

Online Appendices for
Testing the Benefits of Public Deliberation

William Minozzi, The Ohio State University
Ryan Kennedy, University of Houston
Kevin M. Esterling, University of California, Riverside
Michael A. Neblo, The Ohio State University
Ryan Jewell, University of Houston

March 2021

Table of Contents

Appendix A. Question Wording (pp. A2-A3)
Appendix B. Descriptive Statistics (pp. A4-A7)
Appendix C. Regression Models from Main Text (pp. A8-A12)
Appendix D. Alternative Models (pp. A13-A16)
Appendix E. Statistical Power and Minimum Detectable Effects (p. A17)
Appendix F. Scale Reliability and Separate Models (pp. A18-A19)

Appendix A. Question Wording for Outcome Variables.

Attitudes toward the Session. Items 2-5 reverse keyed, scaled to 0-1.

- ATS1.** How satisfied are you with the policy session as a whole?
(1 = Not at all satisfied, 2, 3, 4 = Moderately Satisfied, 5, 6, 7 = Extremely satisfied, DK)
To what degree do you agree or disagree with the following statements? (1 = Strongly agree, 2 = Agree, 3 = Neither agree nor disagree, 4 = Disagree, 5 = Strongly disagree)
- ATS2.** I found this session to be helpful and informative.
- ATS3.** In the future, I would be interested in participating in sessions like this one on other political issues.
- ATS4.** I feel like I learned a lot from participating in this session.
- ATS5.** It would be useful for my Member of Congress to see the results of this session.
- ATS6.** Discussions with my fellow citizens on topics like this are important in our democracy.

Perceptions of Changed Mind. Reverse-keyed item CM2, scaled to 0-1.

- PCM1.** Compared to what you knew about this issue, how much more do you know about this issue after this policy session? (1 = I understand the issue less well, 2, 3 = I understand the issue about the same, 4, 5 = I understand the issue a little better, 6, 7 = I understand the issue much better, DK)
- PCM2.** Compared to how you felt about this issue, how confused about this issue do you feel after this policy session? (1 = much more confused, 2 = a little more confused, 3 = about the same as before, 4 = a little less confused, 5 = much less confused, DK)
- PCM3.** Compared to how you saw things before this policy session began, how much would you say you respect the views of people who disagree with you on this issue? (1 = I respect their views a lot less, 2 = I respect their views a little less, 3 = about the same as before, 4 = I respect their views a little more, 5 = I respect their views a lot more, DK)
Some people change their minds after a policy session, but others don't. Do any of these describe you? (0 = No, 0.5 = Maybe, 1 = Yes, DK)
- PCM4.** I support more strongly the actions I favored before the session.
- PCM5.** I support new actions now that I didn't support before.
- PCM6.** I now oppose some actions that I favored before the session.
- PCM7.** I am more sympathetic to some actions that I still oppose.
- PCM8.** I now recognize clear tradeoffs for some actions that I still support.

Knowledge. Six items, correct responses (in bold) coded as 1, all others 0.

- K1.** About what proportion of Americans support some form of immigration reform? (1/4, 1/3, 1/2, **2/3**, 3/4, DK)
- K2.** Under current law, are undocumented immigrants who came here as minors and graduate high school automatically eligible to become citizens? (Yes, **No** DK)
- K3.** About what percentage of farmworkers in the U.S. are undocumented workers? (10%, 20%, **50%**, 75%, DK)
- K4.** Under current law, are undocumented immigrants who have lived in the U.S. for five years or more, and have no criminal record, eligible to apply for citizenship? (Yes, **No**, DK)
- K5.** Under current law, do most undocumented workers pay into social security, even if they are not eligible for benefits? (**Yes**, No, DK)

K6. About how much economic activity do economists estimate undocumented immigrants are responsible for? (\$7 billion, \$75 billion, **\$150 billion**, \$300 billion, DK)

Enthusiasm, Surveillance, & Reduced Anger. Three, three, & four items respectively, reverse keyed (except for *Reduced Anger*), scaled 0-1.

When thinking about the issue of immigration, to what extent would you say that you feel the emotions listed below? (1 = Strongly, 2 = Somewhat, 3 = A little, 4 = Not at all)

E1.Enthusiastic

E2.Hopeful

E3.Proud

S1. Anxious

S2. Worried

S3. Afraid

A1.Hatred

A2.Contempt

A3.Bitterness

A4.Anger

Internal efficacy. Four items, items 1 & 2 reverse-keyed, scaled 0-1.

To what degree do you agree or disagree with the following statements? (1 = Strongly agree, 2 = Agree, 3 = Neither agree nor disagree, 4 = Disagree, 5 = Strongly disagree)

IE1. I consider myself well-qualified to participate in politics.

