

Interactive role-play with climate policy simulation can motivate evidence-based climate action: Supplementary Information

Table SI1. Contextual information about *Climate Action Simulation* sessions. The treatment or control column denotes whether sessions were used for the treatment group (denoted by a ‘T’), the subset of the treatment group that was compared to the control group (‘TC’), the subset of the treatment group in the follow-up sample (‘F’), or the control group (‘control’).

<i>Date</i>	<i>Session name</i>	<i>Institution¹</i>	<i>Audience²</i>	<i>Platform</i>	<i>Chose CC³</i>	<i>Length (hrs)</i>	<i>Total Surveyed</i>	<i>Matched Cases</i>	<i>% Usable Responses</i>	<i>Average Age (years)</i>	<i>Gender (% Female)</i>	<i>Treatment or control⁴</i>
Mar-21	2021-03-21 MIT EF	MIT Sloan	Undergrad	Virtual	Yes	1	12	3	25%	55.7	67%	T
Mar-21	2021-03-27 UNC CH	UNC	Grad	Virtual	No	3.2	40	21	53%	31.1	29%	T
Aug-21	2021-08-06 EMBA	MIT Sloan	Exec MBA	Hybrid	No	3	126	30	24%	41.8	31%	T
Sep-21	2021-09-24 UMLHON	UML	Undergrad	In Person	Yes	2	20	20	100%	20.8	60%	T
Oct-21	2021-10-05 SOC1	UML	Undergrad	In Person	No	2	42	19	45%	20.5	63%	T
Oct-21	2021-10-07 SOC2	UML	Undergrad	In Person	No	2	41	28	68%	20.4	54%	T
Oct-21	2021-10-26 CRIM	UML	Undergrad	Virtual	Yes	2	6	6	100%	21.3	67%	T
Feb-22	2022-02-14 PBIO1	UML	Undergrad	In Person	No	3	32	32	100%	19.8	66%	TC, F
Feb-22	2022-02-14 PBIO2	UML	Undergrad	In Person	No	3	15	15	100%	19.7	53%	TC, F
Feb-22	2022-02-15 PBIO3	UML	Undergrad	In Person	No	3	27	27	100%	20.4	59%	TC, F
Feb-22	2022-02-15 PBIO4	UML	Undergrad	In Person	No	3	30	29	97%	19.8	55%	TC, F
Feb-22	2022-02-15 PBIO8	UML	Undergrad	In Person	No	3	13	13	100%	20.7	77%	TC, F
Feb-22	2022-02-16 PBIO5	UML	Undergrad	In Person	No	3	22	22	100%	20.1	73%	TC, F
Feb-22	2022-02-16 PBIO6	UML	Undergrad	In Person	No	3	18	17	94%	20.8	65%	TC, F
Feb-22	2022-02-17 PBIO9	UML	Undergrad	In Person	No	3	14	14	100%	20.1	50%	TC, F
Feb-22	2022-02-18 PBIO7	UML	Undergrad	In Person	No	3	33	32	97%	20.5	50%	TC, F
Mar-22	2022-03-01 SOCPROB	UML	Undergrad	In Person	No	2.5	37	9	24%	21.6	44%	T
Mar-22	2022-03-14 GES1	UML	Undergrad	In Person	No	2	16	16	100%	21	25%	T, F
Mar-22	2022-03-15 GES2	UML	Undergrad	In Person	No	2	17	17	100%	21.1	12%	T, F
Mar-22	2022-03-17 GES3	UML	Undergrad	In Person	No	2	15	13	87%	20.9	31%	T, F
Mar-22	2022-03-17 GES4	UML	Undergrad	In Person	No	2	15	15	100%	21.3	13%	T, F
Mar-22	2022-03-18 GES5	UML	Undergrad	In Person	No	2	12	12	100%	22.3	42%	T, F
Mar-22	2022-03-21 G4E	UML	Undergrad	In Person	No	2	34	18	53%	22.8	11%	T, F

Mar-22	2022-03-23 EDPSYCH	UML	Undergrad	Hybrid	No	0.8	13	4	31%	41.3	50%	T, F
Mar-22	2022-03-25 UNC	UNC	Undergrad	In Person	Yes	4	75	58	77%	29.2	40%	T, F
Mar-22	2022-03-29 Eureka	Eureka	Undergrad	In Person	No	1	82	46	56%	NA	NA	T
Apr-22	2022-04-26 MIT Sloan	MIT Sloan	Grad	Unrecorded	Yes	1.5	129	69	53%	33.7	43%	T
Aug-22	2022-08-11 EMBA	MIT Sloan	Exec MBA	In Person	No	3.5	95	11	12%	43.5	45%	T
Sep-22	2022-09 UML CC	UML	Undergrad	In Person	Yes	3	36	26	72%	22.6	46%	T
Oct-22	2022-10 Brandeis	Brandeis	Undergrad	Virtual	No	3	21	7	33%	24.6	43%	T
Nov-22	2022-11-03 Eureka	Eureka	Undergrad	Virtual	Yes	1.5	16	15	94%	20.6	47%	T
Mar-23	2023-03-31 UNC	UNC	Grad	In Person	Yes	4	66	51	77%	31.1	57%	T
Mar-23	2023 March Weeden	UML	Undergrad	In Person	No	?	76	61	80%	21.5	30%	T
Mar-23	2023-03 BIOL 1180L	UML	Undergrad	NA	NA	NA	216	174	81%	20.5	64%	Control

¹ Abbreviations for session locations are: MIT Sloan School of Management (MIT Sloan); University of North Carolina Asheville (UNC); University of Massachusetts Lowell (UML); Brandeis University (Brandeis); Eureka College (Eureka).

² Refers to the educational setting of the simulation, i.e., ‘undergrad’ is undergraduate students; ‘grad’ is graduate students; Exec MBA is executive MBA students.

³ ‘Chose cc’ refers to whether respondents chose to participate in a climate change-related activity (‘Yes’) or did so as a required activity in a course that was not focused on climate change, such as introductory biology (‘No’).

Table SI2. Sample population sociodemographic traits and sociopolitical values. The range, mean, and median are given for each sub-sample analyzed, including: (1) participants from the UMass Lowell introductory biology course used for the treatment vs. control comparison study; (2) the full treatment group, which included all participants in the *Climate Action Simulation* with matched pre- and post-surveys analyzed; (3) participants who provided matched pre-, post-, and follow-up surveys. Note that perceived socioeconomic status is measured on a scale from one to ten, with one representing the highest perceived socioeconomic status and ten representing the lowest.

<i>Treatment vs. control study</i>				
	Treatment group¹	Control group¹	Full treatment group²	Follow-up survey study³
Total N	201	178	776	112
Age				
Lowest	18	18	18	19
Highest	33	28	71	55
Mean	20	20	25	22
Median	20	20	22	20
Gender				
Female	60.2%	58.4%	45.7%	52.7%
Male	38.3%	38.8%	52.8%	44.6%
Other	1.5%	2.8%	1.5%	2.7%
Race participants identify with				
White	45.8%	53.7%	52.2%	48.2%
Black/African American	11.9%	5.1%	7.6%	7.1%
American Indian/Alaska Native	0.5%	0.6%	0.1%	0.0%
Hispanic	10.4%	10.2%	9.1%	11.6%
Asian	21.4%	20.9%	22.6%	21.4%
Middle Eastern	6.5%	5.6%	3.7%	5.4%
Mixed	2.5%	2.8%	3.7%	3.6%
Other	1.0%	1.1%	1.0%	2.7%
Perceived socioeconomic status				
Lowest	2	1	1	2
Highest	10	10	10	9
Mean	5.3	5.3	4.8	5.0
Median	5	5	5	5

	<i>Treatment group¹</i>	<i>Control group¹</i>	<i>Full treatment group²</i>	<i>Follow-up survey study³</i>
<i>Sociopolitical value constructs⁴</i>				
<i>Government intervention</i>				
<i>Strongly support (liberal)</i>	10%	3%	8%	5%
<i>Somewhat support</i>	27%	15%	28%	22%
<i>Neither support nor oppose</i>	36%	35%	33%	36%
<i>Somewhat oppose</i>	21%	34%	21%	25%
<i>Strongly oppose (conservative)</i>	6%	13%	9%	12%
<i>Diversity and equity</i>				
<i>Strongly support (liberal)</i>	43%	37%	47%	41%
<i>Somewhat support</i>	20%	14%	20%	21%
<i>Neither support nor oppose</i>	21%	28%	19%	21%
<i>Somewhat oppose</i>	11%	15%	11%	12%
<i>Strongly oppose (conservative)</i>	5%	7%	4%	5%
<i>Economic equality</i>				
<i>Strongly support (liberal)</i>	46%	45%	51%	46%
<i>Somewhat support</i>	29%	31%	27%	27%
<i>Neither support nor oppose</i>	15%	17%	14%	16%
<i>Somewhat oppose</i>	7%	6%	5%	8%
<i>Strongly oppose (conservative)</i>	4%	2%	2%	3%

⁴ The mean value for all survey items included in each sociopolitical values construct are given here.

Table SI3. Interclass correlations calculated from models with only the grouping variables (session, participant, or participant nested in session) as predictors. Correlations are shown for the session or participant grouping variable.

Predictor variables in model:	Session	Participant	Participant nested in session	
Interclass correlation shown for:	Session	Participant	Session	Participant
<i>Personal importance of climate change</i>	0.70%	70.8%	0.00%	64.6%
<i>Hopefulness</i>	1.30%	8.0%	1.29%	0.0%
<i>Knowledge of high-impact policies</i>	2.97%	50.7%	2.00%	43.0%
<i>Self-efficacy/ability to personally contribute</i>	4.60%	81.9%	3.00%	74.0%
<i>Sense of power to make a difference</i>	1.76%	54.1%	1.10%	46.2%
<i>Reduce personal C footprint</i>	0.00%	50.3%	0.00%	44.8%
<i>Discuss climate change with family and friends</i>	0.29%	87.4%	0.00%	84.0%
<i>Discuss climate change with peers</i>	0.40%	60.8%	0.00%	56.1%
<i>Intent to take low-risk political action</i>	0.03%	63.3%	0.00%	57.6%
<i>Intent to take high-risk action</i>	2.60%	59.8%	1.10%	54.6%

Table SI4. Bayesian information criterion (BIC) values for regression models of each outcome variable on time (pre-/ post-En-ROADS) for the control vs. treatment study.

BIC values are shown for models with clustering by participant nested within *Climate Action Simulation* session, clustering by participant only, and clustering by participant with controls for age, gender, and race. For each outcome variable, the models with lowest BIC values are shown in bold and results for those regressions are provided in Table SI3.

Predictor variables included in models with pre/post-En-ROADS	Participant nested within session	Participant	Participant; controls for age, gender and race
<i>Personal importance of climate change</i>	2,015	2,009	2,026
<i>Hopefulness</i>	2,174	2,168	2,190
<i>Knowledge of high-impact policies</i>	2,092	2,087	2,113
<i>Self-efficacy/ability to personally contribute</i>	2,154	2,148	2,148
<i>Sense of power to make a difference</i>	1,895	1,891	1,944
<i>Reduce personal C footprint</i>	1,471	1,464	1,480
<i>Discuss climate change with family and friends</i>	2,080	2,074	2,084
<i>Discuss climate change with peers</i>	1,736	1,729	1,735
<i>Intent to take low-risk political action</i>	2,119	2,112	2,129
<i>Intent to take high-risk action</i>	1,759	1,752	1,800

Table SI5a. Comparison of pre- to post-survey gains in *Personal importance of climate change* in treatment vs. control groups using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 795

Number of groups: 421

Log likelihood: -990.82

Wald chi²: 21.14

Chi² *p*-value < 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
Pre (base)	0.000			
Post	-0.008	0.056	-0.14	0.885
<i>Treated</i>				
Control (base)	0.000			
Treatment	0.092	0.099	0.93	0.355
Post*Treatment	0.221	0.077	2.86	0.004
Constant	-0.112	0.070	-1.61	0.108

<i>Random effects:</i>	<i>Estimate</i>	<i>SE</i>
Constant	0.710	0.060
Residual	0.282	0.021

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
Time	1	7.04	0.008
Treatment	1	4.97	0.026
Time*Treatment	1	8.20	0.004

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Pre treatment vs. pre control	0.092	0.099	0.930	0.355
Post treatment vs. post control	0.313	0.098	3.19	0.001
Control post vs. pre	-0.008	0.056	-0.14	0.885
Treatment post vs. pre	0.213	0.053	4.02	<0.001

Table SI5b. Comparison of pre- to post-survey gains in *Hopefulness* in treatment vs. control groups using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 796

Number of groups: 421

Log likelihood: -1071.2746

Wald chi²: 2.47

Chi² *p*-value < 0.4800

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
Pre (base)	0.000			
Post	-0.060	0.073	-0.83	0.408
<i>Treated</i>				
Control (base)	0.000			
Treatment	-0.001	0.100	-0.01	0.990
Post*Treatment	0.135	0.101	1.34	0.180
Constant	0.007	0.071	0.10	0.917

<i>Random effects:</i>	<i>Estimate</i>	<i>SE</i>
Constant	0.504	0.056
Residual	0.490	0.036

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
Time	1	0.02	0.884
Treatment	1	0.60	0.438
Time*Treatment	1	1.80	0.180

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Pre treatment vs. pre control	-0.001	0.100	-0.01	0.990
Post treatment vs. post control	0.134	0.098	1.36	0.174
Control post vs. pre	-0.060	0.073	-0.83	0.408
Treatment post vs. pre	0.075	0.070	1.07	0.283

Table SI5c. Comparison of pre- to post-survey gains in *Knowledge of high-impact policies* in treatment vs. control groups using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 772

Number of groups: 410

Log likelihood: -1033.4387

Wald chi²: 146.01

Chi² *p*-value < 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
Pre (base)	0.000			
Post	0.0648	0.085	0.75	0.454
<i>Treated</i>				
Control (base)	0.000			
Treatment	-0.284	0.097	-2.94	0.003
Post*Treatment	0.918	0.119	7.73	<0.001
Constant	-0.154	0.069	-2.23	0.026

<i>Random effects:</i>	<i>Estimate</i>	<i>SE</i>
Constant	0.206	0.047
Residual	0.669	0.049

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
Time	1	77.45	<0.001
Treatment	1	5.53	0.018
Time*Treatment	1	59.75	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Pre treatment vs. pre control	-0.284	0.097	-2.94	0.003
Post treatment vs. post control	0.634	0.094	6.76	<0.001
Control post vs. pre	0.064	0.085	0.75	0.454
Treatment post vs. pre	0.981	0.083	11.82	<0.001

Table SI5d. Comparison of pre- to post-survey gains in *Self-efficacy/ability to personally contribute* in treatment vs. control groups using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 796

Number of groups: 421

Log likelihood: -1060.39

Wald chi²: 19.07

Chi² *p*-value < 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
Pre (base)	0.000			
Post	-0.043	0.070	-0.62	0.536
<i>Treated</i>				
Control (base)	0.000			
Treatment	0.128	0.100	1.28	0.200
Post*Treatment	0.254	0.097	2.62	0.009
Constant	-0.105	0.071	-1.48	0.140

<i>Random effects:</i>	<i>Estimate</i>	<i>SE</i>
Constant	0.538	0.057
Residual	0.453	0.033

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
Time	1	2.98	0.085
Treatment	1	8.72	0.003
Time*Treatment	1	6.85	0.009

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Pre treatment vs. pre control	0.128	0.100	1.28	0.200
Post treatment vs. post control	0.382	0.098	3.89	<0.001
Control post vs. pre	-0.043	0.070	-0.62	0.536
Treatment post vs. pre	0.211	0.067	3.14	0.002

Table SI5e. Comparison of pre- to post-survey gains in *Sense of power to make a difference* in treatment vs. control groups using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 840

Number of groups: 420

Log likelihood: -948.8231

Wald chi²: 18.91

Chi² *p*-value < 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
Pre (base)	0.000			
Post	-0.121	0.040	-3.02	0.002
<i>Treated</i>				
Control (base)	0.000			
Treatment	0.013	0.097	0.13	0.896
Post*Treatment	0.236	0.058	4.11	<0.001
Constant	-0.002	0.067	-0.04	0.971

<i>Random effects:</i>	<i>Estimate</i>	<i>SE</i>
Constant	0.817	0.063
Residual	0.174	0.012

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
Time	1	0.01	0.937
Treatment	1	1.99	0.159
Time*Treatment	1	16.86	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Pre treatment vs. pre control	0.013	0.097	0.13	0.896
Post treatment vs. post control	0.249	0.097	2.56	0.010
Control post vs. pre	-0.121	0.040	-3.02	0.002
Treatment post vs. pre	0.116	0.042	2.79	0.005

Table SI5f. Comparison of pre- to post-survey gains in intent to *Reduce personal C footprint* in treatment vs. control groups using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 795

Number of groups: 421

Log likelihood: -719.85

Wald chi²: 15.9

Chi² *p*-value: 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
Pre (base)	0.000			
Post	0.000	0.047	0.00	0.999
<i>Treated</i>				
Control (base)	0.000			
Treatment	-0.015	0.065	-0.23	0.820
Post*Treatment	0.169	0.065	2.62	0.009
Constant	3.169	0.046	68.84	<0.001

<i>Random effects:</i>	<i>Estimate</i>	<i>SE</i>
Constant	0.214	0.024
Residual	0.201	0.015

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
Time	1	6.87	0.009
Treatment	1	1.59	0.208
Time*Treatment	1	6.86	0.009

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Pre treatment vs. pre control	-0.015	0.065	-0.23	0.820
Post treatment vs. post control	0.154	0.064	2.43	0.015
Control post vs. pre	0.000	0.047	0.00	0.999
Treatment post vs. pre	0.169	0.045	3.78	<0.001

Table SI5g. Comparison of pre- to post-survey gains in intent to *Discuss climate change with family and friends* in treatment vs. control groups using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 794

Number of groups: 421

Log likelihood: -1022.4695

Wald chi²: 29.40

Chi² *p*-value < 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
Pre (base)	0.000			
Post	0.004	0.062	0.07	0.943
<i>Treated</i>				
Control (base)	0.000			
Treatment	-0.040	0.100	-0.40	0.692
Post*Treatment	0.306	0.085	3.59	<0.001
Constant	-0.068	0.071	-0.97	0.333

<i>Random effects:</i>	<i>Estimate</i>	<i>SE</i>
Constant	0.652	0.060
Residual	0.347	0.025

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
Time	1	13.63	<0.001
Treatment	1	1.61	0.204
Time*Treatment	1	12.88	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Pre treatment vs. pre control	-0.040	0.100	-0.40	0.692
Post treatment vs. post control	0.267	0.098	2.71	0.007
Control post vs. pre	0.004	0.062	0.07	0.943
Treatment post vs. pre	0.311	0.059	5.27	<0.001

Table SI5h. Comparison of pre- to post-survey gains in *Intent to discuss climate change with peers* in treatment vs. control groups using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 795

Number of groups: 421

Log likelihood: -853.79

Wald chi²: 17.51

Chi² *p*-value < 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	-0.061	0.051	-1.18	0.238
<i>Treated</i>				
<i>Control (base)</i>	0.000			
<i>Treatment</i>	0.040	0.079	0.50	0.615
<i>Post*Treatment</i>	0.225	0.071	3.17	0.002
<i>Constant</i>	2.999	0.056	53.40	<0.001

<i>Random effects:</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>	0.386	0.037
<i>Residual</i>	0.241	0.018

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	1	2.14	0.144
<i>Treatment</i>	1	4.72	0.030
<i>Time*Treatment</i>	1	10.04	0.002

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Pre treatment vs. pre control</i>	0.040	0.079	0.50	0.615
<i>Post treatment vs. post control</i>	0.265	0.078	3.40	0.001
<i>Control post vs. pre</i>	-0.061	0.051	-1.18	0.238
<i>Treatment post vs. pre</i>	0.165	0.049	3.35	0.001

Table SI5i. Comparison of pre- to post-survey gains in *Intent to take low-risk political action* in treatment vs. control groups using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 792

Number of groups: 420

Log likelihood: -1042.7466

Wald chi²: 12.80

Chi² *p*-value < 0.005

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
Pre (base)	0.000			
Post	-0.112	0.066	-1.69	0.092
<i>Treated</i>				
Control (base)	0.000			
Treatment	0.065	0.101	0.64	0.520
Post*Treatment	0.255	0.092	2.77	0.006
Constant	-0.036	0.071	-0.50	0.615

<i>Random effects:</i>	<i>Estimate</i>	<i>SE</i>
Constant	0.604	0.059
Residual	0.402	0.030

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
Time	1	0.11	0.738
Treatment	1	4.70	0.0308
Time*Treatment	1	7.69	0.006

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Pre treatment vs. pre control	0.065	0.101	0.64	0.520
Post treatment vs. post control	0.319	0.099	3.23	0.001
Control post vs. pre	-0.112	0.066	-1.69	0.092
Treatment post vs. pre	0.143	0.063	2.25	0.024

Table SI5j. Comparison of pre- to post-survey gains in *Intent to take high-risk action* in treatment vs. control groups using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 842

Number of groups: 421

Log likelihood: -873.63268

Wald chi²: 32.51

Chi² *p*-value < 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
Pre (base)	0.000			
Post	-0.112	0.033	-3.40	0.001
<i>Treated</i>				
Control (base)	0.000			
Treatment	0.166	0.096	1.72	0.086
Post*Treatment	0.230	0.048	4.84	<0.001
Constant	-0.078	0.067	-1.17	0.240

<i>Random effects:</i>	<i>Estimate</i>	<i>SE</i>
Constant	0.857	0.063
Residual	0.119	0.008

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
Time	1	0.02	0.885
Treatment	1	9.03	0.003
Time*Treatment	1	23.47	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Pre treatment vs. pre control	0.166	0.096	1.72	0.086
Post treatment vs. post control	0.396	0.096	4.11	0.000
Control post vs. pre	-0.112	0.033	-3.40	0.001
Treatment post vs. pre	0.119	0.034	3.45	0.001

Table SI6. Bayesian information criterion (BIC) values for regression models of each outcome variable on time (pre-/ post-En-ROADS) across the full treatment sample.

BIC values are shown for models with clustering by participant nested within Climate Action Simulation session and participant only, with or without controls for age, gender, and race. For each outcome variable, the models with lowest BIC values are shown in bold and results for those regressions are provided in Table SI5.

<i>Predictor variables included in models with pre/post-En-ROADS</i>	<i>Participant nested within session</i>	<i>Participant</i>	<i>Participant nested within session; controls for age, gender and race</i>	<i>Participant; controls for age, gender and race</i>
<i>Personal importance of climate change</i>	3,663	3,687	3,672	3,670
<i>Hopefulness</i>	3,875	3,871	3,898	3,892
<i>Knowledge of high-impact policies</i>	3,809	3,824	3,830	3,843
<i>Self-efficacy/ability to personally contribute</i>	3,893	3,900	3,881	3,878
<i>Sense of power to make a difference</i>	3,274	3,269	3,289	3,283
<i>Reduce personal C footprint</i>	2,410	2,483	2,405	2,408
<i>Discuss climate change with family and friends</i>	3,668	3,710	3,675	3,682
<i>Discuss climate change with peers</i>	2,768	2,814	2,769	2,780
<i>Intent to take low-risk political action</i>	3,822	3,826	3,832	3,829
<i>Intent to take high-risk action</i>	1,986	1,982	1,977	1,970

Table SI7a. Comparison of pre- to post-survey gains in *Personal importance of climate change* across the full treatment sample, using mixed-effects regression with maximum likelihood estimation and clustering by participant nested within session.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Log likelihood: -1,933.7

Wald χ^2 : 33.60

χ^2 *p*-value < 0.001

<i>Group variable</i>	<i>Observations per group</i>			
	Number of groups	Minimum	Average	Maximum
<i>Session</i>	33	6	46.9	137
<i>Participant</i>	776	1	2	2

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.168	0.029	5.80	<0.001
<i>Constant</i>	-0.112	0.058	-1.93	0.053

<i>Random effects</i>	<i>Estimate</i>	<i>SE</i>
<i>Session</i>	0.061	0.024
<i>Participant</i>	0.594	0.040
<i>Residual</i>	0.322	0.016
	<i>Chi²</i>	<i>p-value</i>
<i>Likelihood ratio test against model without random effects</i>	498.03	<0.001

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time (Pre/Post)</i>	1	33.60	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs pre</i>	0.168	0.029	5.80	<0.001

Table SI7b. Comparison of pre- to post-survey gains in *Hopefulness* across the full treatment sample using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 1,456

Number of groups: 730

Log likelihood: -1941.1

Wald χ^2 : 22.18

χ^2 *p*-value < 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.169	0.036	4.71	<0.001
<i>Constant</i>	-0.070	0.037	-1.90	0.058

<i>Random effects</i>	<i>Estimate</i>	<i>SE</i>
<i>Participant</i>	0.519	0.041
<i>Residual</i>	0.470	0.025

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	1	22.18	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs pre</i>	0.169	0.036	4.71	<0.001

Table SI7c. Comparison of pre- to post-survey gains in *Knowledge of high-impact policies* across the full treatment sample, using mixed-effects regression with maximum likelihood estimation and clustering by participant nested within session.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Log likelihood: -2026.8

Wald χ^2 : 241.93

χ^2 *p*-value < 0.001

<i>Group variable</i>	<i>Observations per group</i>			
	Number of groups	Minimum	Average	Maximum
<i>Session</i>	33	6	45.7	136
<i>Participant</i>	764	1	2	2

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.670	0.043	15.55	<0.001
<i>Constant</i>	-0.360	0.049	-7.30	<0.001

<i>Random effects</i>	<i>Estimate</i>	<i>SE</i>
<i>Session</i>	0.036	0.015
<i>Participant</i>	0.165	0.033
<i>Residual</i>	0.696	0.036
	<i>Chi²</i>	<i>p-value</i>
	62.49	<0.001
<i>Likelihood ratio test against model without random effects</i>		

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time (Pre/Post)</i>	1	241.93	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs pre</i>	0.670	0.043	5.80	<0.001

Table SI7d. Comparison of pre- to post-survey gains in *Self-efficacy/ability to personally contribute* across the full treatment sample using mixed-effects regression with maximum likelihood estimation, clustering by participant, and controls for race, gender, and age. Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 1,442
Number of groups: 722

Log likelihood: -1913.9
Wald chi²: 85.85
Chi² *p*-value < 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000 (base)			
<i>Post</i>	0.214	0.037	5.77	<0.001
<i>Race</i>				
<i>Non-white</i>	0.000 (base)			
<i>White</i>	-0.254	0.063	-4.06	<0.001
<i>Gender</i>				
<i>Female</i>	0.000 (base)			
<i>Male</i>	-0.275	0.063	-4.36	<0.001
<i>Other</i>	-0.595	0.258	-2.31	0.021
<i>Age</i>	0.014	0.004	3.47	0.001
<i>Constant</i>	-0.189	0.117	-1.62	0.105

<i>Random effects</i>	<i>Estimate</i>	<i>SE</i>
<i>Participant</i>	0.451	0.039
<i>Residual</i>	0.496	0.026

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	1	33.28	<0.001
<i>White</i>	1	16.45	<0.001
<i>Gender</i>	2	22.05	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Post vs pre	0.214	0.037	5.77	<0.001

Table SI7e. Comparison of pre- to post-survey gains in *Sense of power to make a difference* across the full treatment sample using mixed-effects regression with maximum likelihood estimation and clustering by participant.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 1,454

Number of groups: 727

Log likelihood: -1640.1

Wald chi²: 1.82

Chi² *p*-value < 0.1771

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.030	0.022	1.35	0.177
<i>Constant</i>	0.028	0.037	0.75	0.452

<i>Random effects</i>	<i>Estimate</i>	<i>SE</i>
<i>Participant</i>	0.798	0.047
<i>Residual</i>	0.176	0.009

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time (Pre vs. post)</i>	1	1.82	0.1771

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs pre</i>	0.030	0.022	1.35	0.177

Table SI7f. Comparison of pre- to post-survey gains in intent to *Reduce personal C footprint* across the full treatment sample using mixed-effects regression with maximum likelihood estimation and clustering by participant nested within session.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Log likelihood: -1198.42

Wald χ^2 : 16.8

χ^2 *p*-value < 0.001

<i>Group variable</i>	<i>Observations per group</i>			
	Number of groups	Minimum	Average	Maximum
<i>Session</i>	32	6	45.3	136
<i>Participant</i>	730	1	2	2

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.091	0.022	4.10	<0.001
<i>Constant</i>	3.320	0.042	78.86	<0.001

<i>Random effects</i>	<i>Estimate</i>	<i>SE</i>
<i>Session</i>	0.038	0.013
<i>Participant</i>	0.156	0.014
<i>Residual</i>	0.179	0.009
	<i>χ^2</i>	<i>p-value</i>
	320.49	<0.001
<i>Likelihood ratio test against model without random effects</i>		

<i>Main effects:</i>	<i>df</i>	<i>χ^2</i>	<i>p-value</i>
<i>Time (Pre/Post)</i>	1	16.66	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs pre</i>	0.091	0.022	4.08	<0.001

Table SI7g. Comparison of pre- to post-survey gains in *Intent to discuss climate change with family and friends* across the full treatment sample, using mixed-effects regression with maximum likelihood estimation and clustering by participant nested within session. Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Log likelihood: -1,837.27

Wald χ^2 : 33.36

χ^2 *p*-value < 0.001

<i>Group variable</i>	<i>Observations per group</i>			
	Number of groups	Minimum	Average	Maximum
<i>Session</i>	32	6	45.2	136
<i>Participant</i>	730	1	2	2

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.182	0.032	5.78	<0.001
<i>Constant</i>	-0.094	0.063	-1.48	0.139

<i>Random effects</i>	<i>Estimate</i>	<i>SE</i>
<i>Session</i>	0.078	0.029
<i>Participant</i>	0.547	0.040
<i>Residual</i>	0.358	0.019
	<i>Chi²</i>	<i>p-value</i>
<i>Likelihood ratio test against model without random effects</i>	429.28	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs pre</i>	0.182	0.032	5.78	<0.001

Table SI7h. Comparison of pre- to post-survey gains in intent to *Discuss climate change with peers* across the full treatment sample, using mixed-effects regression with maximum likelihood estimation and clustering by participant nested within session. Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Log likelihood: -1389.3

Wald χ^2 : 23.00

χ^2 *p*-value < 0.001

<i>Group variable</i>	<i>Observations per group</i>			
	Number of groups	Minimum	Average	Maximum
<i>Session</i>	32	6	45.1	136
<i>Participant</i>	730	1	2	2

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.111	0.023	4.80	<0.001
<i>Constant</i>	3.213	0.045	71.1	<0.001

<i>Random effects</i>	<i>Estimate</i>	<i>SE</i>
<i>Session</i>	0.038	0.014
<i>Participant</i>	0.299	0.022
<i>Residual</i>	0.193	0.010
	<i>Chi²</i>	<i>p-value</i>
<i>Likelihood ratio test against model without random effects</i>	437.68	<0.001

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time (Pre/Post)</i>	1	22.83	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs pre</i>	0.111	0.023	4.78	<0.001

Table SI7i. Comparison of pre- to post-survey gains in *Intent to take low-risk political action* across the full treatment sample using mixed-effects regression with maximum likelihood estimation and clustering by participant nested within session.

Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Log likelihood: -1,910.99

Wald χ^2 : 1.46

χ^2 *p*-value < 0.228

<i>Group variable</i>	<i>Observations per group</i>			
	Number of groups	Minimum	Average	Maximum
<i>Session</i>	32	6	45.0	134
<i>Participant</i>	729	1	2	2

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.043	0.036	1.21	0.228
<i>Constant</i>	-0.007	0.050	-0.13	0.895

<i>Random effects</i>	<i>Estimate</i>	<i>SE</i>
<i>Session</i>	0.031	0.016
<i>Participant</i>	0.505	0.041
<i>Residual</i>	0.457	0.024
	<i>Chi²</i>	<i>p-value</i>
<i>Likelihood ratio test against model without random effects</i>	255.79	<0.001

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs pre</i>	0.043	0.036	1.21	0.228

Table SI7j. Comparison of pre- to post-survey gains in *Intent to take high-risk action* across the full treatment sample using mixed-effects regression with maximum likelihood estimation, clustering by participant, and controls for race, gender, and age.
Contrasts of marginal linear predictions (as standardized mean differences) are also provided.

