.175
wave [3]	-0.289	0.196	- 0.329	0.223	- 0.674 – 0.095	- 0.766 – 0.108	0.140	547.447
Political Orientation 4groups [Anti-LGBT, pro-refugees]	0.439	0.175	0.499	0.200	0.094 – 0.783	0.107 – 0.891	0.013	642.554
Political Orientation 4groups [Pro- LGBT, anti- refugees]	0.315	0.203	0.358	0.231	- 0.084 – 0.714	- 0.095 – 0.812	0.121	644.296
Political Orientation 4groups [Liberal]	0.441	0.168	0.501	0.191	0.111 – 0.770	0.127 – 0.876	0.009	643.166
wave [3] — Political Orientation 4groups [Anti-LGBT, pro-refugees]	0.287	0.235	0.326	0.267	- 0.175 – 0.748	- 0.198 – 0.850	0.223	555.309
wave [3] — Political Orientation 4groups [Pro-LGBT,	-0.025	0.261	- 0.029	0.296	- 0.537 – 0.487	- 0.611 – 0.554	0.923	580.236

anti-
refugees]

wave [3] — Political Orientation 4groups [Liberal]	0.169	0.220	0.192	0.250	- 0.263 – 0.600	- 0.299 – 0.683	0.443	532.851
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Random Effects

σ^2	0.61
$\tau_{00 \text{ SERIAL}}$	0.13
ICC	0.17
N_{SERIAL}	525

Observations 653

Marginal R^2 /
Conditional
 R^2

62

63 **Table S19.** Detailed Results: Mixed-Linear Models Predicting Positive Descriptive Norms by Time and
64 Opinion-Based Political Group:

Descriptive_Norms_Positive_Avg								
Predictors	Estimates	std. Error	std. Beta	standardized std. Error	CI	standardized CI	p	df
(Intercept)	2.663	0.155	- 0.296	0.180	2.359 – 2.967	- 0.650 – 0.057	<0.001	644.824
wave [3]	0.014	0.197	0.016	0.229	- 0.373 – 0.401	- 0.434 – 0.466	0.944	571.374
Political Orientation 4groups [Anti-LGBT, pro-refugees]	0.252	0.174	0.293	0.203	- 0.090 – 0.595	- 0.105 – 0.691	0.149	644.749

Political Orientation 4groups [Pro-LGBT, anti-refugees]	0.062	0.200	0.072	0.232	- 0.331 – 0.454	- 0.385 – 0.528	0.758	644.909
Political Orientation 4groups [Liberal]	0.359	0.167	0.417	0.194	0.031 – 0.686	0.037 – 0.798	0.032	644.823
wave [3] — Political Orientation 4groups [Anti-LGBT, pro-refugees]	0.320	0.237	0.372	0.275	- 0.146 – 0.785	- 0.169 – 0.913	0.178	586.212
wave [3] — Political Orientation 4groups [Pro-LGBT, anti-refugees]	-0.081	0.260	- 0.095	0.302	- 0.592 – 0.430	- 0.689 – 0.499	0.754	586.927
wave [3] — Political Orientation 4groups [Liberal]	-0.105	0.222	- 0.122	0.258	- 0.540 – 0.331	- 0.628 – 0.384	0.636	560.417
Random Effects								
σ^2	0.68							
$\tau_{00 \text{ SERIAL}}$	0.04							
ICC	0.06							
N_{SERIAL}	523							
Observations	653							

Marginal R^2 / 0.040 / 0.095
Conditional
 R^2

65

66 **Table S20.** Detailed Results: Mixed-Linear Models Predicting Negative Descriptive Norms by Time and
67 Opinion-Based Political Group:

Descriptive_Norms_Negative_Avg								
Predictors	Estimates	std. Error	std. Beta	standardized std. Error	CI	standardized CI	p	df
(Intercept)	3.333	0.157	0.503	0.179	3.024 – 3.642	0.151 – 0.854	<0.001	643.571
wave [3]	-0.151	0.198	- 0.171	0.225	- 0.540 – 0.238	- 0.613 – 0.271	0.447	550.875
Political Orientation 4groups [Anti-LGBT, pro-refugees]	-0.618	0.177	- 0.702	0.201	-0.966 – - 0.270	-1.097 – - 0.306	0.001	642.972
Political Orientation 4groups [Pro- LGBT, anti- refugees]	-0.317	0.203	- 0.360	0.231	- 0.716 – 0.082	- 0.813 – 0.093	0.119	644.245
Political Orientation 4groups [Liberal]	-0.538	0.169	- 0.611	0.193	-0.871 – - 0.205	-0.989 – - 0.233	0.002	643.563
wave [3] — Political Orientation 4groups [Anti-LGBT, pro-refugees]	0.081	0.238	0.092	0.271	- 0.387 – 0.550	- 0.439 – 0.624	0.733	563.081

wave [3] — Political Orientation 4groups [Pro-LGBT, anti- refugees]	0.298	0.262	0.338	0.297	- 0.217 – 0.812	- 0.246 – 0.923	0.256	571.115
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wave [3] — Political Orientation 4groups [Liberal]	0.280	0.223	0.318	0.253	- 0.157 – 0.718	- 0.178 – 0.815	0.208	537.008
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Random Effects