IE2. I feel that I could do as good a job in public office as most other people.

IE3. Sometimes politics and government seem so complicated that a person like me can't really understand what's going on.

IE4. I often don't feel sure of myself when talking with other people about politics and government.

External efficacy. Four items, items 3 & 4 reverse-keyed, scaled 0-1.

To what degree do you agree or disagree with the following statements? (1 = Strongly agree, 2 = Agree, 3 = Neither agree nor disagree, 4 = Disagree, 5 = Strongly disagree)

EE1. People like me don't have any say about what the government does.

EE2. If public officials are not interested in hearing what the people think, there is really no way to make them listen.

EE3. Under our form of government, the people have the final say about how the country is run, no matter who is in office.

EE4. There are many legal ways for citizens to successfully influence what the government does.

Trust. Six items, correct responses (in bold) coded as 1, all others 0.

How much of the time do you think the following statements are true?

(1 = Just about always, 2 = Most of the time, 3 = Only some of the time, 4 = Almost never)

T1. You can trust the people who run our government to do what is right.

T2. When government leaders make statements to the American people on television or in the newspapers, they are telling the truth.

T3. The people we elect to public office try to keep the promises they have made during the election.

Appendix B. Descriptive Statistics

Table A1. Descriptive Statistics for Covariates and Group Size

Variable	Mean	SD	Obs.Min	Obs.Max	# Missing
<i>Conflict Avoidance</i>	-0.36	0.33	-1	0.6	13
<i>Female</i>	0.48	0.5	0	1	14
<i>Proportion Women</i>	0.54	0.19	0	1	0
<i>Party</i>	-0.06	0.67	-1	1	16
<i>Ideology</i>	-0.02	0.58	-1	1	23
<i>Political Interest</i>	0.44	0.47	-1	1	7
<i>Prev. Political Actions</i>	0.07	0.58	-1	1	0
<i>Need for Cognition</i>	0.66	0.37	-0.75	1	11
<i>Age</i>	47.2	12.6	22	76	13
<i>Asian</i>	0.04	0.21	0	1	28
<i>Black</i>	0.07	0.25	0	1	28
<i>Latino</i>	0.06	0.23	0	1	28
<i>White</i>	0.74	0.44	0	1	28
<i>Some College</i>	0.2	0.4	0	1	0
<i>College</i>	0.8	0.4	0	1	0
<i>Fulltime Employment</i>	0.9	0.3	0	1	10
<i>First Gen. Immigrant</i>	0.1	0.3	0	1	0
<i>Second Gen. Immigrant</i>	0.1	0.3	0	1	0
<i>Third+ Gen. Immigrant</i>	0.2	0.4	0	1	0
<i>Urban</i>	0.2	0.4	0	1	0
<i>Suburban</i>	0.3	0.5	0	1	0
<i>Rural</i>	0.1	0.3	0	1	0
<i>Number of Participants</i>	6.1	1.7	2	9	0

All continuous covariates are rescaled to have theoretically possible ranges of -1 to 1. Summaries of *Proportion Female* and *Number of Participants* are calculated only for participants in the **Public Deliberation** condition. All statistics are calculated based on unimputed data.

Table A2. Descriptive Statistics for Outcomes.

Variable	Mean	SD	Obs. Min	Obs. Max	# Missing
ATS1	0.7	0.3	0	1	14
ATS2	0.7	0.2	0	1	4
ATS3	0.8	0.2	0	1	4
ATS4	0.6	0.3	0	1	4
ATS5	0.8	0.2	0	1	4
ATS6	0.9	0.2	0	1	4
PCM1	0.4	0.3	0	1	5
PCM2	0.6	0.2	0.2	1	15
PCM3	0.6	0.2	0	1	14
PCM4	0.6	0.4	0	1	22
PCM5	0.3	0.4	0	1	16
PCM6	0.1	0.3	0	1	17
PCM7	0.5	0.4	0	1	16
PCM8	0.7	0.4	0	1	14
K1	0.4	0.5	0	1	0
K2	0.7	0.5	0	1	0
K3	0.4	0.5	0	1	0
K4	0.5	0.5	0	1	0
K5	0.5	0.5	0	1	0
K6	0.2	0.4	0	1	0
E1	0.4	0.3	0	1	8
E2	0.5	0.3	0	1	8
E3	0.3	0.3	0	1	8
S1	0.5	0.3	0	1	8
S2	0.6	0.3	0	1	8
S3	0.3	0.3	0	1	9
A1	0.1	0.2	0	1	9
A2	0.2	0.3	0	1	9
A3	0.2	0.3	0	1	9
A4	0.2	0.3	0	1	9
IE1	0.7	0.2	0	1	6
IE2	0.6	0.3	0	1	6
IE3	0.7	0.3	0	1	6
IE4	0.6	0.3	0	1	6
EE1	0.6	0.3	0	1	5
EE2	0.5	0.3	0	1	5
EE3	0.4	0.3	0	1	5
EE4	0.7	0.3	0	1	5
T1	0.3	0.2	0	1	6
T2	0.3	0.2	0	1	6
T3	0.4	0.2	0	1	6

Note. Variable names refer to Appendix A1. Items A1-A4 (Anger) were reversed for analysis.

