Extension of Gauchat (2012)—Politicization of Science in the Public Sphere: A Study of Public Trust in the United States, 1974 to 2021 [Draft]

Tables

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Table 1. Descriptive Statistics, General Social Survey 1974 to 2021 ($N = 36,080$)

Variable	Mean	SD	Min	Max
Confidence in Science	0.445		0	1
Female	0.538		0	1
Non-White	0.182		0	1
Education (years)	13.206	3.041	0	20
High School	0.512		0	1
Bachelor	0.166		0	1
Graduate	0.084		0	1
South	0.341		0	1
Church Attendance	3.698	2.703	0	8
Family Income	0.024	0.997	-1.056	4.305
Age	4.531	1.696	1.800	8.900
Independent	0.361		0	1
Republican	0.251		0	1
Moderate	0.378		0	1
Conservative	0.337		0	1
Post-Reagan (1981–2021)	0.798		0	1
Bush (2001–2008)	0.117		0	1
Social Media Era (2010–2021)	0.245		0	1
Post-Trump (2017–2021)	0.097		0	1
COVID-19 (2020–2021)	0.060		0	1

Note: Family income is measured in constant dollars (base = 1986) and is z-score standardized. The original age variable is decreased by a factor of 10.

Table 2. Logit Models Predicting Public Confidence in Science (I)

	Model 1	Model 2	Model 2 Variation	Model 3
Constant	12.688**	−1.457	0.454	13.032**
	(5.408)	(6.016)	(6.786)	(5.410)
Year	−0.006**	0.001	−0.000	−0.006**
	(0.003)	(0.003)	(0.003)	(0.003)
Female	−0.290***	−0.292***	−0.291***	−0.291***
	(0.023)	(0.023)	(0.023)	(0.023)
Non-White	−0.422***	−0.425***	−0.425***	−0.425***
	(0.032)	(0.032)	(0.032)	(0.032)
Education (Years)	0.071***	0.070***	0.070***	0.070***
	(0.007)	(0.007)	(0.007)	(0.007)
High School	−0.015	−0.018	−0.018	−0.018
	(0.031)	(0.031)	(0.031)	(0.031)
Bachelor	0.275***	0.271***	0.270***	0.271***
	(0.052)	(0.052)	(0.052)	(0.052)
Graduate	0.267***	0.261***	0.261***	0.262***
	(0.069)	(0.069)	(0.069)	(0.069)
South	−0.147***	−0.143***	−0.143***	−0.143***
	(0.024)	(0.024)	(0.024)	(0.024)
Church Attendance	−0.043***	−0.042***	−0.042***	−0.042***
	(0.004)	(0.004)	(0.004)	(0.004)
Family Income	0.109***	0.110***	0.110***	0.110***
	(0.013)	(0.013)	(0.013)	(0.013)
Age	−0.343***	−0.350***	−0.350***	−0.349***
	(0.039)	(0.039)	(0.039)	(0.039)
Age^2	0.031***	0.032***	0.032***	0.032***
	(0.004)	(0.004)	(0.004)	(0.004)
Independent	−0.081***	−0.074***	−0.074***	−0.074***
	(0.027)	(0.027)	(0.027)	(0.027)
Republican	−0.015	0.009	0.008	0.007
	(0.031)	(0.032)	(0.032)	(0.032)
Moderate	−0.217***	8.956**	4.902	−0.136**
	(0.029)	(4.077)	(6.057)	(0.059)
Conservative	−0.207***	31.847***	30.228***	0.040
	(0.031)	(4.258)	(6.277)	(0.063)
Post-Reagan (1981–2021)	−0.035	−0.040	−0.041	0.049
	(0.048)	(0.048)	(0.049)	(0.067)
Bush (2001–2008)	−0.021	−0.018	−0.019	0.089
	(0.054)	(0.054)	(0.055)	(0.080)
Social Media Era (2010–2021)	0.037	0.036	−24.624	0.192**
	(0.070)	(0.070)	(38.559)	(0.087)
Post-Trump (2017–2021)	0.139**	0.139**	0.147*	0.320***
	(0.065)	(0.065)	(0.087)	(0.117)
Year × Moderate		−0.005**	−0.003	
		(0.002)	(0.003)	