σ^2 0.63

$\tau_{00 \text{ SERIAL}}$ 0.12

ICC 0.16

N_{SERIAL} 523

Observations 653

Marginal R^2 /
Conditional
 R^2 0.047 / 0.199

68

69 **Table S21.** Detailed Results: Mixed-Linear Models Predicting Dialogue orientation by Time and Opinion-
70 Based Political Group:

AP_dialogue_Avg								
Predictors	Estimates	std. Error	std. Beta	standardized std. Error	CI	standardized CI	p	df
(Intercept)	3.008	0.172	- 0.561	0.172	2.670 – 3.346	-0.899 – - 0.223	<0.001	635.815
wave [3]	0.362	0.213	0.362	0.213	- 0.057 – 0.781	- 0.057 – 0.781	0.090	497.983

Political Orientation 4groups [Anti-LGBT, pro-refugees]	0.170	0.193	0.170	0.193	- 0.209 – 0.550	- 0.209 – 0.549	0.379	633.752
Political Orientation 4groups [Pro- LGBT, anti- refugees]	0.608	0.223	0.608	0.223	0.171 – 1.045	0.171 – 1.045	0.006	640.148
Political Orientation 4groups [Liberal]	0.783	0.185	0.783	0.185	0.419 – 1.147	0.419 – 1.146	<0.001	635.853
wave [3] — Political Orientation 4groups [Anti-LGBT, pro-refugees]	-0.230	0.256	- 0.230	0.256	- 0.733 – 0.272	- 0.732 – 0.272	0.368	494.274
wave [3] — Political Orientation 4groups [Pro-LGBT, anti- refugees]	-0.249	0.282	- 0.249	0.282	- 0.804 – 0.305	- 0.803 – 0.305	0.377	529.170
wave [3] — Political Orientation 4groups [Liberal]	-0.243	0.239	- 0.243	0.239	- 0.713 – 0.226	- 0.713 – 0.226	0.309	480.559

Random Effects

σ^2	0.61
$\tau_{00 \text{ SERIAL}}$	0.31

ICC 0.34

N_{SERIAL} 524

Observations 652

Marginal R² /
Conditional
R² 0.086 / 0.394

71

72 **Table S22.** Detailed Results: Mixed-Linear Models Predicting Prescriptive social distance by Time and
73 Opinion-Based Political Group:

AP_social_Avg								
Predictors	Estimates	std. Error	std. Beta	standardized std. Error	CI	standardized CI	p	df
(Intercept)	2.137	0.185	- 0.425	0.179	1.773 – 2.500	-0.777 – - 0.073	<0.001	637.457
wave [3]	0.371	0.230	0.360	0.223	- 0.081 – 0.824	- 0.078 – 0.798	0.107	507.073
Political Orientation 4groups [Anti-LGBT, pro-refugees]	0.290	0.208	0.281	0.201	- 0.117 – 0.698	- 0.114 – 0.676	0.162	635.817
Political Orientation 4groups [Pro- LGBT, anti- refugees]	0.736	0.239	0.713	0.232	0.266 – 1.206	0.258 – 1.168	0.002	640.998
Political Orientation 4groups [Liberal]	0.448	0.199	0.433	0.193	0.057 – 0.838	0.055 – 0.812	0.025	637.491
wave [3] — Political	-0.206	0.276	- 0.200	0.267	- 0.749 – 0.336	- 0.725 – 0.325	0.455	504.522

Orientation
4groups
[Anti-LGBT,
pro-refugees]

wave [3] —	-0.323	0.304	-	0.295	-	-	0.289	536.862
Political			0.313		0.921 – 0.275	0.891 – 0.266		

Orientation
4groups
[Pro-LGBT,
anti-
refugees]

wave [3] —	-0.347	0.258	-	0.250	-	-	0.179	490.313
Political			0.336		0.854 – 0.160	0.827 – 0.155		

Orientation
4groups
[Liberal]

Random Effects

σ^2 0.73

$\tau_{00 \text{ SERIAL}}$ 0.32

ICC 0.31

N_{SERIAL} 524

Observations 652

Marginal R^2 /
Conditional
 R^2 0.027 / 0.327

74

75

Table S23. Longitudinal measurement invariance across waves and single-group structural models