Table A3. Descriptive Statistics for Mean Covariates for Deliberative Groups

Variable	Weighted	Mean	SD	Obs.Min	Obs.Max	Cor. w/ Group Size
<i>Conflict Avoidance</i>	No	-0.38	0.14	-0.6	-0.1	0.11
	Yes	-0.37	0.14	-0.6	-0.1	0.16
<i>Female</i>	No	0.51	0.21	0	1	0.09
	Yes	0.48	0.22	0	1	0.04
<i>Proportion Women</i>	No	0.52	0.19	0	1	0.09
	Yes	0.52	0.19	0	1	0.09
<i>Party</i>	No	-0.08	0.40	-0.8	0.6	0.08
	Yes	-0.06	0.40	-0.8	0.7	0.05
<i>Ideology</i>	No	-0.08	0.35	-0.8	0.7	0.08
	Yes	-0.05	0.36	-0.8	0.7	0.08
<i>Political Interest</i>	No	0.50	0.23	0	0.9	-0.22
	Yes	0.47	0.23	-0.1	0.9	-0.27
<i>Prev. Political Action</i>	No	0.17	0.32	-0.6	0.8	-0.14
	Yes	0.11	0.31	-0.6	0.7	-0.18
<i>Need for Cognition</i>	No	0.66	0.22	0	1	0.11
	Yes	0.65	0.22	0	1	0.06
<i>Age</i>	No	47.43	6.45	32.2	61.5	-0.05
	Yes	47.42	6.62	31.4	61.7	-0.08
<i>Asian</i>	No	0.06	0.10	0	0.3	0.03
	Yes	0.05	0.09	0	0.3	0.03
<i>Black</i>	No	0.08	0.11	0	0.4	0.10
	Yes	0.07	0.11	0	0.4	0.02
<i>Latino</i>	No	0.08	0.12	0	0.5	-0.15
	Yes	0.07	0.10	0	0.4	-0.14
<i>White</i>	No	0.68	0.20	0.2	1	0.17
	Yes	0.71	0.2	0.2	1	0.22
<i>Some College</i>	No	0.15	0.21	0	1	-0.15
	Yes	0.16	0.22	0	1	-0.15
<i>College</i>	No	0.81	0.23	0	1	0.11
	Yes	0.80	0.23	0	1	0.12
<i>Fulltime Employment</i>	No	0.91	0.14	0.5	1	0.10
	Yes	0.92	0.13	0.5	1	0.08
<i>First Gen. Immigrant</i>	No	0.08	0.12	0	0.4	0.37
	Yes	0.08	0.11	0	0.4	0.35
<i>Second Gen. Immigrant</i>	No	0.11	0.14	0	0.5	-0.17
	Yes	0.09	0.12	0	0.4	-0.15
<i>Third+ Gen. Immigrant</i>	No	0.19	0.20	0	0.7	-0.18
	Yes	0.22	0.23	0	0.7	-0.17
<i>Urban</i>	No	0.22	0.20	0	0.8	0.20
	Yes	0.22	0.21	0	0.8	0.22
<i>Suburban</i>	No	0.25	0.20	0	0.8	0.04
	Yes	0.28	0.22	0	0.8	0.09
<i>Rural</i>	No	0.15	0.19	0	0.7	-0.15
	Yes	0.13	0.17	0	0.7	-0.19

Note to Table A3 appears on next page.

Note to Table A3 (p. A6)

All continuous covariates are rescaled to have theoretically possible ranges of –1 to 1. All cells report descriptive statistics on means (weighted or not, as indicated) at the deliberative group-imputation level, then averaged over 10 imputations. The rightmost column reports the correlation between *Number of Participants* and deliberative group mean values for each covariate.

Appendix C. Regression Models from Main Text

Table A4. Details on Main Multilevel Model.

Main Effects	Estimate [95% Interval]
<i>Individual Deliberation</i> (β_0)	0.03 [0.02, 0.05]
<i>Public Deliberation</i> (γ_0)	0.06 [0.04, 0.07]
Intercept (α_0)	0.51 [0.50, 0.52]
Group-level Effects	SD
Respondent ($n_{\text{respondents}} = 402$)	
Intercept ($\alpha_{\text{respondent}}$)	0.079
Outcome ($n_{\text{outcomes}} = 9$)	
<i>Individual Deliberation</i> (β_{outcome})	0.051
<i>Public Deliberation</i> (γ_{outcome})	0.044
Intercept (α_{outcome})	0.131
Question ($n_{\text{questions}} = 41$)	
<i>Individual Deliberation</i> (β_{question})	0.031
<i>Public Deliberation</i> (γ_{question})	0.041
Intercept (α_{question})	0.163
Residual (σ^2)	0.015

$n_{\text{total}} = 16510$. The table presents details on the main multilevel model from the text (see model in “Estimation and Statistical Inference” section). The model was estimated using the lmer function from the lme4 package in R, using covariate balancing propensity score weights. To ease convergence, we fixed the group-level correlations between coefficients to be 0. Confidence intervals refer to bootstrap distribution of coefficients, with block resampling within each of the treatment conditions. Missing outcome observations, of which there were 300, were removed.

Table A5. Details on Non-College Graduate Model.

Main Effects	Estimate [95% Interval]
<i>Individual Deliberation</i> (β_0)	0.03 [0.01, 0.05]
<i>Public Deliberation</i> (γ_0)	0.06 [0.04, 0.08]
<i>Non-College Grad.</i>	−0.04 [−0.08, 0.01]
<i>Non-College Grad. × Individual</i>	−0.01 [−0.06, 0.05]
<i>Non-College Grad. × Public</i>	0.00 [−0.05, 0.05]
Intercept (α_0)	0.52 [0.50, 0.53]
Group-level Effects	SD
Respondent ($n_{\text{respondents}} = 402$)	
Intercept ($\alpha_{\text{respondent}}$)	0.078
Outcome ($n_{\text{outcomes}} = 9$)	
<i>Individual Deliberation</i> (β_{outcome})	0.051
<i>Public Deliberation</i> (γ_{outcome})	0.044
Intercept (α_{outcome})	0.131
Question ($n_{\text{questions}} = 41$)	
<i>Individual Deliberation</i> (β_{question})	0.031
<i>Public Deliberation</i> (γ_{question})	0.041
Intercept (α_{question})	0.163
Residual (σ^2)	0.015

$n_{\text{total}} = 16510$. See note on Table A3 for details on estimation and inference.

Table A6. Details on Non-White Model.

Main Effects	Estimate [95% Interval]
<i>Individual Deliberation</i> (β_0)	0.04 [0.02, 0.06]
<i>Public Deliberation</i> (γ_0)	0.06 [0.04, 0.07]
<i>Non-White</i>	−0.01 [−0.04, 0.03]
<i>Non-White</i> \times <i>Individual</i>	−0.02 [−0.06, 0.03]
<i>Non-White</i> \times <i>Public</i>	0.01 [−0.03, 0.05]
Intercept (α_0)	0.51 [0.49, 0.52]
Group-level Effects	SD
Respondent ($n_{\text{respondents}} = 402$)	
Intercept ($\alpha_{\text{respondent}}$)	0.079
Outcome ($n_{\text{outcomes}} = 9$)	
<i>Individual Deliberation</i> (β_{outcome})	0.051
<i>Public Deliberation</i> (γ_{outcome})	0.044
Intercept (α_{outcome})	0.131
Question ($n_{\text{questions}} = 41$)	
<i>Individual Deliberation</i> (β_{question})	0.031
<i>Public Deliberation</i> (γ_{question})	0.041
Intercept (α_{question})	0.163
Residual (σ^2)	0.015

$n_{\text{total}} = 16510$. See note on Table A3 for details on estimation and inference.

Table A7. Details on Conflict Avoidance Model.

Main Effects	Estimate [95% Interval]
<i>Individual Deliberation</i> (β_0)	0.04 [0.01, 0.06]
<i>Public Deliberation</i> (γ_0)	0.05 [0.02, 0.07]
<i>Conflict Avoidance</i>	−0.02 [−0.07, 0.02]
<i>Conflict Avoidance</i> \times <i>Individual</i>	0.01 [−0.05, 0.07]
<i>Conflict Avoidance</i> \times <i>Public</i>	−0.03 [−0.08, 0.02]
Intercept (α_0)	0.50 [0.48, 0.52]
Group-level Effects	SD
Respondent ($n_{\text{respondents}} = 402$)	
Intercept ($\alpha_{\text{respondent}}$)	0.078
Outcome ($n_{\text{outcomes}} = 9$)	
<i>Individual Deliberation</i> (β_{outcome})	0.051
<i>Public Deliberation</i> (γ_{outcome})	0.044
Intercept (α_{outcome})	0.131
Question ($n_{\text{questions}} = 41$)	
<i>Individual Deliberation</i> (β_{question})	0.031
<i>Public Deliberation</i> (γ_{question})	0.041
Intercept (α_{question})	0.163
Residual (σ^2)	0.015

$n_{\text{total}} = 16510$. See note on Table A3 for details on estimation and inference.