Number of observations: 1,444
Number of groups: 722

Log likelihood: -955.3
Wald χ^2 : 45.5
 χ^2 *p*-value < 0.001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
Time				
<i>Pre (base)</i>	0.000 (base)			
<i>Post</i>	0.017	0.009	1.96	0.050
Race				
<i>Non-white</i>	0.000 (base)			
<i>White</i>	-0.188	0.071	-2.64	-0.327
Gender				
<i>Female</i>	0.000 (base)			
<i>Male</i>	-0.309	0.072	-4.31	<0.001
<i>Other</i>	-0.148	0.293	-0.50	0.614
<i>Age</i>	0.020	0.005	4.19	<0.001
<i>Constant</i>	-0.150	0.131	-1.14	0.253

Random effects	Estimate	SE
<i>Participant</i>	0.888	0.047
<i>Residual</i>	0.027	0.001

Main effects:	df	χ^2	<i>p</i>-value
<i>Time</i>	1	3.85	0.0496
<i>White</i>	1	6.98	0.008
<i>Gender</i>	2	18.54	<0.001

	Contrast	SE	Z	<i>p</i>-value
<i>Post vs pre</i>	0.017	0.009	1.96	0.050

Table SI8. Pre-, post-, and follow-up survey responses for policies that respondents selected as having a high impact as a climate solution.

	<i>Full treatment sample (N = 743)</i>		<i>Follow-up study (N = 112)</i>			<i>Control (N = 169)</i>		<i>Treated sample compared to control (N = 193)</i>	
<i>Chosen as an effective policy for addressing climate change</i>	Pre	Post	Pre	Post	Follow	Pre	Post	Pre	Post
<i>Plant trees</i>	34.5%	12.2%	40.2%	14.3%	23.2%	53.8%	53.3%	49.2%	10.4%
<i>Electrify transport</i>	31.4%	39.4%	33.0%	34.8%	33.0%	33.1%	30.2%	32.1%	32.1%
<i>Sequester carbon in soils</i>	8.3%	7.0%	8.0%	4.5%	11.6%	6.5%	7.7%	9.3%	5.2%
<i>Improve energy efficiency of buildings</i>	49.4%	52.8%	50.9%	57.1%	52.7%	50.9%	53.8%	56.5%	62.2%
<i>Improve energy efficiency of transport</i>	56.4%	49.4%	55.4%	58.0%	53.6%	56.8%	62.7%	58.0%	56.5%
<i>Cut emissions of methane and other non-CO2 gases</i>	64.7%	71.2%	68.8%	70.5%	76.8%	70.4%	69.8%	72.5%	81.3%
<i>Carbon capture technology</i>	43.9%	34.7%	35.7%	25.9%	35.7%	37.9%	37.9%	45.6%	27.5%
<i>Put a price on carbon</i>	36.1%	78.3%	27.7%	76.8%	70.5%	22.5%	26.6%	18.1%	74.1%
<i>R & D for a new zero-carbon energy</i>	45.4%	22.5%	42.0%	19.6%	37.5%	33.7%	31.4%	39.4%	19.2%

Table SI9. Summary statistics from multiple linear regressions to test for effects of sociodemographic, sociopolitical, and session characteristics on pre- to post-survey gains of each outcome variable.

Independent variables tested included gender, race and ethnicity, sociopolitical value constructs (government intervention, social liberalism, and egalitarianism), the institution where each session was held, the percentage of usable cases for each session, and whether participants chose to participate in a climate change or sustainability-related course. Statistics are reported for each overall model and any main effects that were statistically significant.

Outcome	Overall model statistics				Significant main effects statistics			
	N	F	p-value	R ²	Effect	df	F	p-value
<i>Personal importance of climate change</i>	524	1.07	0.373	0.041	NA			
<i>Hopefulness</i>	523	1.71	0.029	0.064	Race ¹	7	2.10	0.0355
<i>Knowledge of high-impact policies</i>	504	0.83	0.683	0.033	NA			
<i>Self-efficacy/ability to personally contribute</i>	525	0.78	0.740	0.030	NA			
<i>Sense of power to make a difference</i>	522	1.45	0.095	0.055	NA			
<i>Reduce personal C footprint</i>	520	0.89	0.599	0.035	NA			
<i>Discuss climate change with family and friends</i>	518	1.42	0.108	0.054	NA			
<i>Discuss climate change with peers</i>	516	0.71	0.815	0.082	NA			
<i>Intent to take low-risk political action</i>	515	1.33	0.154	0.051	NA			
<i>Intent to take high-risk action</i>	525	1.54	0.063	0.058	NA			

¹ *Hopefulness*, Black or African Americans made statistically significantly greater gains than participants who identified with other races.

Table SI10. Bayesian information criterion (BIC) values for regression models of each outcome variable on time (pre-/ post-En-ROADS) for the longitudinal (follow-up) study. BIC values are shown for models with clustering by participant nested within *Climate Action Simulation* session and participant only, with or without controls for age, gender, and race. For each outcome variable, the models with lowest BIC values are shown in bold and results for those regressions are provided in Table SI8.

Random effects and control variables included in models:	Parti- pant nested within session	Parti- pant	Parti- pant and time as random factors	Participant nested within session; controls for age, gender and race	Participant; controls for age, gender and race
<i>Personal importance of cc</i>	899	895	895	916	912
<i>Hopefulness</i>	936	930	936	950	944
<i>Knowledge of high-impact policies</i>	924	921	925	946	942
<i>Self-efficacy/ability to personally contribute</i>	938	934	939	958	953
<i>Sense of power to make a difference</i>	857	853	857	879	874
<i>Reduce personal C footprint</i>	603	603	609	624	620
<i>Discuss climate change with family and friends</i>	913	907	913	935	930
<i>Discuss climate change with peers</i>	697	692	698	717	711
<i>Intent to take low-risk political action</i>	920	914	920	934	928
<i>Intent to take high-risk action</i>	688	684	691	710	706

Table SI11a. Mixed-effects regression with maximum likelihood estimation for comparison of pre-, post-, and follow-up survey comparisons of sense of *Personal importance of climate change*.

Number of observations: 336
Number of groups: 112

Log likelihood: -433.17
Wald chi²: 9.61
Chi² *p*-value: 0.008

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.261	0.093	2.82	0.005
<i>Follow-up</i>	0.234	0.093	2.52	0.012
<i>Constant</i>	-0.165	0.094	-1.76	0.078

Random-effects parameters

	<i>Identity</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>		0.503	0.090
<i>Residual</i>		0.480	0.045

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	2	9.61	0.0082

Contrasts of marginal linear predictions

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs. pre</i>	0.261	0.093	2.820	0.005
<i>Follow-up vs. pre</i>	0.234	0.093	2.52	0.012
<i>Follow-up vs. post</i>	-0.270	0.093	-0.30	0.767

Table SI11b. Mixed-effects regression with maximum likelihood estimation for comparison of pre-, post-, and follow-up survey comparisons of sense of *Hopefulness* about climate change.

Number of observations: 336
Number of groups: 112

Log likelihood: -450.38
Wald chi²: 2.37
Chi² *p*-value: 0.3060

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.131	0.103	1.28	0.202
<i>Follow-up</i>	-0.011	0.103	-0.11	0.915
<i>Constant</i>	-0.040	0.094	-0.42	0.671

Random-effects parameters

<i>Identity</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>	0.404	0.082
<i>Residual</i>	0.589	0.056

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	2	2.37	0.306

Contrasts of marginal linear predictions

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs. pre</i>	0.131	0.103	1.28	0.202
<i>Follow-up vs. pre</i>	-0.011	0.103	-0.11	0.915
<i>Follow-up vs. post</i>	-0.142	0.103	-1.38	0.167

Table SI11c. Mixed-effects regression with maximum likelihood estimation for comparison of pre-, post-, and follow-up survey comparisons of Knowledge of high-impact policies.

Number of observations: 329
Number of groups: 112

Log likelihood: -445.78
Wald chi²: 44.33
Chi² *p*-value <0.0001

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.748	0.121	6.19	0.000
<i>Follow-up</i>	0.633	0.120	5.26	0.000
<i>Constant</i>	-0.465	0.091	-5.09	0.000

Random-effects parameters

	<i>Identity</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>		0.101	0.056
<i>Residual</i>		0.790	0.076

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	2	44.33	0.000

Contrasts of marginal linear predictions

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs. pre</i>	0.748	0.121	6.19	0.000
<i>Follow-up vs. pre</i>	0.633	0.120	5.26	0.000
<i>Follow-up vs. post</i>	-0.115	0.119	-0.96	0.337

Table SI11d. Mixed-effects regression with maximum likelihood estimation for comparison of pre-, post-, and follow-up survey comparisons of sense of Self-efficacy/ability to personally contribute.

Number of observations: 336
Number of groups: 112

Log likelihood: -452.48
Wald chi²: 3.01
Chi² *p*-value: 0.2225

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.167	0.104	1.60	0.109
<i>Follow-up</i>	0.024	0.104	0.23	0.819
<i>Constant</i>	-0.064	0.094	-0.68	0.499

Random-effects parameters

	<i>Identity</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>		0.385	0.081
<i>Residual</i>		0.607	0.057

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	2	2.01	0.2225

Contrasts of marginal linear predictions

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs. pre</i>	0.167	0.104	1.60	0.109
<i>Follow-up vs. pre</i>	0.024	0.104	0.23	0.819
<i>Follow-up vs. post</i>	-0.143	0.104	-1.37	0.170

Table SI11e. Mixed-effects regression with maximum likelihood estimation for comparison of pre-, post-, and follow-up survey comparisons of sense of Sense of power to make a difference.

Number of observations: 336
Number of groups: 112

Log likelihood: -417.83
Wald chi²: 3.84
Chi² *p*-value: 0.1466

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.159	0.090	1.77	0.076
<i>Follow-up</i>	0.015	0.090	0.17	0.869
<i>Constant</i>	-0.015	0.088	-0.17	0.867

Random-effects parameters

	<i>Identity</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>		0.422	0.078
<i>Residual</i>		0.451	0.043

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	2	3.84	0.1466

Contrasts of marginal linear predictions

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs. pre</i>	0.159	0.090	1.77	0.076
<i>Follow-up vs. pre</i>	0.015	0.090	0.17	0.869
<i>Follow-up vs. post</i>	-0.144	0.090	-1.61	0.108

Table SI11f. Mixed-effects regression with maximum likelihood estimation for comparison of pre-, post-, and follow-up survey comparisons of intent to Reduce personal carbon footprint.

Number of observations: 336
Number of groups: 112

Log likelihood: -287.08
Wald chi²: 4.20
Chi² *p*-value: 0.1225

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.134	0.065	2.05	0.041
<i>Follow-up</i>	0.071	0.065	1.09	0.275
<i>Constant</i>	3.232	0.056	57.32	<0.001

Random-effects parameters

	<i>Identity</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>		0.116	0.027
<i>Residual</i>		0.240	0.023

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	2	4.20	0.123

Contrasts of marginal linear predictions

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs. pre</i>	0.134	0.065	2.05	0.041
<i>Follow-up vs. pre</i>	0.071	0.065	1.09	0.275
<i>Follow-up vs. post</i>	-0.062	0.065	-0.96	0.339

Table SI11g. Mixed-effects regression with maximum likelihood estimation for comparison of pre-, post-, and follow-up survey comparisons of intent to Discuss climate change with family and friends.

Number of observations: 336
Number of groups: 112

Log likelihood: -438.90
Wald chi²: 6.30
Chi² *p*-value: 0.0429

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.236	0.096	2.46	0.014
<i>Follow-up</i>	0.157	0.096	1.64	0.100
<i>Constant</i>	-0.131	0.094	-1.39	0.163

Random-effects parameters

	<i>Identity</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>		0.475	0.088
<i>Residual</i>		0.512	0.048

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	2	6.30	0.0429

Contrasts of marginal linear predictions

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs. pre</i>	0.236	0.096	2.46	0.014
<i>Follow-up vs. pre</i>	0.157	0.096	1.64	0.100
<i>Follow-up vs. post</i>	-0.079	0.096	-0.82	0.411

Table SI11h. Mixed-effects regression with maximum likelihood estimation for comparison of pre-, post-, and follow-up survey comparisons of intent to Discuss climate change with peers.

Number of observations: 33
Number of groups: 112

Log likelihood: -331.5
Wald chi²: 11.41
Chi² *p*-value: 0.003

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.231	0.069	3.34	0.001
<i>Follow-up</i>	0.143	0.069	2.08	0.038
<i>Constant</i>	3.000	0.070	43.12	<0.001

Random-effects parameters

	<i>Identity</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>		0.277	0.050
<i>Residual</i>		0.265	0.025

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	2	11.41	0.003

Contrasts of marginal linear predictions

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs. pre</i>	0.231	0.069	3.34	0.001
<i>Follow-up vs. pre</i>	0.143	0.069	2.08	0.038
<i>Follow-up vs. post</i>	-0.087	0.069	-1.26	0.207

Table SI11i. Mixed-effects regression with maximum likelihood estimation for comparison of pre-, post-, and follow-up survey comparisons of Intent to take low-risk political action on climate change.

Number of observations: 335
Number of groups: 112

Log likelihood: -442.37
Wald chi²: 8.43
Chi² *p*-value: 0.0148

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.056	0.099	0.56	0.573
<i>Follow-up</i>	0.157	0.099	-2.19	0.029
<i>Constant</i>	0.055	0.094	0.59	0.558

Random-effects parameters

	<i>Identity</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>		0.437	0.085
<i>Residual</i>		0.546	0.052

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	2	8.43	0.0148

Contrasts of marginal linear predictions

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs. pre</i>	0.056	0.099	0.56	0.573
<i>Follow-up vs. pre</i>	-0.217	0.099	-2.19	0.029
<i>Follow-up vs. post</i>	-0.272	0.099	-2.75	0.006

Table SI11j. Mixed-effects regression with maximum likelihood estimation for comparison of pre-, post-, and follow-up survey comparisons of Intent to take high-risk action on climate change.

Number of observations: 336
Number of groups: 112

Log likelihood: -338.47
Wald chi²: 0.83
Chi² *p*-value: 0.6617

	<i>Coefficient</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Time</i>				
<i>Pre (base)</i>	0.000			
<i>Post</i>	0.050	0.055	0.90	0.366
<i>Follow-up</i>	0.029	0.055	0.53	0.596
<i>Constant</i>	-0.029	0.098	-0.30	0.764

Random-effects parameters

	<i>Identity</i>	<i>Estimate</i>	<i>SE</i>
<i>Constant</i>		0.895	0.127
<i>Residual</i>		0.172	0.016

<i>Main effects:</i>	<i>df</i>	<i>Chi²</i>	<i>p-value</i>
<i>Time</i>	2	0.83	0.6617

Contrasts of marginal linear predictions

	<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Post vs. pre</i>	0.050	0.055	0.90	0.366
<i>Follow-up vs. pre</i>	0.029	0.055	0.53	0.596
<i>Follow-up vs. post</i>	-0.021	0.055	-0.37	0.708

Table SI12. Results from contrasts of marginal linear predictions to test whether participants who provided follow-up surveys gave statistically significantly different pre- or post-survey responses for each outcome variable.

<i>Outcome</i>		<i>Contrast</i>	<i>SE</i>	<i>Z</i>	<i>p-value</i>
<i>Personal importance of climate change</i>	Pre	-0.216	0.114	-1.90	0.058
	Post	-0.008	0.114	-0.07	0.944
<i>Hopefulness</i>	Pre	-0.154	0.114	-1.35	0.177
	Post	-0.104	0.114	-0.91	0.361
<i>Knowledge of high-impact policies</i>	Pre	0.162	0.107	1.51	0.132
	Post	-0.067	0.106	-0.63	0.527
<i>Self-efficacy/ability to personally contribute</i>	Pre	-0.039	0.115	-0.34	0.738
	Post	-0.089	0.115	-0.77	0.439
<i>Sense of power to make a difference</i>	Pre	0.064	0.109	0.59	0.558
	Post	0.183	0.109	1.68	0.093
<i>Reduce personal C footprint</i>	Pre	-0.023	0.073	-0.32	0.752
	Post	0.023	0.073	0.31	0.753
<i>Discuss climate change with family and friends</i>	Pre	-0.071	0.115	-0.62	0.537
	Post	-0.067	0.115	-0.58	0.562
<i>Discuss climate change with peers</i>	Pre	-0.163	0.087	-1.88	0.061
	Post	-0.029	0.087	-0.33	0.743
<i>Intent to take low-risk political action</i>	Pre	0.086	0.114	0.75	0.453
	Post	0.084	0.114	0.73	0.463
<i>Intent to take high-risk action</i>	Pre	0.050	0.112	0.44	0.658
	Post	0.077	0.112	0.69	0.491

Table SI13a. Descriptive statistics for matched cases in the full treatment group.

	<i>Pre-survey</i>					<i>Post-survey</i>				
	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
<i>Cause of Climate Change (Right/Wrong)</i>	726	0	1	0.69	0.46	726	0	1	0.81	0.39
<i>Angry about Climate Change</i>	727	1	4	3.10	0.74	725	1	4	3.17	0.70
<i>Importance of Climate Change</i>	775	1	4	3.40	0.64	772	1	4	3.51	0.60
<i>Anxious about Climate Change</i>	727	1	4	3.01	0.81	727	1	4	3.19	0.73
<i>Hopeful the World Will Address Climate Change</i>	728	1	4	2.70	0.82	728	1	4	2.84	0.76
<i>Ability to Contribute Personally to Issue</i>	775	1	4	2.70	0.78	774	1	4	2.87	0.76
<i>Ability of Organization to Contribute to Issue</i>	724	1	4	2.75	0.76	728	1	4	2.99	0.73
<i>Most Effective Policies - Plant trees</i>	750	0	1	0.34	0.48	757	0	1	0.13	0.33
<i>Most Effective Policies - Electrify transport</i>	750	0	1	0.32	0.47	757	0	1	0.39	0.49
<i>Most Effective Policies - Sequester carbon in soils</i>	750	0	1	0.08	0.28	757	0	1	0.07	0.26
<i>Most Effective Policies - Improve energy efficiency of buildings</i>	750	0	1	0.50	0.50	757	0	1	0.52	0.50
<i>Most Effective Policies - Improve energy efficiency of transport</i>	750	0	1	0.56	0.50	757	0	1	0.49	0.50
<i>Most Effective Policies - Cut emissions of methane/other non-CO2 gases</i>	750	0	1	0.65	0.48	757	0	1	0.70	0.46
<i>Most Effective Policies - Carbon capture technology</i>	750	0	1	0.44	0.50	757	0	1	0.35	0.48
<i>Most Effective Policies - Put a price on carbon</i>	750	0	1	0.36	0.48	757	0	1	0.78	0.41
<i>Most Effective Policies - R & D for a new zero-carbon energy</i>	750	0	1	0.45	0.50	757	0	1	0.23	0.42
<i>Likely - Take action to reduce your personal carbon footprint</i>	727	1	4	3.35	0.62	724	1	4	3.44	0.61
<i>Likely - Discuss climate change with your family and friends</i>	727	1	4	3.16	0.81	721	1	4	3.29	0.72
<i>Likely - Discuss climate change with your peers</i>	725	1	4	3.24	0.77	719	1	4	3.35	0.70
<i>Likely - Clash with family members or close friends about climate change</i>	724	1	4	2.77	0.90	721	1	4	2.88	0.87
<i>Likely - Take low-risk political action</i>	723	1	4	3.23	0.80	717	1	4	3.26	0.79
<i>Likely - Take moderate-risk political action</i>	723	1	4	2.53	0.81	720	1	4	2.70	0.84
<i>Likely - Take high-risk political action</i>	722	1	4	1.99	0.82	718	1	4	2.14	0.84
<i>Sociopolitical Value - Government interferes too much in our daily lives</i>	724	1	5	3.21	1.01	720	1	5	3.17	0.99

<i>Sociopolitical Value - Some laws needed to keep people from hurting themselves</i>	723	1	5	3.93	0.87	717	1	5	3.90	0.83
<i>Sociopolitical Value - Not government's business to protect people from hurting themselves</i>	722	1	5	2.43	1.03	717	1	5	2.58	1.00
<i>Sociopolitical Value - Government should stop telling people how to live their lives</i>	717	1	5	3.05	1.05	717	1	5	2.97	0.98
<i>Sociopolitical Value - Government should advance society's goals even if freedom and choices are limited</i>	719	1	5	3.01	1.15	717	1	5	3.34	1.08
<i>Sociopolitical Value - Government should limit individual choice so they don't get in the way of what's good for society</i>	720	1	5	2.85	1.11	717	1	5	3.20	1.04
<i>Sociopolitical Value - Gone too far in pushing equal rights</i>	720	1	5	1.96	1.10	718	1	5	1.97	1.11
<i>Sociopolitical Value - Society would be better off if distribution of wealth was more equal</i>	717	1	5	3.82	1.13	714	1	5	3.94	1.06
<i>Sociopolitical Value - We need to dramatically reduce inequalities</i>	715	1	5	4.21	0.98	717	1	5	4.25	0.93
<i>Sociopolitical Value - Discrimination against minorities is still a serious problem</i>	719	1	5	4.53	0.80	717	1	5	4.45	0.83
<i>Sociopolitical Value - Minority groups want special rights, not equal rights</i>	721	1	5	2.06	1.21	712	1	5	2.05	1.23
<i>Sociopolitical Value - Society has become too soft and feminine</i>	719	1	5	2.14	1.26	711	1	5	2.13	1.24
<i>Power - I can influence the enactment of new laws and political decisions</i>	715	1	4	2.38	0.76	719	1	4	2.64	0.75
<i>Power - I can facilitate the election of a political leader whose views I share</i>	712	1	4	2.43	0.76	714	1	4	2.68	0.71
<i>Power - I can successfully demand that existing laws and political decisions be observed</i>	711	1	4	2.37	0.75	710	1	4	2.55	0.72
<i>Influence on Climate Support - Your family</i>	722	1	3	1.94	0.71	715	1	3	2.06	0.70
<i>Influence on Climate Support - Your peer group</i>	721	1	3	2.13	0.68	715	1	3	2.24	0.65
<i>Influence on Climate Support - Your teachers</i>	720	1	3	2.27	0.68	711	1	3	2.37	0.67
<i>Influence on Climate Support - Your political party</i>	719	1	3	1.79	0.72	708	1	3	1.84	0.74
<i>Influence on Climate Support - Spiritual leaders</i>	714	1	3	1.48	0.68	704	1	3	1.50	0.70
<i>Look Favorably on Climate Support - Your family</i>	688	1	4	3.21	0.72	676	1	4	3.24	0.71
<i>Look Favorable on Climate Support - Your peer group</i>	693	1	4	3.30	0.61	691	1	4	3.32	0.65
<i>Look Favorably on Climate Support - Your teachers</i>	682	1	4	3.39	0.60	681	1	4	3.41	0.63
<i>Look Favorably on Climate Support - Your political party</i>	560	1	4	3.05	0.79	538	1	4	3.09	0.76
<i>Look Favorably on Climate Support - Spiritual leaders</i>	397	1	4	3.05	0.75	358	1	4	3.03	0.84

Table SI13b. Descriptive statistics for unmatched cases in the full treatment group pre-survey.

	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
<i>Cause of Climate Change (Right/Wrong)</i>	575	0	1	0.730	0.444
<i>Angry about Climate Change</i>	574	1	4	3.031	0.785
<i>Importance of Climate Change</i>	606	1	4	3.450	0.643
<i>Anxious about Climate Change</i>	575	1	4	3.056	0.781
<i>Hopeful the World Will Address Climate Change</i>	575	1	4	2.687	0.802
<i>Ability to Contribute Personally to Issue</i>	605	1	4	2.732	0.796
<i>Ability of Organization to Contribute to Issue</i>	568	1	4	2.717	0.824
<i>Most Effective Policies - Plant trees</i>	710	0	1	0.239	0.427
<i>Most Effective Policies - Electrify transport</i>	710	0	1	0.241	0.428
<i>Most Effective Policies - Sequester carbon in soils</i>	710	0	1	0.079	0.270
<i>Most Effective Policies - Improve energy efficiency of buildings</i>	710	0	1	0.346	0.476
<i>Most Effective Policies - Improve energy efficiency of transport</i>	710	0	1	0.418	0.494
<i>Most Effective Policies - Cut emissions of methane and other non-CO2 gases</i>	710	0	1	0.463	0.499
<i>Most Effective Policies - Carbon capture technology</i>	710	0	1	0.328	0.470
<i>Most Effective Policies - Put a price on carbon</i>	710	0	1	0.370	0.483
<i>Most Effective Policies - R & D for a new zero-carbon energy</i>	710	0	1	0.430	0.495
<i>Likely - Take action to reduce your personal carbon footprint</i>	570	1	4	3.418	0.656
<i>Likely - Discuss climate change with your family and friends</i>	570	1	4	3.358	0.710
<i>Likely - Discuss climate change with your peers</i>	566	1	4	3.337	0.729
<i>Likely - Clash with family members or close friends about climate change</i>	569	1	4	2.749	0.909
<i>Likely - Take low-risk political action</i>	569	1	4	3.264	0.821
<i>Likely - Take moderate-risk political action</i>	568	1	4	2.606	0.906
<i>Likely - Take high-risk political action</i>	569	1	4	2.053	0.868
<i>Sociopolitical Value - Government interferes too much in our daily lives</i>	570	1	5	3.040	1.067
<i>Sociopolitical Value - Some laws needed to keep people from hurting themselves</i>	565	1	5	3.940	0.913
<i>Sociopolitical Value - Not government's business to protect people from hurting themselves</i>	567	1	5	2.316	1.033
<i>Sociopolitical Value - Government should stop telling people how to live their lives</i>	561	1	5	2.843	1.104
<i>Sociopolitical Value - Government should advance society's goals even if freedom and choices are limited</i>	563	1	5	3.144	1.145
<i>Sociopolitical Value - Government should limit individual choice so they don't get in the way of what's good for society</i>	565	1	5	2.988	1.134
<i>Sociopolitical Value - Gone too far in pushing equal rights</i>	566	1	5	2.053	1.120
<i>Sociopolitical Value - Society would be better off if distribution of wealth was more equal</i>	560	1	5	3.805	1.122
<i>Sociopolitical Value - We need to dramatically reduce inequalities</i>	561	1	5	4.171	1.000
<i>Sociopolitical Value - Discrimination against minorities is still a serious problem</i>	561	1	5	4.465	0.859
<i>Sociopolitical Value - Minority groups want special rights, not equal rights</i>	562	1	5	2.110	1.308
<i>Sociopolitical Value - Society has become too soft and feminine</i>	563	1	5	2.091	1.217
<i>Power - I can influence the enactment of new laws and political decisions</i>	559	1	4	2.462	0.756
<i>Power - I can facilitate the election of a political leader whose views I share</i>	559	1	4	2.546	0.758
<i>Power - I can successfully demand that existing laws and political decisions be observed</i>	557	1	4	2.427	0.761
<i>Influence on Climate Support - Your family</i>	562	1	3	1.968	0.745
<i>Influence on Climate Support - Your peer group</i>	562	1	3	2.194	0.691

<i>Influence on Climate Support - Your teachers</i>	561	1	3	2.203	0.695
<i>Influence on Climate Support - Your political party</i>	558	1	3	1.744	0.732
<i>Influence on Climate Support - Spiritual leaders</i>	557	1	3	1.508	0.664
<i>Look Favorably on Climate Support - Your family</i>	524	1	4	3.166	0.748
<i>Look Favorable on Climate Support - Your peer group</i>	539	1	4	3.252	0.630
<i>Look Favorably on Climate Support - Your teachers</i>	521	1	4	3.305	0.627
<i>Look Favorably on Climate Support - Your political party</i>	408	1	4	2.958	0.778
<i>Look Favorably on Climate Support - Spiritual leaders</i>	294	1	4	2.946	0.773

Table SI13c. Descriptive statistics for matched cases in the follow-up study group.

	<i>Pre-survey</i>					<i>Post-survey</i>					<i>Follow-up survey</i>				
	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>	<i>N</i>	<i>Min</i>	<i>Max</i>	<i>Mean</i>	<i>SD</i>
<i>Cause of Climate Change (Right/Wrong)</i>	112	0	1	0.57	0.50	111	0	1	0.76	0.43	112	0	1	0.73	0.45
<i>Angry about Climate Change</i>	112	1	4	2.92	0.78	112	1	4	3.12	0.63	112	1	4	3.15	0.66
<i>Importance of Climate Change</i>	112	1	4	3.21	0.70	112	2	4	3.38	0.57	112	2	4	3.37	0.66
<i>Anxious about Climate Change</i>	112	1	4	2.84	0.84	112	1	4	3.17	0.70	112	1	4	3.09	0.64
<i>Hopeful the World Will Address Climate Change</i>	112	1	4	2.62	0.85	112	1	4	2.72	0.81	112	1	4	2.61	0.80
<i>Ability to Contribute Personally to Issue</i>	112	1	4	2.67	0.75	112	1	4	2.80	0.80	112	1	4	2.69	0.70
<i>Ability of Organization to Contribute to Issue</i>	112	1	4	2.72	0.70	112	1	4	3.13	0.71	112	1	4	2.93	0.68
<i>Most Effective Policies - Plant trees</i>	112	0	1	0.40	0.49	112	0	1	0.14	0.35	112	0	1	0.23	0.42
<i>Most Effective Policies - Electrify transport</i>	112	0	1	0.33	0.47	112	0	1	0.35	0.48	112	0	1	0.33	0.47
<i>Most Effective Policies - Sequester carbon in soils</i>	112	0	1	0.08	0.27	112	0	1	0.05	0.21	112	0	1	0.12	0.32
<i>Most Effective Policies - Improve energy efficiency of buildings</i>	112	0	1	0.51	0.50	112	0	1	0.57	0.50	112	0	1	0.53	0.50
<i>Most Effective Policies - Improve energy efficiency of transport</i>	112	0	1	0.55	0.50	112	0	1	0.58	0.50	112	0	1	0.54	0.50
<i>Most Effective Policies - Cut emissions of methane/other non-CO2 gases</i>	112	0	1	0.69	0.47	112	0	1	0.71	0.46	112	0	1	0.77	0.42
<i>Most Effective Policies - Carbon capture technology</i>	112	0	1	0.36	0.48	112	0	1	0.26	0.44	112	0	1	0.36	0.48
<i>Most Effective Policies - Put a price on carbon</i>	112	0	1	0.28	0.45	112	0	1	0.77	0.42	112	0	1	0.71	0.46
<i>Most Effective Policies - R & D for a new zero-carbon energy</i>	112	0	1	0.42	0.50	112	0	1	0.20	0.40	112	0	1	0.38	0.49
<i>Likely - Take action to reduce your personal carbon footprint</i>	112	1	4	3.23	0.64	112	1	4	3.37	0.60	112	2	4	3.30	0.55
<i>Likely - Discuss climate change with your family and friends</i>	112	1	4	2.97	0.88	112	1	4	3.16	0.77	112	1	4	3.10	0.74
<i>Likely - Discuss climate change with your peers</i>	112	1	4	3.00	0.84	111	1	4	3.23	0.74	111	1	4	3.14	0.63
<i>Likely - Clash with family members or close friends about climate change</i>	112	1	4	2.64	0.96	112	1	4	2.83	0.96	111	1	4	2.74	0.89
<i>Likely - Take low-risk political action</i>	112	1	4	3.22	0.78	112	1	4	3.27	0.82	111	1	4	3.05	0.80
<i>Likely - Take moderate-risk political action</i>	112	1	4	2.37	0.86	112	1	4	2.68	0.85	111	1	4	2.49	0.80
<i>Likely - Take high-risk political action</i>	112	1	4	1.92	0.87	112	1	4	2.19	0.84	111	1	4	2.05	0.89
<i>Sociopolitical Value - Government interferes too much in our daily lives</i>	111	1	5	3.42	0.94	111	1	5	3.31	0.96	112	1	5	3.36	0.99
<i>Sociopolitical Value - Some laws needed to keep people from hurting themselves</i>	111	1	5	3.73	0.90	112	1	5	3.78	0.84	112	2	5	3.89	0.80
<i>Sociopolitical Value - Not government's business to protect people from hurting themselves</i>	111	1	5	2.60	0.97	111	1	5	2.82	0.93	112	1	5	2.88	1.00
<i>Sociopolitical Value - Government should stop telling people how to live their lives</i>	110	1	5	3.33	1.04	111	1	5	3.05	0.95	112	1	5	3.39	1.07

<i>Sociopolitical Value - Government should advance society's goals even if freedom and choices are limited</i>	111	1	5	2.86	1.11	111	1	5	3.09	1.15	112	1	5	2.97	1.18
<i>Sociopolitical Value - Government should limit individual choice so they don't get in the way of what's good for society</i>	111	1	5	2.64	1.04	111	1	5	2.99	1.02	112	1	5	2.80	1.14
<i>Sociopolitical Value - Gone too far in pushing equal rights</i>	110	1	4	2.05	1.00	112	1	5	2.07	1.10	112	1	5	2.02	1.13
<i>Sociopolitical Value - Society would be better off if distribution of wealth was more equal</i>	111	1	5	3.67	1.19	112	1	5	3.78	1.07	112	1	5	3.76	1.06
<i>Sociopolitical Value - We need to dramatically reduce inequalities</i>	111	1	5	3.96	1.05	112	1	5	4.10	0.93	112	2	5	4.10	0.96
<i>Sociopolitical Value - Discrimination against minorities is still a serious problem</i>	111	1	5	4.54	0.86	111	1	5	4.43	0.85	112	1	5	4.45	0.77
<i>Sociopolitical Value - Minority groups want special rights, not equal rights</i>	111	1	5	2.28	1.32	109	1	5	2.10	1.22	111	1	5	2.34	1.33
<i>Sociopolitical Value - Society has become too soft and feminine</i>	111	1	5	2.27	1.35	110	1	5	2.18	1.28	112	1	5	2.37	1.27
<i>Power - I can influence the enactment of new laws and political decisions</i>	111	1	4	2.28	0.79	112	1	4	2.76	0.65	112	1	4	2.47	0.79
<i>Power - I can facilitate the election of a political leader whose views I share</i>	110	1	4	2.37	0.80	112	1	4	2.71	0.61	112	1	4	2.53	0.78
<i>Power - I can successfully demand that existing laws and political decisions be observed</i>	111	1	4	2.39	0.74	111	1	4	2.67	0.62	112	1	4	2.45	0.72
<i>Influence on Climate Support - Your family</i>	111	1	3	1.95	0.70	111	1	3	2.13	0.66	112	1	3	2.02	0.71
<i>Influence on Climate Support - Your peer group</i>	111	1	3	1.98	0.65	111	1	3	2.21	0.62	112	1	3	2.21	0.63
<i>Influence on Climate Support - Your teachers</i>	111	1	3	2.17	0.71	111	1	3	2.38	0.66	112	1	3	2.23	0.72
<i>Influence on Climate Support - Your political party</i>	110	1	3	1.78	0.75	108	1	3	1.89	0.70	112	1	3	1.90	0.75
<i>Influence on Climate Support - Spiritual leaders</i>	110	1	3	1.53	0.66	108	1	3	1.65	0.72	111	1	3	1.54	0.71
<i>Look Favorably on Climate Support - Your family</i>	105	1	4	3.13	0.80	107	1	4	3.17	0.80	109	1	4	3.24	0.84
<i>Look Favorable on Climate Support - Your peer group</i>	105	1	4	3.25	0.59	109	1	4	3.23	0.70	109	1	4	3.39	0.65
<i>Look Favorably on Climate Support - Your teachers</i>	105	1	4	3.34	0.63	108	1	4	3.35	0.65	108	1	4	3.44	0.65
<i>Look Favorably on Climate Support - Your political party</i>	83	1	4	2.94	0.87	82	1	4	3.07	0.75	89	1	4	3.20	0.83
<i>Look Favorably on Climate Support - Spiritual leaders</i>	66	1	4	3.06	0.78	60	1	4	2.98	0.93	62	1	4	3.13	0.90

Table SI13d. Descriptive statistics for the quasi-experimental control vs. treatment group.

	Control Group										Treatment Group									
	Pre					Post					Pre					Post				
	N	Min	Max	Mean	SD	N	Min	Max	Mean	SD	N	Min	Max	Mean	SD	N	Min	Max	Mean	SD
<i>Cause of Climate Change (Right/Wrong)</i>	188	0	1	0.76	0.43	206	0	1	0.66	0.48	200	0	1	0.55	0.50	201	0	1	0.74	0.44
<i>Angry about Climate Change</i>	187	1	4	2.91	0.87	206	1	4	2.95	0.77	201	1	4	2.93	0.84	201	1	4	3.10	0.76
<i>Importance of Climate Change</i>	187	1	4	3.18	0.79	206	1	4	3.15	0.73	201	1	4	3.24	0.73	201	1	4	3.39	0.66
<i>Anxious about Climate Change</i>	188	1	4	2.81	0.88	206	1	4	2.86	0.85	201	1	4	2.79	0.92	201	1	4	3.13	0.79
<i>Hopeful the World Will Address Climate Change</i>	188	1	4	2.69	0.80	206	1	4	2.63	0.74	201	1	4	2.68	0.81	201	1	4	2.74	0.84
<i>Ability to Contribute Personally to Issue</i>	188	1	4	2.64	0.80	206	1	4	2.59	0.74	201	1	4	2.73	0.76	201	1	4	2.90	0.81
<i>Ability of Organization to Contribute to Issue</i>	188	1	4	2.73	0.71	206	1	4	2.76	0.70	201	1	4	2.70	0.72	201	1	4	3.12	0.72
<i>Most Effective Policies - Plant trees</i>	181	0	1	0.54	0.50	202	0	1	0.52	0.50	193	0	1	0.49	0.50	196	0	1	0.11	0.31
<i>Most Effective Policies - Electrify transport</i>	181	0	1	0.33	0.47	202	0	1	0.29	0.46	193	0	1	0.32	0.47	196	0	1	0.32	0.47
<i>Most Effective Policies - Sequester carbon in soils</i>	181	0	1	0.06	0.24	202	0	1	0.08	0.28	193	0	1	0.09	0.29	196	0	1	0.05	0.22
<i>Most Effective Policies - Improve energy efficiency of buildings</i>	181	0	1	0.51	0.50	202	0	1	0.51	0.50	193	0	1	0.56	0.50	196	0	1	0.62	0.49
<i>Most Effective Policies - Improve energy efficiency of transport</i>	181	0	1	0.58	0.49	202	0	1	0.62	0.49	193	0	1	0.58	0.49	196	0	1	0.56	0.50
<i>Most Effective Policies - Cut emissions of methane and other non-CO2 gases</i>	181	0	1	0.71	0.46	202	0	1	0.69	0.46	193	0	1	0.73	0.45	196	0	1	0.82	0.39
<i>Most Effective Policies - Carbon capture technology</i>	181	0	1	0.39	0.49	202	0	1	0.39	0.49	193	0	1	0.46	0.50	196	0	1	0.28	0.45
<i>Most Effective Policies - Put a price on carbon</i>	181	0	1	0.23	0.42	202	0	1	0.27	0.44	193	0	1	0.18	0.39	196	0	1	0.74	0.44
<i>Most Effective Policies - R & D for a new zero-carbon energy</i>	181	0	1	0.34	0.47	202	0	1	0.33	0.47	193	0	1	0.39	0.49	196	0	1	0.19	0.39
<i>Likely - Take action to reduce your personal carbon footprint</i>	188	1	4	3.18	0.56	206	1	4	3.17	0.65	200	1	4	3.16	0.68	201	1	4	3.32	0.67
<i>Likely - Discuss climate change with your family and friends</i>	188	1	4	2.94	0.79	206	1	4	2.96	0.80	200	1	4	2.93	0.89	200	1	4	3.18	0.75
<i>Likely - Discuss climate change with your peers</i>	188	1	4	2.97	0.80	206	1	4	2.94	0.80	200	1	4	3.04	0.83	201	1	4	3.20	0.74

<i>Likely - Clash with family members or close friends about climate change</i>	188	1	4	2.70	0.98	205	1	4	2.59	0.96	199	1	4	2.63	0.97	201	1	4	2.84	0.95
<i>Likely - Take low-risk political action</i>	187	1	4	3.05	0.86	205	1	4	2.96	0.85	200	1	4	3.11	0.84	200	1	4	3.24	0.81
<i>Likely - Take moderate-risk political action</i>	187	1	4	2.26	0.86	205	1	4	2.30	0.86	199	1	4	2.35	0.78	201	1	4	2.70	0.85
<i>Likely - Take high-risk political action</i>	186	1	4	1.82	0.82	205	1	4	1.91	0.83	199	1	4	1.85	0.79	201	1	4	2.13	0.84
<i>Sociopolitical Value - Government interferes too much in our daily lives</i>	188	1	5	3.56	0.95	206	1	5	3.53	0.95	200	1	5	3.48	0.87	201	1	5	3.44	0.93
<i>Sociopolitical Value - Some laws needed to keep people from hurting themselves</i>	188	1	5	3.82	0.81	206	1	5	3.71	0.83	200	1	5	3.75	0.96	200	1	5	3.77	0.84
<i>Sociopolitical Value - Not government's business to protect people from hurting themselves</i>	188	1	5	2.64	0.95	206	1	5	2.84	0.95	200	1	5	2.64	1.04	200	1	5	2.84	0.94
<i>Sociopolitical Value - Government should stop telling people how to live their lives</i>	188	1	5	3.29	0.97	204	1	5	3.39	0.91	197	1	5	3.27	1.01	200	1	5	3.18	0.91
<i>Sociopolitical Value - Government should advance society's goals even if freedom and choices are limited</i>	187	1	5	2.71	1.12	205	1	5	2.85	1.13	200	1	5	2.66	1.06	200	1	5	3.04	1.11
<i>Sociopolitical Value - Government should limit individual choice so they don't get in the way of what's good for society</i>	185	1	5	2.70	1.10	205	1	5	2.73	1.05	200	1	5	2.61	1.05	200	1	5	3.07	1.03
<i>Sociopolitical Value - Gone too far in pushing equal rights</i>	183	1	5	2.14	1.16	204	1	5	2.35	1.28	200	1	5	1.98	1.07	201	1	5	1.97	1.12
<i>Sociopolitical Value - Society would be better off if distribution of wealth was more equal</i>	185	1	5	3.75	1.03	203	1	5	3.72	1.02	199	1	5	3.60	1.18	200	1	5	3.76	1.12
<i>Sociopolitical Value - We need to dramatically reduce inequalities</i>	185	1	5	4.19	0.95	204	1	5	4.18	0.94	198	1	5	4.06	1.06	201	1	5	4.12	0.95
<i>Sociopolitical Value - Discrimination against minorities is still a serious problem</i>	185	1	5	4.39	0.92	203	1	5	4.30	0.91	199	1	5	4.53	0.83	201	1	5	4.40	0.85

<i>Sociopolitical Value - Minority groups want special rights, not equal rights</i>	185	1	5	2.49	1.34	204	1	5	2.49	1.33	200	1	5	2.19	1.26	198	1	5	2.07	1.20
<i>Sociopolitical Value - Society has become too soft and feminine</i>	185	1	5	2.56	1.33	202	1	5	2.56	1.33	200	1	5	2.30	1.33	200	1	5	2.23	1.31
<i>Power - I can influence the enactment of new laws and political decisions</i>	187	1	4	2.32	0.79	206	1	4	2.42	0.79	199	1	4	2.28	0.79	201	1	4	2.60	0.77
<i>Power - I can facilitate the election of a political leader whose views I share</i>	187	1	4	2.42	0.80	206	1	4	2.47	0.78	198	1	4	2.34	0.78	200	1	4	2.69	0.70
<i>Power - I can successfully demand that existing laws and political decisions be observed</i>	185	1	4	2.30	0.80	206	1	4	2.39	0.78	197	1	4	2.31	0.75	196	1	4	2.60	0.72
<i>Influence on Climate Support - Your family</i>	188	1	3	1.87	0.73	205	1	3	1.98	0.72	200	1	3	1.93	0.74	199	1	3	2.03	0.69
<i>Influence on Climate Support - Your peer group</i>	188	1	3	1.90	0.71	205	1	3	2.07	0.73	200	1	3	2.03	0.70	199	1	3	2.20	0.66
<i>Influence on Climate Support - Your teachers</i>	188	1	3	2.23	0.66	205	1	3	2.27	0.70	200	1	3	2.21	0.69	199	1	3	2.33	0.70
<i>Influence on Climate Support - Your political party</i>	187	1	3	1.76	0.70	205	1	3	1.80	0.74	199	1	3	1.79	0.72	196	1	3	1.85	0.75
<i>Influence on Climate Support - Spiritual leaders</i>	186	1	3	1.60	0.72	204	1	3	1.63	0.72	198	1	3	1.59	0.73	197	1	3	1.63	0.73
<i>Look Favorably on Climate Support - Your family</i>	172	1	4	3.16	0.75	195	1	4	3.11	0.76	187	1	4	3.12	0.78	188	1	4	3.19	0.70
<i>Look Favorable on Climate Support - Your peer group</i>	174	1	4	3.12	0.78	193	1	4	3.15	0.71	189	1	4	3.21	0.64	191	1	4	3.20	0.71
<i>Look Favorably on Climate Support - Your teachers</i>	175	1	4	3.32	0.73	196	1	4	3.37	0.72	187	1	4	3.34	0.65	193	1	4	3.34	0.69
<i>Look Favorably on Climate Support - Your political party</i>	137	1	4	2.98	0.84	152	1	4	3.09	0.73	153	1	4	3.03	0.81	148	1	4	3.09	0.72
<i>Look Favorably on Climate Support - Spiritual leaders</i>	110	1	4	2.98	0.81	123	1	4	3.03	0.82	124	1	4	3.06	0.78	112	1	4	3.02	0.85

Table SI14. Configural model fit statistics (A) and measurement invariance test (B) results for latent constructs. Learning outcome constructs include *sense of power to make a difference* and *intent to take high-risk action*. Sociopolitical value constructs describe participants' views prior to simulation sessions. Measurement invariance across groups (control vs. treatment) and longitudinal data (pre-, post-, and follow-up surveys) was tested by comparing configural and scalar models, with a lack of statistically significant difference between the models indicating invariance.

A.

	<i>Sense of power to make a difference</i>	<i>Intent to take high-risk action</i>	<i>Sociopolitical values</i>
RMSEA	0.000	0.000	0.053
p(RMSEA $\leq$ 0.05)	0.000	0.000	0.386
SRMR	0.000	0.000	0.048
CFI	1.000	1.000	0.968
TLI	1.000	1.000	0.950

B.

	<i>Sense of power to make a difference</i>	<i>Intent to take high-risk action</i>
Group invariance		
Chi ²	8.583	7.288
df	7	7
p-value	0.284	0.400
Longitudinal invariance		
Chi ²	4.674	13.125
DF	7	7
p-value	0.700	0.069

Questions included in pre-, post-, and follow-up surveys

Pre-, post-, and follow-up surveys included written informed consent statements approved by the UMass Lowell Institutional Review Board (Protocol 21-024-ROO-EXM) and questions listed below. Questions were included on all three surveys unless noted otherwise.

Your name (first and last): _____

Questions on pre-survey only

Please enter your birth year: _____

1. Gender:
 - ☐ Male
 - ☐ Female
 - ☐ Other
2. Race:
 - ☐ White
 - ☐ Black or African American
 - ☐ American Indian or Alaska Native
 - ☐ Hispanic
 - ☐ Asian
 - ☐ Native Hawaiian or Pacific Islander
 - ☐ Middle Eastern
 - ☐ Mixed
 - ☐ Other
3. Level of education:
 - ☐ Partial High School
 - ☐ High School Graduate
 - ☐ Partial college education
 - ☐ 2-year college degree
 - ☐ 4-year college degree
 - ☐ Post graduate education
4. Think of this ladder as representing where people stand in your country. At the top of the ladder are people who are best off—those who have the most money, the most education, and the most respected jobs. At the bottom are the people who are worst off—who have the least money, the least education, and the least respected jobs or no job. The higher up you are on this ladder, the closer you are to the people at the very top; the lower you are, the closer you are to the people at the very bottom. **When considering your overall life circumstances, where would you place yourself on this ladder? Please select the circle underneath the ladder diagram that best represents where you stand at this time in your life compared to other people in your country.**

Please select the circle that best represents where you stand at this time in your life compared to other people in your country.

	1	2	3	4	5	6	7	8	9	10	
top of ladder	☐	☐	☐	☐	☐	☐	☐	☐	☐	☐	bottom of ladder

Questions on pre-survey, post-survey, and follow-up survey:

5. Which of these statements is most accurate?
 - ☐ Climate change is caused mostly by human activities. (1)
 - ☐ Climate change is caused mostly by natural changes in the environment outside of human control. (2)
 - ☐ Climate change is caused equally by human activities and natural changes in the environment. (3)
 - ☐ Climate change is not happening at all. (4)
6. When you hear about policies or actions that cause global warming, how do you feel?
 - ☐ Very angry (1)
 - ☐ Somewhat angry (2)
 - ☐ Not very angry (3)
 - ☐ Not angry at all (4)
7. How important is the issue of climate change to you personally?
 - ☐ Very important (1)
 - ☐ Somewhat important (2)
 - ☐ Not very important (3)
 - ☐ Not at all important (4)
8. How anxious are you about climate change?
 - ☐ Very anxious (1)
 - ☐ Somewhat anxious (2)
 - ☐ Not very anxious (3)
 - ☐ Not at all anxious (4)
9. How hopeful are you that the world will be able to address the issue of climate change?
 - ☐ Very hopeful (1)
 - ☐ Somewhat hopeful (2)
 - ☐ Not very hopeful (3)
 - ☐ Not at all hopeful (4)
10. How do you feel about being able to contribute personally to address the issue of climate change?
 - ☐ Very empowered (1)
 - ☐ Somewhat empowered (2)
 - ☐ Not very empowered (3)
 - ☐ Not at all empowered (4)
11. How well do you think your organization is situated toward being able to address the issue of climate change?
 - ☐ Very empowered (1)
 - ☐ Somewhat empowered (2)
 - ☐ Not very empowered (3)
 - ☐ Not at all empowered (4)

12. up to three items from the list into the box labeled 'Most effective policies.')

Most effective policies

- _____ Plant trees (1)
- _____ Electrify transport (2)
- _____ Sequester carbon in soils (3)
- _____ Improve energy efficiency of buildings (4)
- _____ Improve energy efficiency of transport (5)
- _____ Cut emissions of methane and other non-CO2 gases (6)
- _____ Carbon capture technology (7)
- _____ Put a price on carbon (8)
- _____ R&D for a new zero-carbon energy supply (9)

13. How likely are you to do the following?

	Extremely likely (1)	Somewhat likely (2)	Unlikely (3)	Will not do (4)
Take action to reduce your personal carbon footprint (e.g., ride your bike more, turn off lights when they are not needed, purchase renewable energy sources if available from your utility, etc.). (1)	☐	☐	☐	☐
Discuss climate change with your family and friends. (2)	☐	☐	☐	☐
Discuss climate change with your peers. (3)	☐	☐	☐	☐
Clash with family members or close friends about climate change in order to change their points of view. (4)	☐	☐	☐	☐
Take low-risk political action in support of climate change policy (e.g., sign a petition, vote consistent with your party's position). (5)	☐	☐	☐	☐
Take moderate-risk political action in support of climate change policy (e.g., write to a congressperson, attend a rally). (6)	☐	☐	☐	☐
Take high-risk political action in support of climate change policy (e.g., be a speaker at a rally, become a leader in climate activism). (7)	☐	☐	☐	☐

14. To what extent do you agree with the following statements?

	Strongly agree (1)	Somewhat agree (2)	Neither agree nor disagree (3)	Somewhat disagree (4)	Strongly disagree (5)
The government interferes far too much in our everyday lives.	☐	☐	☐	☐	☐
Sometimes government needs to make laws that keep people from hurting themselves.	☐	☐	☐	☐	☐
It's not the government's business to try to protect people from hurting themselves.	☐	☐	☐	☐	☐
The government should stop telling people how to live their lives.	☐	☐	☐	☐	☐
The government should do more to advance society's goals even if that means limiting the freedom and choices of individuals.	☐	☐	☐	☐	☐
Government should put more limits on the choices individuals can make so they don't get in the way of what's good for society.	☐	☐	☐	☐	☐
We have gone too far in pushing equal rights in this country.	☐	☐	☐	☐	☐
Our society would be better off if the distribution of wealth was more equal.	☐	☐	☐	☐	☐
We need to dramatically reduce inequalities between the rich and the poor, whites and people of color, and men and women.	☐	☐	☐	☐	☐
Discrimination against minorities is still a very serious problem in our society.	☐	☐	☐	☐	☐
It seems like Blacks, women, homosexuals, and other groups don't want equal rights, they want special rights just for them.	☐	☐	☐	☐	☐
Society as a whole has become too soft and feminine.	☐	☐	☐	☐	☐

15. To what extent do you agree with the following statements?

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly disagree (4)
I can influence the enactment of new laws and political decisions	☐	☐	☐	☐
I can facilitate the election of a political leader whose views I share	☐	☐	☐	☐
I can successfully demand that existing laws and political decisions be observed	☐	☐	☐	☐

16. To what extent is your support of climate-friendly policies influenced by the following?

	A lot (1)	A little (2)	Not at all (3)
Your family	☐	☐	☐
Your peer group	☐	☐	☐
Your teachers	☐	☐	☐
Your political party's position	☐	☐	☐
Spiritual leaders	☐	☐	☐

17. To what extent do you agree that, in general, these people would look favorably upon you if you took actions in support of climate change policy?

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly disagree (4)	Not applicable (5)
Your family	☐	☐	☐	☐	☐
Your peer group	☐	☐	☐	☐	☐
Your teachers	☐	☐	☐	☐	☐
Your political party's position	☐	☐	☐	☐	☐
Spiritual leaders	☐	☐	☐	☐	☐

Questions on post-survey only:

18. Do you think the En-ROADS model is credible?

- ☐ Yes
- ☐ No

19. What were one to three things that made you think that?

20. Did the workshop convince you to take actions that you were not planning to take before?

- ☐ Yes
- ☐ No

21. If yes, what actions are you planning to take?

Questions on post- and follow-up surveys only:

22. As a result of the En-ROADS workshop, did your thoughts change about which actions or policies are effective for addressing global warming?

- ☐ Yes
- ☐ No

23. If yes, describe one to three ways that they changed.
24. If yes, what one-to-three aspects of the workshop experience led you to make that decision?
25. To what extent do you agree with the following statements?

	Strongly agree (1)	Agree (2)	Disagree (3)	Strongly disagree (4)
The En-ROADS simulation increases participants' awareness of how to address climate change.	☐	☐	☐	☐

Questions on follow-up survey only:

26. Have you taken any actions because of your use of En-ROADS?
- ☐ Yes
 - ☐ No
27. If yes, what actions did you take?
28. If yes, what were your reasons for those actions?