Model	df	χ^2 (p)	CFI	TLI	RMSEA [90% CI]	SRMR	AIC	BIC	Comparison ($\Delta\chi^2$, Δdf , p)
(A) Measurement Invariance									
1. Configural	174	593.11 ($<.001$)	0.961	0.953	0.063 [0.057– 0.068]	0.064	46017.02	46508.20	—
2. Metric	186	605.42 ($<.001$)	0.961	0.956	0.061 [0.055– 0.066]	0.065	46005.33	46435.10	vs. Configural: $\Delta\chi^2 =$ 12.304 $\Delta df = 12$ $p = .422$
3. Scalar	198	633.45 ($<.001$)	0.959	0.957	0.060 [0.055– 0.065]	0.066	46009.36	46377.75	vs. Partial Scalar: $\Delta\chi^2 =$ 19.882 $\Delta df = 1$ $p < .001$
4. Partial Scalar	197	613.57 ($<.001$)	0.960	0.957	0.060 [0.054– 0.065]	0.065	45261.82	45632.79	vs. Configural: $\Delta\chi^2 = 8.156$ $\Delta df = 11$ $p = .699$
(B) Single-Group Structural Models									
5. SEM (Original)	375	802.40 ($<.001$)	0.961	0.955	0.037 [0.034– 0.041]	0.060	45856.44	46421.55	—
6. SEM (Modified)	368	679.91 ($<.001$)	0.971	0.966	0.032 [0.028– 0.036]	0.055	45747.95	46346.03	vs. Original: $\Delta\chi^2 =$ 122.49 $\Delta df = 12$ $p < .001$

Notes: All models used FIML estimation in lavaan. χ^2 = chi-square; df = degrees of freedom; CFI = comparative fit index; TLI = Tucker–Lewis index; RMSEA = root mean square error of approximation (with 90% confidence interval in square brackets); SRMR = standardized root mean square residual; AIC = Akaike information criterion; BIC = Bayesian information criterion. Partial scalar frees one or more items' intercept for the prescriptive norms factor between T1 and T2. Models 1–4 show the progression of Measurement Invariance across two time points. Models 5–6 show Single-Group SEM analyses using the partial scalar measurement mode.

Table S24. Fit Indices for Single-Group and Multigroup Cross-Lagged Panel Models (CLPM)

Model	χ^2 (df)	p	CFI	TLI	RMSEA (90% CI)	SRMR	AIC	BIC	$\Delta\chi^2$ (df), p vs. Unc.
1. Single-Group CLPM	0.00 (0)	—	1.000	1.000	0.000	0.000	9743.933	9871.084	—
2. School (Multigroup)									
Unconstrained	0.00 (0)	—	1.000	1.000	0.000	0.000	9730.067	9984.370	(reference)
Constrained	15.04 (9)	0.090	0.972	0.908	0.040 [0.000, 0.075]	0.032	9727.108	9939.026	15.04 (9), p = 0.090
Partially Constrained	6.85 (7)	0.445	1.000	1.003	0.000 [0.000, 0.060]	0.023	9722.914	9944.251	6.85 (7), p = 0.445
3. Political Orientation (Multigroup)									
Unconstrained	0.00 (0)	—	1.000	1.000	0.000	0.000	4709.425	5136.375	(reference)
Constrained	42.39 (27)	0.030	0.882	0.737	0.077 [0.024, 0.120]	0.082	4697.817	5018.029	42.39 (27), p = 0.030
Partially Constrained	30.69 (24)	0.163	0.948	0.871	0.054 [0.000, 0.104]	0.071	4692.118	5024.191	30.69 (24), p = 0.163
4. Gender (Multigroup)									
Unconstrained	0.00 (0)	—	1.000	1.000	0.000	0.000	9726.063	9980.365	(reference)

Constrained	4.60 (9)	0.868	1.000	1.072	0.000 [0.000, 0.029]	0.023	9712.660	9924.579	4.60 (9), p = 0.868
5. Religion (Multigroup)									
Unconstrained	0.00 (0)	—	1.000	1.000	0.000	0.000	9692.701	10073.858	(reference)
Constrained	19.24 (18)	0.377	0.994	0.986	0.016 [0.000, 0.057]	0.032	9675.944	9972.399	19.24 (18), p = 0.377
Partially Constrained	6.74 (14)	0.944	1.000	1.106	0.000 [0.000, 0.010]	0.022	9671.445	9986.723	6.74 (14), p = 0.944
6. Migration Background (Multigroup)									
Unconstrained	0.00 (0)	—	1.000	1.000	0.000	0.000	9708.212	9962.515	(reference)
Constrained	14.84 (9)	0.095	0.973	0.911	0.040 [0.000, 0.075]	0.038	9705.055	9916.974	14.84 (9), p = 0.095
Partially Constrained	3.48 (7)	0.837	1.000	1.069	0.000 [0.000, 0.035]	0.017	9697.694	9919.031	3.48 (7), p = 0.837
7. Cohort (Younger vs. Older, Multigroup)									
Unconstrained	0.00 (0)	—	1.000	1.000	0.000	0.000	9742.830	9997.132	(reference)
Constrained	21.48 (9)	0.011	0.943	0.809	0.058 [0.026, 0.090]	0.043	9746.306	9958.224	21.48 (9), p = 0.011

Partially Constrained	1.07 (6)	0.983	1.000	1.114	0.000 [0.000, 0.000]	0.010	9731.897	9957.943	1.07 (6), p = 0.983
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86 *Note: **Unconstrained** means regression paths are freely estimated across groups, yielding a saturated (or near-*
87 *saturated) model with 0 degrees of freedom for the comparisons. **Constrained model** fixes all regression paths*
88 *to equality across groups. **Partially Constrained** frees only those specific paths that the score tests indicated*
89 *differ by group.*