Table A8. Details on Gender Model.

Main Effects	Estimate [95% Interval]
<i>Individual Deliberation</i> (β_0)	0.02 [0.00, 0.05]
<i>Public Deliberation</i> (γ_0)	0.07 [0.01, 0.12]
<i>Female</i>	−0.02 [−0.05, 0.01]
<i>Female</i> \times <i>Individual</i>	0.02 [−0.02, 0.06]
<i>Female</i> \times <i>Public</i>	−0.02 [−0.09, 0.05]
<i>Prop. Women</i> \times <i>Public</i>	−0.05 [−0.16, 0.07]
<i>Female</i> \times <i>Prop. Women</i> \times <i>Public</i>	0.09 [−0.04, 0.21]
Intercept (α_0)	0.52 [0.50, 0.53]
Group-level Effects	SD
Respondent ($n_{\text{respondents}} = 402$)	
Intercept ($\alpha_{\text{respondent}}$)	0.079
Outcome ($n_{\text{outcomes}} = 9$)	
<i>Individual Deliberation</i> (β_{outcome})	0.051
<i>Public Deliberation</i> (γ_{outcome})	0.044
Intercept (α_{outcome})	0.131
Question ($n_{\text{questions}} = 41$)	
<i>Individual Deliberation</i> (β_{question})	0.031
<i>Public Deliberation</i> (γ_{question})	0.041
Intercept (α_{question})	0.163
Residual (σ^2)	0.015

$n_{\text{total}} = 16510$. See note on Table A3 for details on estimation and inference.

Appendix D. Alternative Regression Models

Table A9. Main Multilevel Model with Deliberation Group-Level Random Intercepts.

Main Effects	Estimate [95% Interval]
<i>Individual Deliberation</i> (β_0)	0.03 [0.02, 0.05]
<i>Public Deliberation</i> (γ_0)	0.06 [0.04, 0.08]
Intercept (α_0)	0.51 [0.50, 0.52]
Group-level Effects	SD
Respondent ($n_{\text{respondents}} = 402$)	
Intercept ($\alpha_{\text{respondent}}$)	0.077
Outcome ($n_{\text{outcomes}} = 9$)	
<i>Individual Deliberation</i> (β_{outcome})	0.048
<i>Public Deliberation</i> (γ_{outcome})	0.035
Intercept (α_{outcome})	0.098
Question ($n_{\text{questions}} = 41$)	
<i>Individual Deliberation</i> (β_{question})	0.041
<i>Public Deliberation</i> (γ_{question})	0.067
Intercept (α_{question})	0.031
Deliberation Group ($n_{\text{deliberation groups}} = 41$)	
Intercept ($\alpha_{\text{deliberation group}}$)	0.163
Residual (σ^2)	0.015

$n_{\text{total}} = 16510$. The table presents details on the following model:

$$y_i \sim N(\alpha_i + \beta_i \text{Individual}_i + \gamma_i \text{Public}_i, \sigma^2)$$

$$\alpha_i = \alpha_0 + \alpha_{\text{outcome}[i]} + \alpha_{\text{question}[i]} + \alpha_{\text{respondent}[i]} + \alpha_{\text{deliberation group}[i]}$$

$$\beta_i = \beta_0 + \beta_{\text{outcome}[i]} + \beta_{\text{question}[i]}$$

$$\gamma_i = \gamma_0 + \gamma_{\text{outcome}[i]} + \gamma_{\text{question}[i]},$$

which differs from the main model (Table A4) only insofar as it includes deliberation group-level random intercepts.

Figure A1. Replication of Figure 2 based on the Regression Model in Table A9

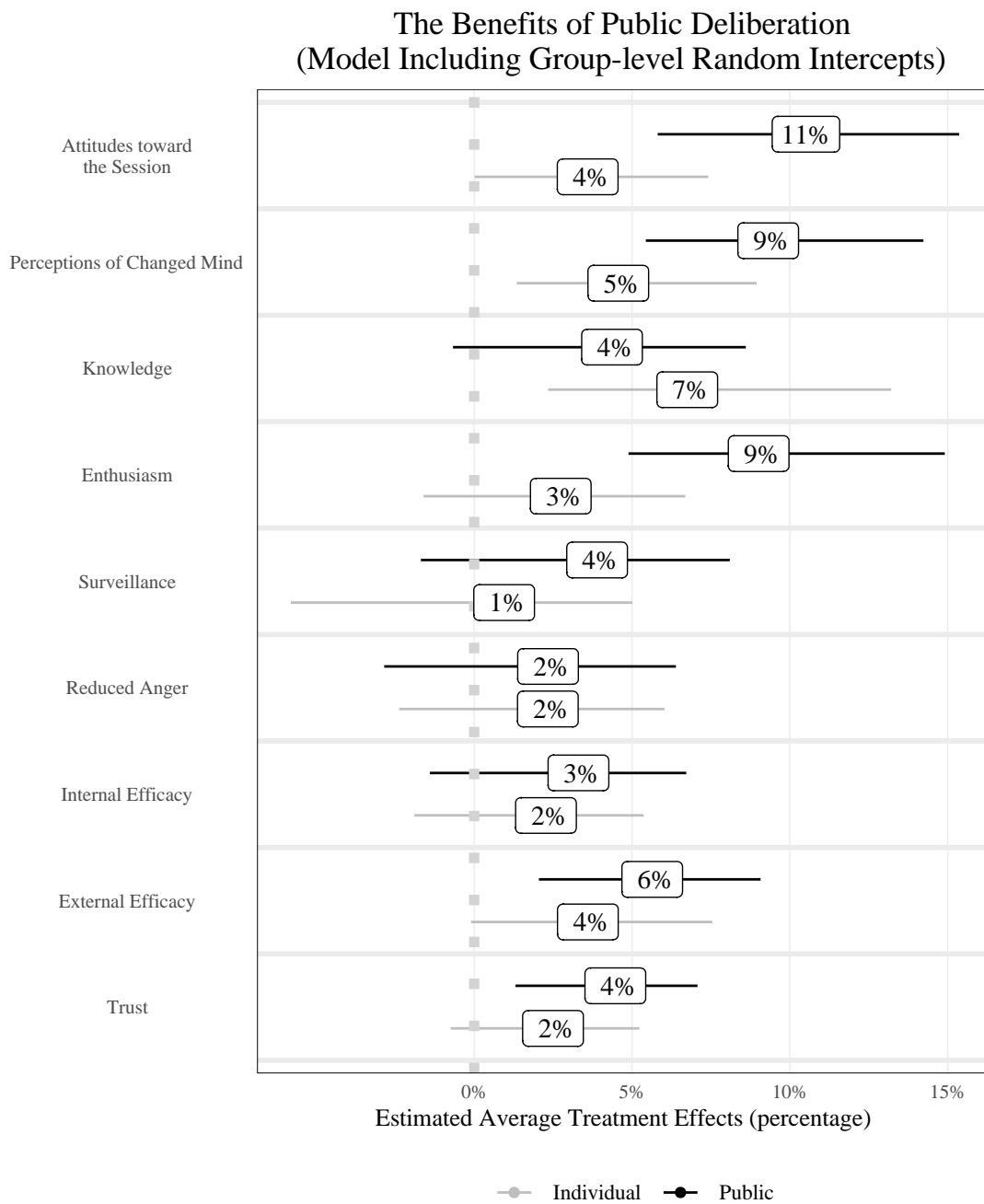
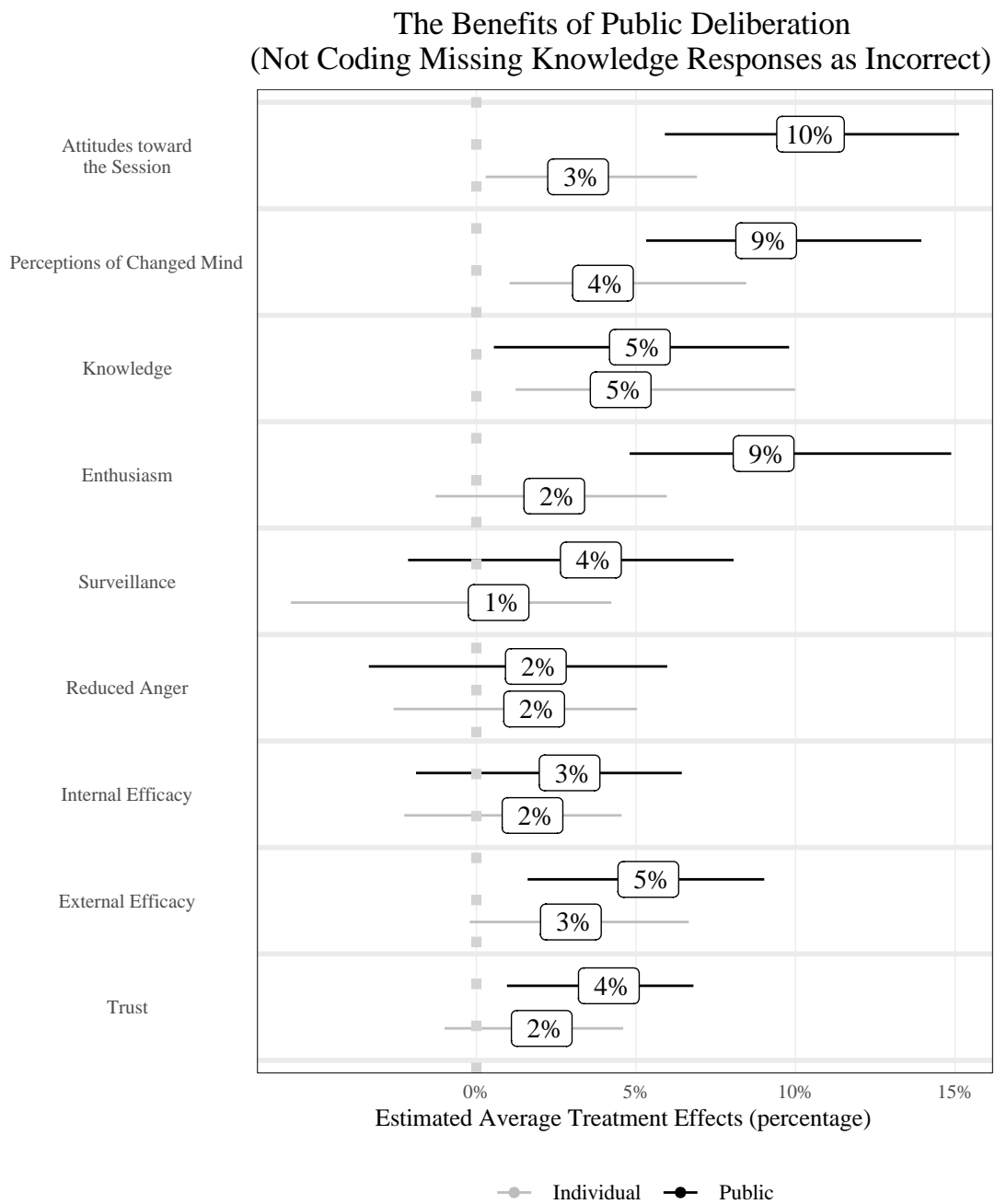


Table A10. Main Multilevel Model with Missing Knowledge Items Dropped.

Main Effects	Estimate [95% Interval]
<i>Individual Deliberation</i> (β_0)	0.03 [0.01, 0.04]
<i>Public Deliberation</i> (γ_0)	0.06 [0.04, 0.07]
Intercept (α_0)	0.53 [0.52, 0.54]
Group-level Effects	SD
Respondent ($n_{\text{respondents}} = 402$)	
Intercept ($\alpha_{\text{respondent}}$)	0.076
Outcome ($n_{\text{outcomes}} = 9$)	
<i>Individual Deliberation</i> (β_{outcome})	0.053
<i>Public Deliberation</i> (γ_{outcome})	0.040
Intercept (α_{outcome})	0.135
Question ($n_{\text{questions}} = 41$)	
<i>Individual Deliberation</i> (β_{question})	0.024
<i>Public Deliberation</i> (γ_{question})	0.042
Intercept (α_{question})	0.160
Residual (σ^2)	0.015

$n_{\text{total}} = 15888$. The table presents the original main multilevel model, but drops all observations for which respondents did not answer a *Knowledge* question.

Figure A2. Replication of Figure 2 based on the Regression Model in Table A9



Appendix E. Statistical Power and Minimum Detectable Effects

To get a sense of the statistical power of our experiment, we calculated minimum detectable effects (MDEs). That is, given our sample sizes and observed standard deviations for each of our outcomes, we calculated how big the “true” effect size would have to be for our study to have had 80% power to detect it. (SDs are calculated by averaging over all items in a question-group, effectively creating additive scales; see (2) below for more discussion of scale reliability.) This inversion of power analysis reveals whether our study demands unreasonably large effect sizes to yield highly reliable results. Our goal, then, is to evaluate whether the MDEs are overly large in magnitude, since bigger MDEs reveal limits in sample size. This approach also permits us to examine how an increase in sample size would alter these MDEs, giving us an idea of where on the “power curve” our sample size puts us.

The MDEs for *Individual* deliberation that yield 80% power given our sample sizes and observed SDs range from 4% to 10% (see Table A11). For context, observed estimates for that treatment range from 1% to 7%. Similarly, the MDEs for *Public* deliberation range from 3% to 8%, while observed estimates range from 2% to 11%. The difference in ranges of MDEs results from the difference in sample sizes in the treatment groups, with 102 assigned to *Individual* and 206 assigned to *Public*. But there is substantial overlap between the two sets of MDEs. For example, the two largest MDEs occur for *Knowledge Gains* in both treatments, owing to the higher SDs for that outcome. All other MDEs (for both treatments) were 7% or smaller. For comparison, if our sample sizes had been doubled, MDEs would only have dropped to the 2% to 7% range, with a max of 5% if we exclude the high SD *Knowledge Gains* outcome. We conclude that our study was not seriously underpowered—at least to estimate main effects. Sample sizes were sufficient to reliably detect effects of 3% to 7%.

Table A11. Minimum Detectable Effects for Additive Scales.

Outcome	SD	Individual (n = 204)	Public (n = 300)
Overall	0.37	0.07	0.06
Attitudes toward the Session	0.24	0.05	0.04
Perceptions of Changed Mind	0.37	0.07	0.06
Knowledge	0.50	0.10	0.08
Enthusiasm	0.33	0.06	0.05
Surveillance	0.34	0.07	0.05
Reduced Anger	0.26	0.05	0.04
Internal Efficacy	0.26	0.05	0.04
External Efficacy	0.29	0.06	0.05
Trust	0.21	0.04	0.03

Appendix F. Scale Reliability and Separate Linear Models by Outcome

In this section, we first report α for each outcome (category of questions), and then report results of separate linear models by outcome. Finally, we display a version of Figure 2 based on these nine separate linear models.

Scale reliability as measured by α was as follows: *Attitudes toward the Session* (0.8), *Perceptions of Changed Mind* (0.7), *Knowledge* (0.4), *Enthusiasm* (0.7), *Surveillance* (0.8), *Reduced Anger* (0.9), *Internal Efficacy* (0.8), *External Efficacy* (0.7), and *Trust* (0.8).

To fit a separate linear model for each outcome, we first calculated the first principal component for each, scaled them to have $SD = 1$, and reoriented as necessary.* We listwise-delete any respondent missing at least one item per scale. We then regressed each scale on indicators for *Individual* and *Public*. The results are presented in Table A12.

Table A12. Separate Linear Models by Outcome.

Outcome Variable	<i>Individual</i> (β)	<i>Public</i> (γ)	<i>Intercept</i> (α)	<i>n</i>
<i>Attitudes toward the Session</i>	0.30 [-0.04, 0.63]	0.73 [0.45, 1.00]	-0.44 [-0.69, -0.22]	392
<i>Perceptions of Changed Mind</i>	0.34 [0.05, 0.67]	0.60 [0.35, 0.86]	-0.40 [-0.62, -0.20]	364
<i>Knowledge</i>	0.40 [0.09, 0.70]	0.31 [0.02, 0.59]	-0.23 [-0.45, 0.00]	400
<i>Enthusiasm</i>	0.14 [-0.17, 0.48]	0.44 [0.18, 0.72]	-0.28 [-0.51, -0.07]	396
<i>Surveillance</i>	-0.12 [-0.44, 0.21]	0.08 [-0.17, 0.35]	-0.02 [-0.23, 0.19]	396
<i>Reduced Anger</i>	0.04 [-0.27, 0.33]	0.03 [-0.23, 0.27]	-0.01 [-0.20, 0.20]	396
<i>Internal Efficacy</i>	0.00 [-0.26, 0.24]	0.08 [-0.13, 0.29]	-0.02 [-0.18, 0.14]	397
<i>External Efficacy</i>	0.20 [-0.19, 0.53]	0.31 [0.07, 0.55]	-0.20 [-0.41, -0.01]	397
<i>Trust</i>	0.02 [-0.37, 0.40]	0.15 [-0.11, 0.42]	-0.12 [-0.34, 0.08]	396

For comparison with our main multilevel model, Figure A3 replicates Figure 2 from the main text, but using the results from Table A12.

* The change from the effectively additive scales in the multilevel model to individual scales with $SD = 1$ means a change in the values of minimum detectable effects. However, they are now equivalent across all outcomes, within each treatment. Given our sample sizes, the MDE for *Individual* deliberation that yields 80% power is now 0.20 for all outcomes; and for *Public* deliberation, the MDE is 0.16.

Figure A3. Replication of Figure 2 based on the Regression Models in Table A12

**The Benefits of Public Deliberation
(Separate Models of PC Scales)**