	Model 1	Model 2	Model 2 Variation	Model 3
Year $\times$ Conservative		-0.016^{***}	-0.015^{***}	
		(0.002)	(0.003)	
Year $\times$ Social Media			0.012	
			(0.019)	
Moderate $\times$ S.M.E.			30.185	-0.088
			(46.359)	(0.082)
Conservative $\times$ S.M.E.			53.499	-0.348^{***}
			(47.698)	(0.084)
Year $\times$ Mod. $\times$ S.M.E.			-0.015	
			(0.023)	
Year $\times$ Cons. $\times$ S.M.E.			-0.027	
			(0.024)	
Moderate $\times$ Post-Reagan				-0.068
				(0.072)
Moderate $\times$ Bush				-0.022
				(0.090)
Moderate $\times$ Post-Trump				-0.247
				(0.157)
Conservative $\times$ Post-Reagan				-0.180^{**}
				(0.075)
Conservative $\times$ Bush				-0.281^{***}
				(0.092)
Conservative $\times$ Post-Trump				-0.268^{*}
				(0.162)
Including Year 2021	No	No	No	No
AIC	44,600	44,542	44,550	44,556
BIC	44,777	44,736	44,786	44,801
Log Likelihood	-22,279	-22,248	-22,247	-22,249
Num. obs.	33,917	33,917	33,917	33,917

$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

Note: Mod., Cons., and S.M.E. are acronyms for moderate, conservative, and social media era, respectively. Numbers in parentheses represent standard errors. The reference category for political party affiliation is Democrat. The reference category for political ideology is liberal. Age^2 is a squared term.

Table 3. Logit Models Predicting Public Confidence in Science (II)

	Model 4	Model 5	Model 5 Variation	Model 6
Constant	15.258***	−7.837	2.237	15.740***
	(5.395)	(5.888)	(6.760)	(5.390)
Year	−0.008***	0.004	−0.001	−0.008***
	(0.003)	(0.003)	(0.003)	(0.003)
Female	−0.289***	−0.293***	−0.292***	−0.293***
	(0.022)	(0.022)	(0.022)	(0.022)
Education (years)	0.078***	0.078***	0.079***	0.079***
	(0.006)	(0.006)	(0.006)	(0.006)
High School	0.009	0.004	0.003	0.004
	(0.030)	(0.030)	(0.030)	(0.030)
Bachelor	0.304***	0.292***	0.287***	0.287***
	(0.050)	(0.050)	(0.050)	(0.050)
Graduate	0.278***	0.262***	0.256***	0.256***
	(0.065)	(0.066)	(0.066)	(0.066)
Church Attendance	−0.055***	−0.053***	−0.053***	−0.053***
	(0.004)	(0.004)	(0.004)	(0.004)
Family Income	0.137***	0.137***	0.137***	0.136***
	(0.012)	(0.012)	(0.012)	(0.012)
Age	−0.361***	−0.375***	−0.371***	−0.371***
	(0.037)	(0.038)	(0.038)	(0.038)
Age^2	0.035***	0.036***	0.036***	0.036***
	(0.004)	(0.004)	(0.004)	(0.004)
Independent	−0.061**	−0.043*	−0.040	−0.038
	(0.026)	(0.026)	(0.026)	(0.026)
Republican	0.019	0.058*	0.059*	0.059*
	(0.030)	(0.030)	(0.030)	(0.030)
Moderate	−0.256***	20.894***	6.799	−0.116**
	(0.028)	(3.671)	(6.038)	(0.059)
Conservative	−0.269***	45.222***	30.887***	0.049
	(0.030)	(3.833)	(6.260)	(0.063)
Post-Reagan (1981–2021)	−0.063	−0.071	−0.071	0.016
	(0.048)	(0.048)	(0.049)	(0.067)
Bush (2001–2008)	−0.037	−0.033	−0.033	0.088
	(0.054)	(0.054)	(0.054)	(0.079)
Social Media Era (2010–2021)	0.013	0.013	−108.536***	0.181**
	(0.070)	(0.070)	(32.050)	(0.087)
Post-Trump (2017–2021)	0.125*	0.124*	0.137	0.300**
	(0.064)	(0.065)	(0.088)	(0.117)
COVID-19 (2020–2021)	0.151**	0.146**	0.151*	0.645***
	(0.072)	(0.073)	(0.083)	(0.136)
Year × Moderate		−0.011***	−0.004	
		(0.002)	(0.003)	
Year × Conservative		−0.023***	−0.016***	
		(0.002)	(0.003)	

	Model 4	Model 5	Model 5 Variation	Model 6
Year × Social Media			0.054***	
			(0.016)	
Moderate × S.M.E.			141.662***	−0.108
			(30.285)	(0.081)
Conservative × S.M.E.			189.347***	−0.351***
			(31.129)	(0.084)
Year × Mod. × S.M.E.			−0.070***	
			(0.015)	
Year × Cons. × S.M.E.			−0.094***	
			(0.015)	
Moderate × Post-Reagan				−0.069
				(0.072)
Moderate × Bush				−0.040
				(0.090)
Moderate × Post-Trump				−0.245
				(0.156)
Moderate × COVID-19				−0.579***
				(0.181)
Conservative × Post-Reagan				−0.169**
				(0.075)
Conservative × Bush				−0.299***
				(0.092)
Conservative × Post-Trump				−0.254
				(0.161)
Conservative × COVID-19				−0.876***
				(0.187)
Including Year 2021	Yes	Yes	Yes	Yes
AIC	47,520	47,382	47,348	47,341
BIC	47,690	47,568	47,577	47,596
Log Likelihood	-23,740	-23,669	-23,647	-23,640
Num. obs.	36,080	36,080	36,080	36,080

$^{***}p < 0.01$; $^{**}p < 0.05$; $^{*}p < 0.1$

Note: Mod., Cons., and S.M.E. are acronyms for moderate, conservative, and social media era, respectively. The variables "Non-White" and "South" are excluded from Model 4, 5, and 6. Numbers in parentheses represent standard errors. The reference category for political party affiliation is Democrat. The reference category for political ideology is liberal. Age^2 is a squared term.

Table 4. Average Marginal Effects of Logit Models (I)

	Model 1	Model 2	Model 2 Variation	Model 3
Year	−0.001**	−0.001**	−0.002**	−0.002**
	(0.001)	(0.001)	(0.001)	(0.001)
Female	−0.067***	−0.068***	−0.068***	−0.068***
	(0.005)	(0.005)	(0.005)	(0.005)
Non-White	−0.098***	−0.098***	−0.099***	−0.099***
	(0.007)	(0.007)	(0.007)	(0.007)
Education (Years)	0.016***	0.016***	0.016***	0.016***
	(0.002)	(0.002)	(0.002)	(0.002)
High School	−0.003	−0.004	−0.004	−0.004
	(0.007)	(0.007)	(0.007)	(0.007)
Bachelor	0.064***	0.063***	0.063***	0.063***
	(0.012)	(0.012)	(0.012)	(0.012)
Graduate	0.062***	0.061***	0.060***	0.061***
	(0.016)	(0.016)	(0.016)	(0.016)
South	−0.034***	−0.033***	−0.033***	−0.033***
	(0.006)	(0.006)	(0.006)	(0.006)
Church Attendance	−0.010***	−0.010***	−0.010***	−0.010***
	(0.001)	(0.001)	(0.001)	(0.001)
Family Income	0.025***	0.025***	0.025***	0.025***
	(0.003)	(0.003)	(0.003)	(0.003)
Age	−0.016***	−0.016***	−0.016***	−0.016***
	(0.002)	(0.002)	(0.002)	(0.002)
Independent	−0.019***	−0.017***	−0.017***	−0.017***
	(0.006)	(0.006)	(0.006)	(0.006)
Republican	−0.003	0.002	0.002	0.002
	(0.007)	(0.007)	(0.007)	(0.007)
Moderate	−0.050***	−0.051***	−0.051***	−0.051***
	(0.007)	(0.007)	(0.007)	(0.007)
Conservative	−0.048***	−0.049***	−0.049***	−0.049***
	(0.007)	(0.007)	(0.007)	(0.007)
Post-Reagan (1981–2021)	−0.008	−0.009	−0.009	−0.009
	(0.011)	(0.011)	(0.011)	(0.011)
Bush (2001–2008)	−0.005	−0.004	−0.004	−0.003
	(0.013)	(0.013)	(0.013)	(0.013)
Social Media Era (2010–2021)	0.009	0.008	0.019	0.010
	(0.016)	(0.016)	(0.058)	(0.016)
Post-Trump (2017–2021)	0.032**	0.032**	0.034*	0.031**
	(0.015)	(0.015)	(0.020)	(0.015)
Including Year 2021	No	No	No	No
AIC	44,600	44,542	44,550	44,556
BIC	44,777	44,736	44,786	44,801
Log Likelihood	-22,279	-22,248	-22,247	-22,249
Num. obs.	33,917	33,917	33,917	33,917

***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

Table 5. Average Marginal Effects of Logit Models (II)

	Model 4	Model 5	Model 5 Variation	Model 6
Year	−0.002***	−0.002***	−0.002**	−0.002***
	(0.001)	(0.001)	(0.001)	(0.001)
Female	−0.067***	−0.068***	−0.068***	−0.068***
	(0.005)	(0.005)	(0.005)	(0.005)
Education (Years)	0.018***	0.018***	0.018***	0.018***
	(0.001)	(0.001)	(0.001)	(0.001)
High School	0.002	0.001	0.001	0.001
	(0.007)	(0.007)	(0.007)	(0.007)
Bachelor	0.071***	0.068***	0.067***	0.067***
	(0.012)	(0.012)	(0.012)	(0.012)
Graduate	0.065***	0.061***	0.059***	0.059***
	(0.015)	(0.015)	(0.015)	(0.015)
Church Attendance	−0.013***	−0.012***	−0.012***	−0.012***
	(0.001)	(0.001)	(0.001)	(0.001)
Family Income	0.032***	0.032***	0.032***	0.032***
	(0.003)	(0.003)	(0.003)	(0.003)
Age	−0.011***	−0.012***	−0.011***	−0.011***
	(0.002)	(0.002)	(0.002)	(0.002)
Independent	−0.014**	−0.010*	−0.009	−0.009
	(0.006)	(0.006)	(0.006)	(0.006)
Republican	0.004	0.014*	0.014*	0.014*
	(0.007)	(0.007)	(0.007)	(0.007)
Moderate	−0.060***	−0.060***	−0.059***	−0.059***
	(0.006)	(0.006)	(0.006)	(0.006)
Conservative	−0.063***	−0.064***	−0.064***	−0.063***
	(0.007)	(0.007)	(0.007)	(0.007)
Post-Reagan (1981–2021)	−0.015	−0.016	−0.016	−0.016
	(0.011)	(0.011)	(0.011)	(0.011)
Bush (2001–2008)	−0.009	−0.008	−0.008	−0.006
	(0.013)	(0.012)	(0.013)	(0.012)
Post-Trump (2017–2021)	0.003	0.003	0.022	0.005
	(0.016)	(0.016)	(0.053)	(0.016)
Social Media Era (2010–2021)	0.029*	0.029*	0.032	0.028*
	(0.015)	(0.015)	(0.020)	(0.015)
COVID-19 (2020–2021)	0.035**	0.034**	0.035*	0.030*
	(0.017)	(0.017)	(0.019)	(0.017)
Including Year 2021	Yes	Yes	Yes	Yes
AIC	47,520	47,382	47,348	47,341
BIC	47,690	47,568	47,577	47,596
Log Likelihood	-23,740	-23,669	-23,647	-23,640
Num. obs.	36,080	36,080	36,080	36,080

***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

Note: Mod., Cons., and S.M.E. are acronyms for moderate, conservative, and social media era, respectively. The variables "Non-White" and "South" are excluded from Model 4, 5, and 6.

Model 2 and 5 Variations

Table 6. Logit Models 2 Predicting Public Confidence in Science (I)

	Model 2	Model 2 Variation
Constant	−1.457	0.454
	(6.016)	(6.786)
Year	0.001	−0.000
	(0.003)	(0.003)
Female	−0.292***	−0.291***
	(0.023)	(0.023)
Non-White	−0.425***	−0.425***
	(0.032)	(0.032)
Education (Years)	0.070***	0.070***
	(0.007)	(0.007)
High School	−0.018	−0.018
	(0.031)	(0.031)
Bachelor	0.271***	0.270***
	(0.052)	(0.052)
Graduate	0.261***	0.261***
	(0.069)	(0.069)
South	−0.143***	−0.143***
	(0.024)	(0.024)
Church Attendance	−0.042***	−0.042***
	(0.004)	(0.004)
Family Income	0.110***	0.110***
	(0.013)	(0.013)
Age	−0.350***	−0.350***
	(0.039)	(0.039)
Age^2	0.032***	0.032***
	(0.004)	(0.004)
Independent	−0.074***	−0.074***
	(0.027)	(0.027)
Republican	0.009	0.008
	(0.032)	(0.032)
Moderate	8.956**	4.902
	(4.077)	(6.057)
Conservative	31.847***	30.228***
	(4.258)	(6.277)
Post-Reagan (1981–2021)	−0.040	−0.041
	(0.048)	(0.049)
Bush (2001–2008)	−0.018	−0.019
	(0.054)	(0.055)
Post-Trump (2017–2021)	0.036	−24.624

	Model 2	Model 2 Variation
	(0.070)	(38.559)
Year × