

Supplementary Information for Using Generative AI to Increase Skeptics’ Engagement with Climate Science

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Note on coding

Here, we report standardized beta coefficients. All continuous variables were scaled and centered (including partisanship, ideology, interest in science news, credibility, bookmark regret, age, continuous priors on climate change). The experimental Treatment variable was dummy coded (0 - Original headlines, 1 - Flipped headlines), while the rest of the demographic variables were sum coded to aid interpretability of the results as they do not have natural reference levels (Education: 1 - Collage or higher, -1 - Less than collage; Sex: 1 - Male, -1 - Female; Categorical climate belief: 1 - Believer, 0 - Other or don’t know, -1: Denier). Votes and bookmarks were always dependent variables, and were coded as 0 (downvoted, not bookmarked) or 1 (upvoted, bookmarked). Models that had votes or bookmarks as dependent variables always included titles and IDs as random intercepts, while models that predicted credibility or regret always included titles as random intercepts (there were no variation on the individual level as all participants had only one rating in these metrics).

Preregistered analysis on engagement

Table S1. Regression Results for Categorical Climate Belief

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.594	0.018	<0.001	0.506	0.023	<0.001
Prior	0.143	0.009	<0.001	0.078	0.006	<0.001
Treatment	0.053	0.026	0.043	0.012	0.032	0.710
Prior * Treatment	-0.045	0.012	<0.001	-0.049	0.009	<0.001
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.051 / 0.262			0.010 / 0.087		

Table S2. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.663	0.018	<0.001	0.543	0.022	<0.001
Prior	0.128	0.007	<0.001	0.058	0.005	<0.001
Treatment	0.029	0.025	0.258	-0.012	0.032	0.704
Prior * Treatment	-0.041	0.010	<0.001	-0.036	0.007	<0.001
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.057 / 0.262			0.008 / 0.088		

Table S3. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.666	0.018	<0.001	0.545	0.022	<0.001
Prior	0.139	0.007	<0.001	0.077	0.005	<0.001
Treatment	0.024	0.025	0.349	-0.015	0.032	0.638
Prior * Treatment	-0.041	0.010	<0.001	-0.046	0.007	<0.001
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.068 / 0.262			0.014 / 0.087		

Table S4. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.666	0.018	<0.001	0.545	0.022	<0.001
Prior	0.153	0.007	<0.001	0.076	0.005	<0.001
Treatment	0.025	0.025	0.329	-0.014	0.032	0.657
Prior * Treatment	-0.041	0.010	<0.001	-0.042	0.007	<0.001
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.085 / 0.262			0.015 / 0.087		

Engagement analysis on extreme skeptics/believers

To explore (post hoc) the impact of modified headlines as a function of initial climate skepticism, we analyzed the treatment effect in four subgroups defined by 4 different levels of skepticism, for each of 3 continuous measures of skepticism (i.e., 0-25, 26-50, 51-75, 76-100), that showed the highest effects both for votes and bookmarks among the most skeptical audiences in the belief that climate change is happening (vote : $b = 0.168, p = .01$, bookmark: $b = 0.09, p = .142$), that is caused by human activity (vote : $b = 0.14, p = .01$, bookmark: $b = 0.1, p = .054$) and that it is a significant threat (vote : $b = 0.17, p = .004$, bookmark: $b = 0.11, p = .051$). % The treatment is the least effective among the most believers in the belief that climate change is happening (vote : $b = 0.01, p = .619$, bookmark: $b = -0.03, p = .378$), that is caused by human activity (vote : $b = -0.001, p = .960$, bookmark: $b = -0.05, p = .168$) and that it is a significant threat (vote : $b = 0.01, p = .717$, bookmark: $b = -0.04, p = .282$), whereas higher positive beta means higher treatment effect.

Replication of Engagement effects with inattention exclusions

Right after the vote phase, we asked participants two attention check questions: out of 4 headlines they had to select the ones that were not presented to them in the previous stage. We replicated the effect of headline flipping on votes and bookmarks as well after excluding participants who inaccurately answered at least one of the two attention check questions (1.4% excluded). Taking into account the random intercept of titles and the random intercept of IDs, we did find a significant interaction between climate belief and condition both in bookmarks and in votes suggesting that headline flipping is more likely to increase engagement among climate sceptics than believers. We found similar effects when we replaced the categorical climate change variable with the continuous measures. For bookmarks, we found a significant interaction between headline condition and belief in the existence of climate change, the belief in the human-causes of climate change, and the belief in the risks posed by climate change; all pointing to the direction that headline flipping causes higher engagement among skeptics. Tables S5-S8 explain the results.

Table S5. Regression Results for Categorical Climate Belief

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.591	0.020	<0.001	0.498	0.024	<0.001
Prior	0.154	0.009	<0.001	0.084	0.006	<0.001
Treatment	0.056	0.028	0.043	0.016	0.033	0.623
Prior * Treatment	-0.052	0.013	<0.001	-0.052	0.009	<0.001
Observations	20460			20460		
Marginal R ² / Conditional R ²	0.057 / 0.269			0.012 / 0.090		

Table S6. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.663	0.019	<0.001	0.537	0.023	<0.001
Prior	0.129	0.007	<0.001	0.065	0.005	<0.001
Treatment	0.030	0.027	0.266	-0.008	0.033	0.813
Prior * Treatment	-0.040	0.011	<0.001	-0.042	0.008	<0.001
Observations	20460			20460		
Marginal R ² / Conditional R ²	0.058 / 0.269			0.010 / 0.090		

Table S7. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.668	0.019	<0.001	0.540	0.023	<0.001
Prior	0.141	0.007	<0.001	0.080	0.005	<0.001
Treatment	0.024	0.027	0.376	-0.012	0.033	0.727
Prior * Treatment	-0.042	0.010	<0.001	-0.047	0.007	<0.001
Observations	20460			20460		
Marginal R ² / Conditional R ²	0.071 / 0.269			0.016 / 0.090		

Table S8. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.666	0.019	<0.001	0.539	0.023	<0.001
Prior	0.153	0.007	<0.001	0.080	0.005	<0.001
Treatment	0.026	0.027	0.336	-0.010	0.033	0.759
Prior * Treatment	-0.041	0.010	<0.001	-0.047	0.007	<0.001
Observations	20460			20460		
Marginal R ² / Conditional R ²	0.087 / 0.269			0.016 / 0.090		

Bookmark regret in skeptics explained by negative sentiments in article texts

We found that the treatment increased skeptics regret over bookmarking climate change related articles. We hypothesized that this decreased regret is caused by skeptics more likely to self-select into articles that contains overly negative/doomsdayist language in the modified headline condition compared the personalized headline condition. This negative language may make them experience anxiety or other negative emotions that may make them regret engaging with the article - and not believers because they may already be used to reading climate change articles with such language.

For this, we used Llama3 -70B to rate articles on their sentimentality with the following prompt, taken from Rathje et al (2024): *‘How negative or positive is this article on a 1 to 7 scale? Answer only with a number, with 1 being “very negative” and 7 being “very positive.” Here is the article: [Article text]’*

Tables S9-S10 summarize the results. We conducted this analysis using the dichotomous prior and the continuous prior on the belief that climate change is caused by human activity, as we found evidence for decreased regret among skeptics in the treatment condition only in these 2 measures. Indeed, we found evidence that one sentimentality score, as rated by Llama3, included in the regression, treatment condition no longer significantly interact with prior beliefs, while sentimentality does interact with prior beliefs significantly. This supports our suspicion that negativity of the article texts makes skeptics experience negative emotions that make them later regret their choice. Nevertheless, the interpretation of this analysis is speculative and should be treated as such. Importantly, as it can be seen in the analysis of the posterior beliefs or the perceived credibility of the article this increased regret in the modified headline condition does not translate to decreased belief updating nor a decrease in judgments of credibility.

Table S9. Regression Results for Categorical Climate Belief

Bookmark regret			
Predictors	Estimates	std. Error	p
Intercept	-0.276	0.145	0.057
Sentiment	0.060	0.032	0.065
Treatment	-0.057	0.198	0.775
Prior	0.284	0.119	0.017
Sentiment * Treatment	-0.002	0.045	0.965
Prior * Sentiment	-0.050	0.026	0.056
Treatment * Prior	0.018	0.161	0.912
Prior * Sentiment * Treatment	0.022	0.036	0.548
Observations	1992		
Marginal R ² / Conditional R ²	0.019 / 0.043		

Table S10. Regression Results for Prior on Climate Change is Caused by Human Activity

Bookmark regret			
Predictors	Estimates	std. Error	p
Intercept	-0.143	0.128	0.265
Sentiment	0.037	0.029	0.207
Treatment	-0.065	0.180	0.719
Prior	0.276	0.103	0.007
Sentiment * Treatment	0.010	0.041	0.806
Prior * Sentiment	-0.046	0.023	0.044
Treatment * Prior	-0.030	0.140	0.832
Prior * Sentiment * Treatment	0.034	0.031	0.276
Observations	1992		
Marginal R ² / Conditional R ²	0.027 / 0.051		

Belief updating

First, we tested whether people updated their beliefs about climate change toward the scientific consensus as a result of having read one article on climate change. This we found in all 3 of our continuous belief measures: on the belief climate change is happening $t(1998) = -6.3, p < .001$, Mean difference = -1.2 , 95% CI = $[-1.57, -0.74]$ and also on the belief that climate change is caused by human activity, $t(1998) = -5.44, p < .001$, Mean difference = -1.15 , 95% CI = $[-1.57, -0.74]$ and also on the belief that climate change is a threat, $t(1998) = -13.0, p < .001$, Mean difference = -2.36 , 95% CI = $[-2.72, -2.0]$. Second, we also tested whether updating was higher in the treatment or in the modified headline condition and whether updating was affected by priors. Updating was defined by prior-posterior for all people, so negative values mean higher updating toward the scientific consensus.

Participant level heterogeneity on Engagement

As pre-registered, to test the effects of treatment heterogeneity, we included a number of participant level variables into our models, one-by-one, along with the treatment condition and climate belief variables.

Heterogeneity over Age

Table S11. Regression Results for Categorical Climate Belief

Predictors	Vote			Bookmark		
	Estimates	std. Error	p	Estimates	std. Error	p
Intercept	0.598	0.019	<0.001	0.507	0.023	<0.001
Prior	0.137	0.009	<0.001	0.077	0.006	<0.001
Age	-0.023	0.009	0.008	0.001	0.006	0.864
Treatment	0.049	0.026	0.063	0.010	0.032	0.750
Prior * Age	0.019	0.009	0.038	0.009	0.006	0.177
Prior * Treatment	-0.040	0.013	0.002	-0.045	0.009	<0.001
Age * Treatment	0.022	0.013	0.089	0.005	0.009	0.607
Prior * Age * Treatment	-0.016	0.013	0.230	-0.005	0.009	0.574
Observations	21747			21747		
Marginal R ² / Conditional R ²	0.052 / 0.263			0.010 / 0.088		

Table S12. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.663	0.018	<0.001	0.544	0.023	<0.001
Prior	0.125	0.007	<0.001	0.055	0.005	<0.001
Age	-0.021	0.007	0.004	0.000	0.005	0.973
Treatment	0.026	0.026	0.305	-0.012	0.032	0.718
Prior * Age	0.004	0.007	0.560	0.011	0.005	0.028
Prior * Treatment	-0.032	0.011	0.003	-0.033	0.008	<0.001
Age * Treatment	0.027	0.010	0.011	0.007	0.008	0.389
Prior * Age * Treatment	-0.023	0.011	0.041	-0.007	0.008	0.412
Observations	21747			21747		
Marginal R ² / Conditional R ²	0.058 / 0.263			0.008 / 0.088		

Table S13. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.666	0.018	<0.001	0.546	0.023	<0.001
Prior	0.137	0.007	<0.001	0.077	0.005	<0.001
Age	-0.009	0.007	0.187	0.008	0.005	0.122
Treatment	0.023	0.026	0.361	-0.016	0.032	0.626
Prior * Age	0.002	0.007	0.765	0.005	0.005	0.335
Prior * Treatment	-0.037	0.011	0.001	-0.043	0.008	<0.001
Age * Treatment	0.016	0.010	0.117	0.002	0.007	0.762
Prior * Age * Treatment	-0.010	0.011	0.367	-0.009	0.008	0.273
Observations	21747			21747		
Marginal R ² / Conditional R ²	0.068 / 0.263			0.015 / 0.088		

Table S14. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.665	0.018	<0.001	0.546	0.023	<0.001
Prior	0.152	0.007	<0.001	0.073	0.005	<0.001
Age	-0.009	0.007	0.173	0.006	0.005	0.234
Treatment	0.026	0.025	0.312	-0.014	0.032	0.651
Prior * Age	-0.002	0.007	0.812	0.009	0.005	0.068
Prior * Treatment	-0.039	0.010	<0.001	-0.038	0.008	<0.001
Age * Treatment	0.013	0.010	0.174	0.002	0.007	0.764
Prior * Age * Treatment	-0.004	0.010	0.672	-0.008	0.008	0.284
Observations	21747			21747		
Marginal R ² / Conditional R ²	0.085 / 0.263			0.015 / 0.088		

Heterogeneity over Education

Table S15. Regression Results for Categorical Climate Belief

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.593	0.019	<0.001	0.507	0.023	<0.001
Prior	0.142	0.009	<0.001	0.080	0.006	<0.001
Education	0.001	0.009	0.906	-0.003	0.006	0.649
Treatment	0.054	0.026	0.041	0.010	0.032	0.754
Prior * Education	0.004	0.009	0.677	-0.006	0.006	0.308
Prior * Treatment	-0.044	0.013	<0.001	-0.053	0.009	<0.001
Education * Treatment	-0.004	0.012	0.762	0.006	0.009	0.513
Prior * Education * Treatment	-0.002	0.013	0.870	0.014	0.009	0.131
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.051 / 0.262			0.010 / 0.087		

Table S16. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.662	0.018	<0.001	0.545	0.022	<0.001
Prior	0.129	0.007	<0.001	0.059	0.005	<0.001
Education	0.002	0.008	0.744	-0.006	0.005	0.264
Treatment	0.029	0.026	0.253	-0.016	0.032	0.618
Prior * Education	-0.006	0.007	0.434	-0.004	0.005	0.457
Prior * Treatment	-0.042	0.011	<0.001	-0.038	0.008	<0.001
Education * Treatment	-0.002	0.011	0.865	0.013	0.008	0.093
Prior * Education * Treatment	0.006	0.011	0.538	0.009	0.008	0.262
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.057 / 0.262			0.008 / 0.088		

Table S17. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.665	0.018	<0.001	0.547	0.022	<0.001
Prior	0.139	0.007	<0.001	0.079	0.005	<0.001
Education	0.005	0.007	0.522	-0.005	0.005	0.353
Treatment	0.025	0.026	0.328	-0.018	0.032	0.566
Prior * Education	-0.002	0.007	0.756	-0.008	0.005	0.126
Prior * Treatment	-0.043	0.010	<0.001	-0.049	0.007	<0.001
Education * Treatment	-0.005	0.010	0.665	0.012	0.007	0.120
Prior * Education * Treatment	0.006	0.010	0.590	0.010	0.007	0.162
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.068 / 0.262			0.015 / 0.088		

Table S18. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.664	0.018	<0.001	0.546	0.022	<0.001
Prior	0.155	0.007	<0.001	0.077	0.005	<0.001
Education	0.006	0.007	0.417	-0.004	0.005	0.406
Treatment	0.025	0.025	0.320	-0.018	0.032	0.579
Prior * Education	-0.007	0.007	0.331	-0.004	0.005	0.469
Prior * Treatment	-0.044	0.010	<0.001	-0.043	0.007	<0.001
Education * Treatment	-0.002	0.010	0.852	0.012	0.007	0.102
Prior * Education * Treatment	0.008	0.010	0.421	0.005	0.007	0.476
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.085 / 0.262			0.015 / 0.087		

Heterogeneity over Sex

Table S19. Regression Results for Categorical Climate Belief and Sex

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.593	0.018	<0.001	0.507	0.023	<0.001
Prior	0.143	0.009	<0.001	0.077	0.006	<0.001
Sex	-0.013	0.008	0.124	-0.008	0.006	0.192
Treatment	0.054	0.026	0.039	0.011	0.032	0.735
Prior * Sex	0.000	0.009	0.995	0.019	0.006	0.002
Prior * Treatment	-0.045	0.012	<0.001	-0.047	0.009	<0.001
Sex * Treatment	0.006	0.012	0.631	0.014	0.008	0.100
Prior * Sex * Treatment	0.002	0.012	0.874	-0.013	0.009	0.126
Observations	21813			21813		
Marginal R ² / Conditional R ²	0.051 / 0.263			0.011 / 0.087		

Table S20. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.662	0.018	<0.001	0.543	0.023	<0.001
Prior	0.129	0.007	<0.001	0.058	0.005	<0.001
Sex	-0.018	0.007	0.013	-0.002	0.005	0.729
Treatment	0.030	0.025	0.240	-0.011	0.032	0.723
Prior * Sex	0.002	0.007	0.792	0.003	0.005	0.534
Prior * Treatment	-0.042	0.010	<0.001	-0.036	0.007	<0.001
Sex * Treatment	0.011	0.010	0.263	0.011	0.007	0.152
Prior * Sex * Treatment	0.002	0.010	0.810	0.000	0.007	0.961
Observations	21813			21813		
Marginal R ² / Conditional R ²	0.058 / 0.263			0.008 / 0.088		

Table S21. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.665	0.018	<0.001	0.546	0.023	<0.001
Prior	0.139	0.007	<0.001	0.076	0.005	<0.001
Sex	-0.012	0.007	0.102	0.002	0.005	0.647
Treatment	0.025	0.025	0.325	-0.015	0.032	0.645
Prior * Sex	-0.004	0.007	0.616	0.010	0.005	0.038
Prior * Treatment	-0.042	0.010	<0.001	-0.045	0.007	<0.001
Sex * Treatment	0.006	0.010	0.582	0.006	0.007	0.375
Prior * Sex * Treatment	0.002	0.010	0.851	-0.007	0.007	0.362
Observations	21813			21813		
Marginal R ² / Conditional R ²	0.068 / 0.263			0.015 / 0.088		

Table S22. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.665	0.018	<0.001	0.546	0.022	<0.001
Prior	0.153	0.007	<0.001	0.075	0.005	<0.001
Sex	-0.002	0.007	0.778	0.006	0.005	0.212
Treatment	0.026	0.025	0.305	-0.014	0.032	0.661
Prior * Sex	0.001	0.007	0.932	0.007	0.005	0.177
Prior * Treatment	-0.042	0.010	<0.001	-0.041	0.007	<0.001
Sex * Treatment	-0.000	0.010	0.976	0.004	0.007	0.606
Prior * Sex * Treatment	0.001	0.010	0.927	-0.005	0.007	0.498
Observations	21813			21813		
Marginal R ² / Conditional R ²	0.085 / 0.263			0.015 / 0.087		

Heterogeneity over Partisanship

Table S23. Regression Results for Categorical Climate Belief

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.627	0.020	<0.001	0.522	0.023	<0.001
Prior	0.092	0.012	<0.001	0.060	0.008	<0.001
Partisanship	-0.077	0.010	<0.001	-0.024	0.007	0.001
Treatment	0.018	0.028	0.524	-0.009	0.033	0.783
Prior * Partisanship	0.022	0.010	0.039	0.017	0.008	0.026
Prior * Treatment	-0.006	0.016	0.691	-0.027	0.012	0.019
Partisanship * Treatment	0.046	0.014	0.001	0.027	0.010	0.011
Prior * Partisanship * Treatment	-0.040	0.015	0.006	-0.025	0.011	0.016
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.062 / 0.262			0.011 / 0.087		

Table S24. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.664	0.018	<0.001	0.543	0.023	<0.001
Prior	0.098	0.010	<0.001	0.048	0.007	<0.001
Partisanship	-0.062	0.008	<0.001	-0.021	0.006	<0.001
Treatment	0.019	0.026	0.468	-0.013	0.032	0.675
Prior * Partisanship	0.002	0.008	0.805	-0.000	0.006	0.946
Prior * Treatment	-0.015	0.014	0.291	-0.026	0.010	0.010
Partisanship * Treatment	0.026	0.011	0.025	0.017	0.008	0.043
Prior * Partisanship * Treatment	-0.022	0.011	0.050	-0.003	0.008	0.709
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.067 / 0.262			0.009 / 0.088		

Table S25. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.674	0.018	<0.001	0.551	0.023	<0.001
Prior	0.105	0.010	<0.001	0.070	0.007	<0.001
Partisanship	-0.047	0.009	<0.001	-0.002	0.006	0.714
Treatment	0.008	0.026	0.759	-0.024	0.032	0.459
Prior * Partisanship	0.015	0.008	0.059	0.011	0.006	0.064
Prior * Treatment	-0.015	0.014	0.284	-0.035	0.010	<0.001
Partisanship * Treatment	0.021	0.012	0.079	0.007	0.009	0.439
Prior * Partisanship * Treatment	-0.032	0.011	0.006	-0.016	0.008	0.053
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.073 / 0.262			0.015 / 0.088		

Table S26. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.670	0.018	<0.001	0.551	0.023	<0.001
Prior	0.130	0.009	<0.001	0.067	0.007	<0.001
Partisanship	-0.035	0.008	<0.001	-0.005	0.006	0.428
Treatment	0.012	0.026	0.637	-0.020	0.032	0.529
Prior * Partisanship	0.008	0.008	0.288	0.011	0.006	0.057
Prior * Treatment	-0.020	0.013	0.142	-0.031	0.010	0.002
Partisanship * Treatment	0.017	0.012	0.129	0.009	0.009	0.282
Prior * Partisanship * Treatment	-0.025	0.011	0.028	-0.011	0.009	0.188
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.088 / 0.262			0.015 / 0.087		

Importantly, we find significant heterogeneity over partisanship for bookmarks and votes. As Figure S1 shows, this means the the treatment does not work skeptical Democrats - mostly because they are more interested in reading the original headlines without any specification than Republican skeptics. For Republican-skeptics, on the other hand, the treatment effect is very strong.

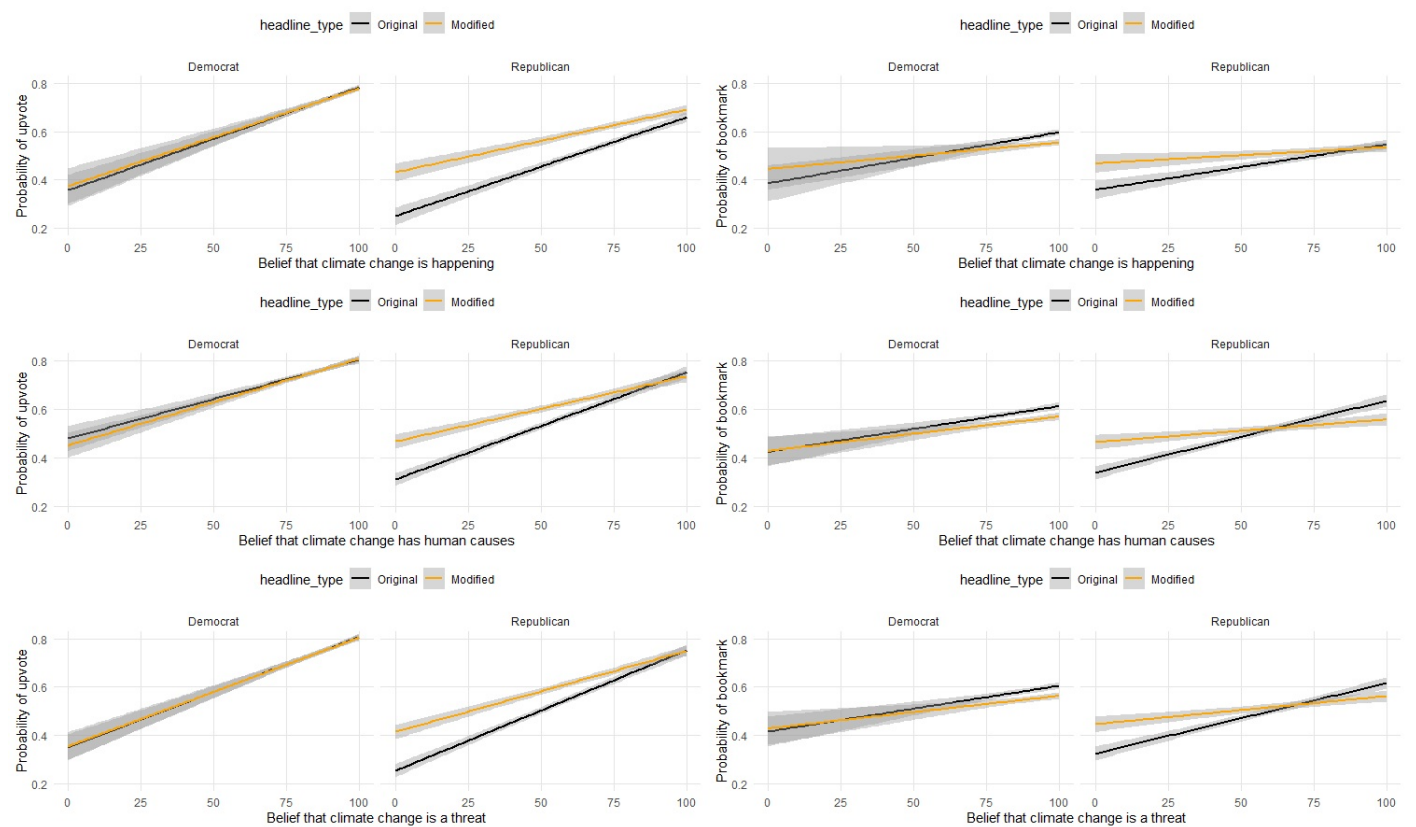


Figure S2: Logistic regression plots for upvote and bookmark probability over partisanship

Heterogeneity over Ideology

Table S27. Regression Results for Categorical Climate Belief

Predictors	Vote			Bookmark		
	Estimates	std. Error	p	Estimates	std. Error	p
Intercept	0.624	0.020	<0.001	0.519	0.023	<0.001
Prior	0.097	0.011	<0.001	0.063	0.008	<0.001
Ideology	-0.072	0.010	<0.001	-0.021	0.007	0.006
Treatment	0.029	0.028	0.303	-0.003	0.033	0.938
Prior * Ideology	0.021	0.010	0.046	0.015	0.008	0.044
Prior * Treatment	-0.016	0.016	0.309	-0.033	0.011	0.003
Ideology * Treatment	0.033	0.014	0.021	0.019	0.010	0.067
Prior * Ideology * Treatment	-0.030	0.015	0.041	-0.018	0.010	0.085
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.061 / 0.262			0.011 / 0.087		

Table S28. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.664	0.018	<0.001	0.545	0.023	<0.001
Prior	0.098	0.010	<0.001	0.047	0.007	<0.001
Ideology	-0.057	0.008	<0.001	-0.018	0.006	0.003
Treatment	0.015	0.026	0.561	-0.015	0.032	0.629
Prior * Ideology	0.005	0.008	0.521	0.004	0.006	0.486
Prior * Treatment	-0.009	0.014	0.496	-0.024	0.010	0.017
Ideology * Treatment	0.021	0.012	0.064	0.014	0.008	0.096
Prior * Ideology * Treatment	-0.033	0.011	0.003	-0.008	0.008	0.324
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.067 / 0.262			0.009 / 0.088		

Table S29. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.673	0.018	<0.001	0.552	0.023	<0.001
Prior	0.107	0.009	<0.001	0.071	0.007	<0.001
Ideology	-0.043	0.008	<0.001	-0.001	0.006	0.896
Treatment	0.011	0.026	0.673	-0.023	0.032	0.470
Prior * Ideology	0.016	0.008	0.030	0.013	0.005	0.020
Prior * Treatment	-0.020	0.013	0.134	-0.037	0.010	<0.001
Ideology * Treatment	0.014	0.012	0.220	0.004	0.009	0.651
Prior * Ideology * Treatment	-0.029	0.011	0.008	-0.015	0.008	0.052
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.073 / 0.262			0.015 / 0.088		

Table S30. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.666	0.018	<0.001	0.550	0.023	<0.001
Prior	0.136	0.009	<0.001	0.069	0.007	<0.001
Ideology	-0.029	0.008	<0.001	-0.002	0.006	0.735
Treatment	0.015	0.026	0.568	-0.021	0.032	0.519
Prior * Ideology	0.003	0.008	0.680	0.011	0.006	0.061
Prior * Treatment	-0.024	0.013	0.070	-0.032	0.010	0.002
Ideology * Treatment	0.012	0.012	0.312	0.007	0.009	0.435
Prior * Ideology * Treatment	-0.022	0.011	0.052	-0.012	0.008	0.145
Observations	21989			21989		
Marginal R ² / Conditional R ²	0.088 / 0.262			0.015 / 0.088		

Heterogeneity over Interest in Science News

Table S31. Regression Results for Categorical Climate Belief

Predictors	Vote			Bookmark		
	Estimates	std. Error	p	Estimates	std. Error	p
Intercept	0.598	0.018	<0.001	0.505	0.023	<0.001
Prior	0.135	0.008	<0.001	0.077	0.006	<0.001
Interest	0.063	0.008	<0.001	0.011	0.006	0.061
Treatment	0.054	0.026	0.040	0.012	0.032	0.702
Prior * Interest	-0.006	0.008	0.439	0.010	0.006	0.084
Prior * Treatment	-0.053	0.012	<0.001	-0.051	0.009	<0.001
Interest * Treatment	-0.002	0.011	0.871	0.000	0.008	0.969
Prior * Interest * Treatment	0.022	0.011	0.049	-0.003	0.008	0.759
Observations	21934			21934		
Marginal R ² / Conditional R ²	0.069 / 0.263			0.011 / 0.087		

Table S32. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.666	0.018	<0.001	0.543	0.022	<0.001
Prior	0.114	0.007	<0.001	0.057	0.005	<0.001
Interest	0.043	0.007	<0.001	0.010	0.006	0.058
Treatment	0.024	0.025	0.340	-0.012	0.032	0.697
Prior * Interest	-0.015	0.006	0.011	0.003	0.005	0.541
Prior * Treatment	-0.043	0.011	<0.001	-0.037	0.008	<0.001
Interest * Treatment	0.021	0.010	0.044	0.004	0.008	0.609
Prior * Interest * Treatment	0.023	0.009	0.007	0.001	0.006	0.831
Observations	21934			21934		
Marginal R ² / Conditional R ²	0.071 / 0.263			0.009 / 0.088		

Table S33. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.668	0.018	<0.001	0.545	0.022	<0.001
Prior	0.130	0.007	<0.001	0.076	0.005	<0.001
Interest	0.049	0.007	<0.001	0.011	0.005	0.044
Treatment	0.020	0.025	0.440	-0.016	0.032	0.616
Prior * Interest	-0.016	0.007	0.012	0.004	0.005	0.443
Prior * Treatment	-0.049	0.010	<0.001	-0.047	0.007	<0.001
Interest * Treatment	0.014	0.010	0.168	0.002	0.007	0.777
Prior * Interest * Treatment	0.027	0.009	0.002	0.003	0.007	0.645
Observations	21934			21934		
Marginal R ² / Conditional R ²	0.082 / 0.263			0.015 / 0.087		

Table S34. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Vote			Bookmark		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	0.667	0.018	<0.001	0.544	0.022	<0.001
Prior	0.144	0.006	<0.001	0.075	0.005	<0.001
Interest	0.044	0.007	<0.001	0.009	0.005	0.074
Treatment	0.021	0.025	0.407	-0.014	0.032	0.647
Prior * Interest	-0.012	0.006	0.038	0.003	0.005	0.453
Prior * Treatment	-0.048	0.010	<0.001	-0.043	0.008	<0.001
Interest * Treatment	0.012	0.010	0.205	0.001	0.007	0.855
Prior * Interest * Treatment	0.022	0.008	0.010	0.001	0.006	0.859
Observations	21934			21934		
Marginal R ² / Conditional R ²	0.097 / 0.263			0.015 / 0.087		

We also found significant heterogeneity effects over interest in self-reported interest in science news. Treatment effect is higher for people who report less interest in engaging with the news both for votes and bookmarks. Nevertheless, the treatment is still effective for skeptics reporting higher interest in science and technology news.

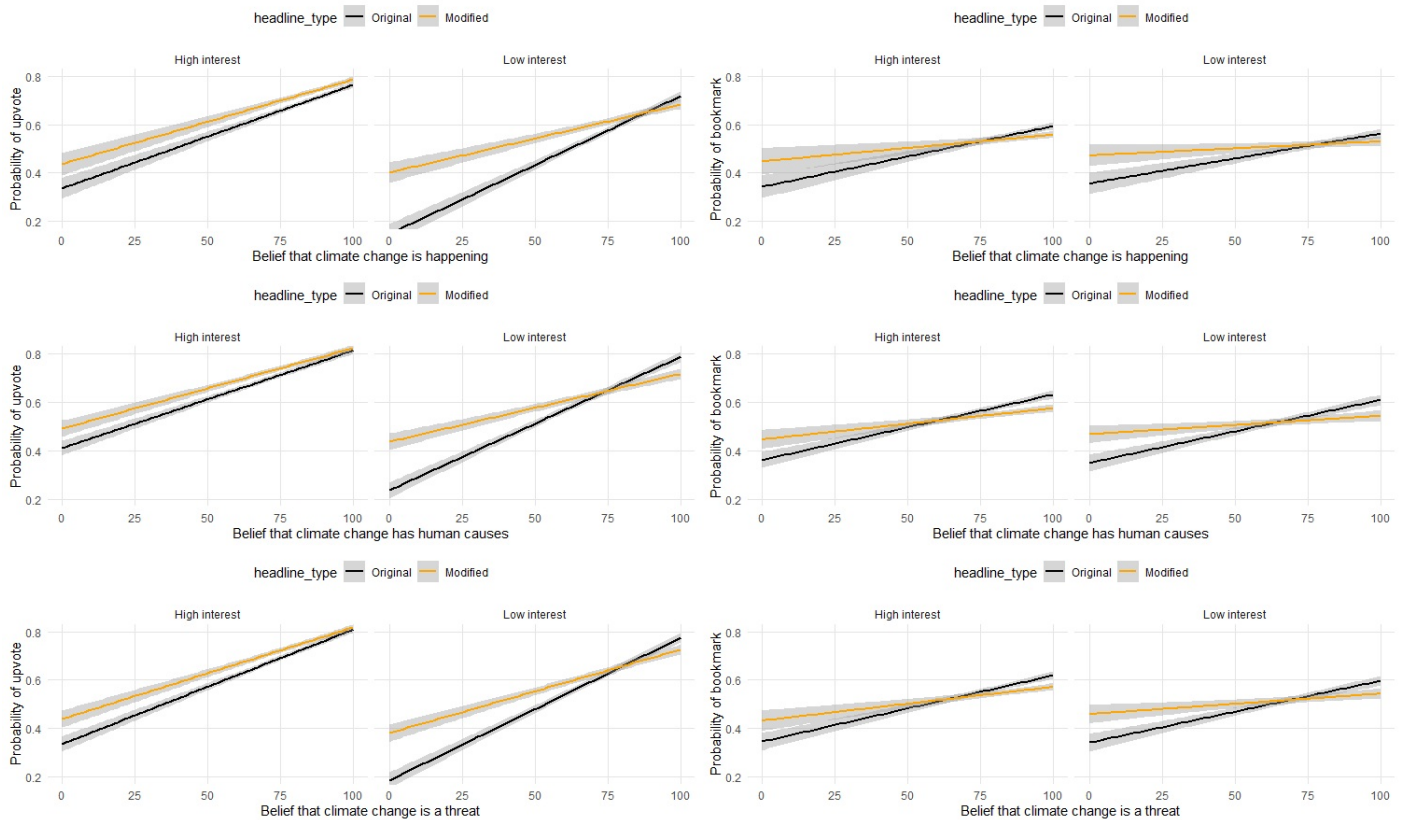


Figure S2: Logistic regression plots for upvote and bookmark probability over self-reported interest in science news

Participant level heterogeneity on Regret and Credibility

Heterogeneity over Age

Table S35. Regression Results for Categorical Climate Belief

Predictors	Credibility			Bookmark regret			New vote		
	Estimates	std. Error	p	Estimates	std. Error	p	Estimates	std. Error	p
Intercept	-0.165	0.049	0.001	-0.049	0.048	0.307	0.258	0.021	<0.001
Prior	0.320	0.037	<0.001	0.095	0.039	0.014	-0.104	0.018	<0.001
Age	0.063	0.036	0.077	0.141	0.037	<0.001	-0.025	0.018	0.157
Treatment	0.030	0.070	0.664	-0.053	0.068	0.435	-0.030	0.030	0.309
Prior * Age	0.130	0.037	<0.001	-0.015	0.038	0.698	0.020	0.018	0.282
Prior * Treatment	0.039	0.052	0.449	0.106	0.054	0.050	0.031	0.025	0.215
Age * Treatment	-0.062	0.052	0.232	-0.048	0.054	0.370	0.057	0.025	0.025
Prior * Age * Treatment	-0.035	0.053	0.511	0.035	0.055	0.522	-0.052	0.026	0.047
Observations	1966			1977			1621		
Marginal R ² / Conditional R ²	0.104 / 0.135			0.028 / 0.052			0.036 / 0.061		

Table S36. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.019	0.046	0.676	-0.003	0.044	0.946	0.204	0.018	<0.001
Prior	0.347	0.030	<0.001	0.130	0.032	<0.001	-0.074	0.015	<0.001
Age	0.118	0.030	<0.001	0.132	0.031	<0.001	-0.007	0.014	0.617
Treatment	0.037	0.065	0.573	-0.013	0.062	0.834	-0.007	0.026	0.785
Prior * Age	0.054	0.029	0.065	-0.043	0.031	0.164	0.006	0.014	0.670
Prior * Treatment	0.010	0.045	0.830	0.064	0.047	0.176	-0.005	0.023	0.823
Age * Treatment	-0.049	0.043	0.253	-0.017	0.045	0.705	0.017	0.020	0.413
Prior * Age * Treatment	-0.057	0.046	0.214	0.012	0.048	0.796	-0.022	0.023	0.341
Observations	1966			1977			1621		
Marginal R ² / Conditional R ²	0.129 / 0.164			0.035 / 0.060			0.036 / 0.060		

Table S37. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.007	0.045	0.884	-0.005	0.044	0.908	0.207	0.018	<0.001
Prior	0.332	0.030	<0.001	0.108	0.032	0.001	-0.092	0.015	<0.001
Age	0.140	0.029	<0.001	0.138	0.032	<0.001	-0.018	0.014	0.215
Treatment	0.023	0.064	0.723	-0.010	0.062	0.866	-0.016	0.026	0.537
Prior * Age	0.087	0.030	0.004	-0.039	0.032	0.216	0.018	0.015	0.233
Prior * Treatment	0.067	0.044	0.127	0.109	0.047	0.021	0.034	0.022	0.122
Age * Treatment	-0.066	0.042	0.119	-0.021	0.045	0.640	0.039	0.020	0.056
Prior * Age * Treatment	-0.050	0.045	0.265	0.042	0.048	0.377	-0.062	0.022	0.005
Observations	1966			1977			1621		
Marginal R ² / Conditional R ²	0.150 / 0.182			0.038 / 0.062			0.042 / 0.066		

Table S38. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.012	0.044	0.790	-0.002	0.043	0.955	0.207	0.018	<0.001
Prior	0.376	0.030	<0.001	0.146	0.032	<0.001	-0.081	0.016	<0.001
Age	0.141	0.029	<0.001	0.142	0.031	<0.001	-0.013	0.014	0.348
Treatment	0.028	0.062	0.646	-0.013	0.061	0.829	-0.007	0.026	0.781
Prior * Age	0.061	0.029	0.036	-0.031	0.031	0.328	0.005	0.015	0.758
Prior * Treatment	0.043	0.043	0.315	0.070	0.046	0.131	-0.004	0.023	0.867
Age * Treatment	-0.081	0.041	0.050	-0.033	0.045	0.457	0.027	0.020	0.180
Prior * Age * Treatment	-0.026	0.044	0.558	0.016	0.047	0.731	-0.021	0.023	0.351
Observations	1966			1977			1621		
Marginal R ² / Conditional R ²	0.170 / 0.199			0.041 / 0.065			0.039 / 0.062		

Heterogeneity over Education

Table S39. Regression Results for Categorical Climate Belief

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.196	0.050	<0.001	-0.029	0.049	0.548	0.243	0.021	<0.001
Prior	0.334	0.037	<0.001	0.059	0.039	0.125	-0.090	0.018	<0.001
Education	0.047	0.036	0.187	0.027	0.037	0.465	0.029	0.017	0.090
Treatment	0.062	0.070	0.381	-0.069	0.069	0.319	-0.012	0.030	0.688
Prior * Education	-0.037	0.037	0.321	0.020	0.038	0.599	-0.028	0.018	0.111
Prior * Treatment	0.007	0.052	0.892	0.109	0.055	0.046	0.018	0.025	0.461
Education * Treatment	-0.094	0.051	0.062	-0.022	0.053	0.680	-0.004	0.024	0.856
Prior * Education * Treatment	0.118	0.052	0.024	0.026	0.054	0.632	-0.011	0.025	0.668
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.089 / 0.122			0.015 / 0.042			0.039 / 0.064		

Table S40. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.031	0.047	0.504	0.000	0.046	0.993	0.199	0.019	<0.001
Prior	0.357	0.030	<0.001	0.119	0.031	<0.001	-0.071	0.015	<0.001
Education	0.031	0.031	0.310	0.036	0.032	0.269	0.013	0.014	0.373
Treatment	0.050	0.066	0.448	-0.022	0.064	0.738	0.001	0.026	0.979
Prior * Education	-0.020	0.030	0.488	-0.049	0.031	0.113	-0.017	0.015	0.272
Prior * Treatment	-0.023	0.043	0.600	0.043	0.045	0.344	-0.006	0.022	0.771
Education * Treatment	-0.032	0.043	0.461	-0.004	0.046	0.923	-0.005	0.020	0.786
Prior * Education * Treatment	0.069	0.043	0.105	0.071	0.045	0.117	-0.029	0.021	0.174
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.124 / 0.159			0.022 / 0.050			0.044 / 0.068		

Table S41. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.029	0.046	0.529	0.001	0.045	0.990	0.199	0.019	<0.001
Prior	0.343	0.030	<0.001	0.080	0.032	0.013	-0.080	0.015	<0.001
Education	0.034	0.030	0.268	0.037	0.032	0.254	0.013	0.014	0.351
Treatment	0.040	0.065	0.537	-0.026	0.064	0.685	0.000	0.026	0.999
Prior * Education	-0.028	0.030	0.354	-0.015	0.032	0.638	-0.018	0.015	0.232
Prior * Treatment	0.038	0.043	0.380	0.111	0.046	0.016	0.016	0.022	0.452
Education * Treatment	-0.037	0.043	0.387	-0.007	0.046	0.879	-0.007	0.020	0.718
Prior * Education * Treatment	0.082	0.043	0.056	0.035	0.046	0.445	-0.020	0.021	0.362
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.137 / 0.170			0.023 / 0.050			0.043 / 0.067		

Table S42. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.031	0.044	0.480	0.000	0.045	0.993	0.204	0.019	<0.001
Prior	0.388	0.029	<0.001	0.126	0.031	<0.001	-0.079	0.015	<0.001
Education	0.038	0.030	0.208	0.039	0.032	0.232	0.010	0.014	0.507
Treatment	0.041	0.063	0.516	-0.026	0.064	0.685	-0.002	0.026	0.948
Prior * Education	-0.047	0.029	0.101	-0.026	0.031	0.396	0.000	0.015	0.993
Prior * Treatment	0.019	0.043	0.664	0.064	0.046	0.168	-0.003	0.022	0.887
Education * Treatment	-0.029	0.043	0.492	-0.003	0.046	0.943	-0.005	0.020	0.805
Prior * Education * Treatment	0.095	0.042	0.025	0.060	0.046	0.193	-0.032	0.022	0.148
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.161 / 0.191			0.028 / 0.055			0.042 / 0.066		

Heterogeneity over Sex

Table S43. Regression Results for Categorical Climate Belief

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.175	0.050	<0.001	-0.022	0.048	0.644	0.248	0.021	<0.001
Prior	0.316	0.036	<0.001	0.063	0.038	0.093	-0.096	0.017	<0.001
Sex	-0.030	0.035	0.383	-0.009	0.036	0.801	-0.005	0.016	0.756
Treatment	0.028	0.070	0.688	-0.074	0.068	0.278	-0.011	0.029	0.703
Prior * Sex	0.042	0.036	0.238	0.092	0.037	0.014	-0.028	0.017	0.094
Prior * Treatment	0.047	0.051	0.359	0.120	0.053	0.023	0.014	0.024	0.560
Sex * Treatment	0.010	0.049	0.837	-0.035	0.051	0.493	0.008	0.023	0.721
Prior * Sex * Treatment	-0.009	0.051	0.865	-0.045	0.053	0.387	0.017	0.024	0.472
Observations	1971			1983			1625		
Marginal R ² / Conditional R ²	0.085 / 0.119			0.018 / 0.045			0.036 / 0.062		

Table S44. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.020	0.047	0.665	0.007	0.045	0.883	0.202	0.018	<0.001
Prior	0.350	0.030	<0.001	0.112	0.031	<0.001	-0.073	0.015	<0.001
Sex	-0.021	0.030	0.487	0.034	0.031	0.281	-0.016	0.014	0.241
Treatment	0.037	0.066	0.576	-0.019	0.064	0.771	0.002	0.026	0.944
Prior * Sex	0.066	0.029	0.024	0.071	0.031	0.022	-0.022	0.015	0.124
Prior * Treatment	-0.004	0.042	0.923	0.054	0.045	0.227	-0.021	0.021	0.326
Sex * Treatment	0.013	0.042	0.763	-0.057	0.044	0.194	0.020	0.019	0.300
Prior * Sex * Treatment	-0.024	0.042	0.562	-0.041	0.044	0.359	-0.027	0.021	0.200
Observations	1971			1983			1625		
Marginal R ² / Conditional R ²	0.122 / 0.158			0.023 / 0.052			0.044 / 0.069		

Table S45. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.017	0.046	0.718	0.008	0.045	0.851	0.201	0.018	<0.001
Prior	0.328	0.030	<0.001	0.072	0.031	0.023	-0.082	0.014	<0.001
Sex	-0.004	0.030	0.879	0.037	0.031	0.238	-0.020	0.014	0.144
Treatment	0.026	0.065	0.690	-0.025	0.063	0.691	0.001	0.026	0.975
Prior * Sex	0.024	0.029	0.415	0.047	0.031	0.128	-0.027	0.014	0.060
Prior * Treatment	0.067	0.042	0.113	0.124	0.045	0.006	0.007	0.021	0.738
Sex * Treatment	0.000	0.042	0.997	-0.060	0.044	0.175	0.020	0.019	0.309
Prior * Sex * Treatment	-0.018	0.042	0.661	-0.022	0.045	0.626	0.008	0.021	0.713
Observations	1971			1983			1625		
Marginal R ² / Conditional R ²	0.133 / 0.166			0.024 / 0.051			0.041 / 0.066		

Table S46. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.014	0.044	0.759	0.014	0.045	0.749	0.201	0.018	<0.001
Prior	0.371	0.029	<0.001	0.115	0.031	<0.001	-0.076	0.015	<0.001
Sex	0.020	0.029	0.500	0.047	0.031	0.136	-0.021	0.014	0.123
Treatment	0.025	0.062	0.684	-0.028	0.063	0.656	0.002	0.026	0.937
Prior * Sex	0.038	0.028	0.183	0.068	0.031	0.026	-0.035	0.015	0.018
Prior * Treatment	0.047	0.042	0.264	0.081	0.045	0.072	-0.016	0.021	0.450
Sex * Treatment	-0.009	0.041	0.824	-0.062	0.044	0.161	0.018	0.019	0.341
Prior * Sex * Treatment	-0.035	0.041	0.395	-0.047	0.044	0.286	0.013	0.021	0.519
Observations	1971			1983			1625		
Marginal R ² / Conditional R ²	0.157 / 0.187			0.029 / 0.056			0.044 / 0.068		

Heterogeneity over Partisanship

Table S47. Regression Results for Categorical Climate Belief

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.146	0.058	0.012	0.018	0.058	0.756	0.277	0.025	<0.001
Prior	0.246	0.048	<0.001	0.008	0.051	0.876	-0.118	0.022	<0.001
Partisanship	-0.130	0.043	0.003	-0.082	0.045	0.067	-0.022	0.020	0.286
Treatment	0.080	0.081	0.321	-0.041	0.082	0.616	-0.089	0.035	0.010
Prior * Partisanship	-0.000	0.044	0.994	0.031	0.046	0.496	0.040	0.021	0.053
Prior * Treatment	0.027	0.067	0.684	0.096	0.070	0.173	0.095	0.031	0.002
Partisanship * Treatment	0.006	0.060	0.915	-0.024	0.063	0.709	0.108	0.029	<0.001
Prior * Partisanship * Treatment	0.091	0.061	0.137	0.054	0.064	0.398	-0.098	0.029	0.001
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.096 / 0.127			0.018 / 0.046			0.047 / 0.073		

Table S48. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.031	0.048	0.523	0.016	0.048	0.735	0.212	0.020	<0.001
Prior	0.323	0.040	<0.001	0.087	0.043	0.042	-0.083	0.019	<0.001
Partisanship	-0.085	0.034	0.012	-0.032	0.036	0.369	0.007	0.016	0.680
Treatment	0.057	0.068	0.399	-0.008	0.067	0.903	-0.023	0.028	0.412
Prior * Partisanship	-0.016	0.033	0.627	0.011	0.035	0.743	0.017	0.016	0.277
Prior * Treatment	-0.013	0.058	0.826	0.028	0.061	0.651	0.035	0.029	0.224
Partisanship * Treatment	0.027	0.048	0.575	-0.027	0.051	0.596	0.041	0.023	0.073
Prior * Partisanship * Treatment	0.030	0.047	0.517	0.029	0.050	0.567	-0.045	0.024	0.058
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.127 / 0.160			0.022 / 0.050			0.044 / 0.070		

Table S49. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.019	0.049	0.703	0.029	0.049	0.551	0.214	0.020	<0.001
Prior	0.296	0.041	<0.001	0.027	0.043	0.534	-0.101	0.019	<0.001
Partisanship	-0.068	0.036	0.057	-0.055	0.038	0.153	-0.011	0.017	0.518
Treatment	0.060	0.069	0.388	0.002	0.069	0.977	-0.037	0.029	0.202
Prior * Partisanship	0.003	0.034	0.927	0.035	0.036	0.341	0.021	0.017	0.196
Prior * Treatment	0.072	0.057	0.209	0.109	0.061	0.073	0.074	0.027	0.006
Partisanship * Treatment	0.061	0.050	0.226	0.014	0.053	0.795	0.068	0.024	0.004
Prior * Partisanship * Treatment	0.053	0.048	0.272	0.053	0.051	0.303	-0.066	0.023	0.004
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.137 / 0.170			0.026 / 0.054			0.048 / 0.074		

Table S50. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.018	0.047	0.700	0.020	0.048	0.678	0.209	0.020	<0.001
Prior	0.353	0.040	<0.001	0.101	0.043	0.019	-0.080	0.020	<0.001
Partisanship	-0.041	0.035	0.244	-0.017	0.038	0.654	0.001	0.017	0.937
Treatment	0.058	0.067	0.386	-0.010	0.068	0.886	-0.029	0.029	0.321
Prior * Partisanship	0.004	0.034	0.914	0.016	0.036	0.664	0.004	0.018	0.809
Prior * Treatment	0.037	0.057	0.515	0.054	0.062	0.384	0.039	0.029	0.178
Partisanship * Treatment	0.035	0.049	0.479	-0.020	0.053	0.707	0.051	0.024	0.034
Prior * Partisanship * Treatment	0.052	0.048	0.287	0.033	0.052	0.533	-0.051	0.025	0.043
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.160 / 0.189			0.027 / 0.054			0.047 / 0.071		

Heterogeneity over Ideology

Table S51. Regression Results for Categorical Climate Belief

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.145	0.057	0.012	0.012	0.058	0.832	0.261	0.024	<0.001
Prior	0.243	0.048	<0.001	0.008	0.050	0.876	-0.097	0.022	<0.001
Ideology	-0.137	0.043	0.002	-0.090	0.045	0.046	0.009	0.020	0.641
Treatment	0.084	0.080	0.294	-0.038	0.080	0.633	-0.067	0.034	0.048
Prior * Ideology	0.006	0.044	0.887	0.020	0.045	0.652	0.020	0.020	0.317
Prior * Treatment	0.025	0.066	0.700	0.103	0.069	0.136	0.071	0.030	0.019
Ideology * Treatment	-0.001	0.060	0.986	-0.010	0.063	0.879	0.081	0.028	0.004
Prior * Ideology * Treatment	0.098	0.061	0.106	0.070	0.063	0.266	-0.071	0.028	0.013
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.098 / 0.130			0.019 / 0.046			0.049 / 0.073		

Table S52. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.021	0.048	0.664	0.006	0.047	0.896	0.204	0.019	<0.001
Prior	0.306	0.040	<0.001	0.094	0.042	0.026	-0.062	0.019	0.001
Ideology	-0.090	0.034	0.008	-0.043	0.036	0.233	0.028	0.016	0.078
Treatment	0.044	0.068	0.520	0.002	0.067	0.977	-0.018	0.028	0.522
Prior * Ideology	0.009	0.033	0.795	-0.008	0.035	0.814	-0.003	0.015	0.841
Prior * Treatment	0.012	0.058	0.831	0.027	0.061	0.654	0.023	0.029	0.418
Ideology * Treatment	0.036	0.048	0.452	-0.003	0.051	0.953	0.030	0.023	0.194
Prior * Ideology * Treatment	-0.003	0.047	0.949	0.048	0.050	0.335	-0.028	0.023	0.226
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.127 / 0.161			0.022 / 0.049			0.047 / 0.072		

Table S53. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.017	0.048	0.719	0.022	0.048	0.651	0.203	0.020	<0.001
Prior	0.291	0.039	<0.001	0.028	0.041	0.506	-0.078	0.018	<0.001
Ideology	-0.077	0.035	0.027	-0.068	0.037	0.069	0.015	0.017	0.363
Treatment	0.062	0.068	0.362	0.003	0.068	0.970	-0.024	0.028	0.396
Prior * Ideology	0.008	0.032	0.793	0.024	0.033	0.478	-0.002	0.015	0.885
Prior * Treatment	0.069	0.055	0.209	0.120	0.059	0.041	0.055	0.026	0.038
Ideology * Treatment	0.063	0.049	0.203	0.040	0.053	0.446	0.052	0.023	0.028
Prior * Ideology * Treatment	0.057	0.045	0.204	0.054	0.048	0.266	-0.039	0.022	0.080
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.138 / 0.172			0.025 / 0.053			0.049 / 0.074		

Table S54. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.019	0.047	0.693	0.018	0.048	0.708	0.206	0.020	<0.001
Prior	0.350	0.040	<0.001	0.095	0.043	0.027	-0.066	0.020	0.001
Ideology	-0.046	0.035	0.182	-0.033	0.037	0.375	0.023	0.017	0.171
Treatment	0.062	0.066	0.348	-0.011	0.068	0.868	-0.027	0.028	0.336
Prior * Ideology	0.005	0.033	0.888	0.013	0.035	0.709	-0.002	0.017	0.885
Prior * Treatment	0.036	0.058	0.529	0.073	0.062	0.243	0.032	0.029	0.268
Ideology * Treatment	0.042	0.049	0.392	0.013	0.053	0.806	0.039	0.024	0.100
Prior * Ideology * Treatment	0.060	0.048	0.211	0.029	0.051	0.577	-0.045	0.024	0.067
Observations	1987			1999			1637		
Marginal R ² / Conditional R ²	0.161 / 0.190			0.027 / 0.054			0.050 / 0.073		

Heterogeneity over Interest in Science News

Table S55. Regression Results for Categorical Climate Belief

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.168	0.049	0.001	-0.009	0.047	0.853	0.252	0.020	<0.001
Prior	0.298	0.036	<0.001	0.041	0.037	0.266	-0.096	0.017	<0.001
Interest	0.203	0.034	<0.001	0.219	0.035	<0.001	-0.061	0.017	<0.001
Treatment	0.029	0.070	0.681	-0.066	0.068	0.330	-0.013	0.029	0.661
Prior * Interest	-0.051	0.035	0.146	-0.023	0.036	0.534	0.028	0.018	0.120
Prior * Treatment	0.038	0.051	0.459	0.097	0.053	0.070	0.022	0.024	0.361
Interest * Treatment	-0.087	0.046	0.060	-0.064	0.048	0.180	0.025	0.023	0.291
Prior * Interest * Treatment	0.097	0.048	0.044	0.038	0.050	0.444	-0.047	0.024	0.053
Observations	1982			1994			1633		
Marginal R ² / Conditional R ²	0.114 / 0.146			0.047 / 0.073			0.049 / 0.073		

Table S56. Regression Results for Prior on Climate Change is Happening

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.013	0.046	0.777	0.016	0.044	0.720	0.200	0.018	<0.001
Prior	0.310	0.030	<0.001	0.063	0.032	0.048	-0.072	0.014	<0.001
Interest	0.126	0.031	<0.001	0.193	0.032	<0.001	-0.041	0.014	0.004
Treatment	0.029	0.065	0.652	-0.032	0.062	0.605	0.008	0.025	0.749
Prior * Interest	-0.055	0.025	0.030	-0.026	0.027	0.338	0.050	0.015	0.001
Prior * Treatment	0.012	0.045	0.787	0.070	0.047	0.137	-0.014	0.022	0.534
Interest * Treatment	-0.013	0.043	0.763	-0.037	0.045	0.419	0.004	0.021	0.856
Prior * Interest * Treatment	0.073	0.036	0.039	0.052	0.037	0.163	-0.066	0.020	0.001
Observations	1982			1994			1633		
Marginal R ² / Conditional R ²	0.140 / 0.174			0.050 / 0.076			0.055 / 0.077		

Table S57. Regression Results for Prior on Climate Change Caused by Humanity

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.014	0.046	0.757	0.017	0.044	0.693	0.201	0.018	<0.001
Prior	0.309	0.029	<0.001	0.043	0.031	0.163	-0.085	0.014	<0.001
Interest	0.152	0.030	<0.001	0.200	0.032	<0.001	-0.043	0.014	0.003
Treatment	0.026	0.065	0.691	-0.030	0.062	0.630	0.004	0.026	0.861
Prior * Interest	-0.048	0.028	0.079	-0.044	0.029	0.129	0.044	0.015	0.003
Prior * Treatment	0.061	0.043	0.153	0.110	0.045	0.015	0.019	0.021	0.365
Interest * Treatment	-0.055	0.043	0.201	-0.054	0.045	0.232	0.001	0.021	0.966
Prior * Interest * Treatment	0.058	0.038	0.122	0.047	0.040	0.243	-0.056	0.020	0.006
Observations	1982			1994			1633		
Marginal R ² / Conditional R ²	0.153 / 0.187			0.053 / 0.079			0.054 / 0.077		

Table S58. Regression Results for Prior on Climate Change is Risky

<i>Predictors</i>	Credibility			Bookmark regret			New vote		
	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>	<i>Estimates</i>	<i>std. Error</i>	<i>p</i>
Intercept	-0.012	0.044	0.791	0.015	0.044	0.730	0.205	0.018	<0.001
Prior	0.347	0.028	<0.001	0.088	0.030	0.004	-0.079	0.015	<0.001
Interest	0.138	0.030	<0.001	0.194	0.032	<0.001	-0.046	0.014	0.002
Treatment	0.034	0.063	0.592	-0.025	0.062	0.684	0.002	0.026	0.934
Prior * Interest	-0.058	0.026	0.023	-0.022	0.028	0.423	0.040	0.015	0.010
Prior * Treatment	0.041	0.043	0.344	0.064	0.046	0.162	-0.003	0.022	0.890
Interest * Treatment	-0.055	0.042	0.193	-0.051	0.045	0.261	0.009	0.021	0.680
Prior * Interest * Treatment	0.035	0.036	0.336	0.019	0.039	0.628	-0.046	0.021	0.028
Observations	1982			1994			1633		
Marginal R ² / Conditional R ²	0.175 / 0.206			0.055 / 0.081			0.053 / 0.076		

Prior and Posterior Beliefs

Question:

Recently, you may have noticed that global warming has been getting some attention in the news. Global warming refers to the idea that the world's average temperature has been increasing over the past 150 years, may be increasing more in the future, and that the world's climate may change as a result. What do you think: Do you think that global warming is happening?

Answer Options: 1. Yes

2. No

3. Don't know

Question (categorical climate belief):

Assuming global warming is happening, do you think it is... ?

Answer Options: 1. Caused mostly by human activities 2. Caused mostly by natural changes in the environment 3. None of the above because global warming is not happening 4. Other 5. Don't know

Question (belief that climate change is caused by human activity):

What is the probability that climate change is primarily caused by human activity? [Scale of 0 (very unlikely) to 100 (very likely)]

Question (belief that climate change is happening):

What is the probability that climate change is happening? [Scale of 0 (very unlikely) to 100 (very likely)]

Question (belief that climate change is a threat):

How significant is the threat climate change poses to human safety, world and national economies or biodiversity? [Scale of 0 (not significant) to 100 (very significant)]

Ideology and Partisanship

Question (ideology on economic issues):

In general, how would you describe your own political viewpoint on economic issues?

Answer Options: 1. Very liberal 2. Liberal 3. Moderate 4. Conservative 5. Very conservative 6. Not sure

Question (ideology on social issues):

In general, how would you describe your own political viewpoint on social issues?

Answer Options: 1. Very liberal 2. Liberal 3. Moderate 4. Conservative 5. Very conservative 6. Not sure

Question (partisanship):

Which of the following best describes your political preference?

Answer Options: 1. Strongly Democratic 2. Democratic 3. Lean Democratic 4. Lean Republican 5. Republican 6. Strongly Republican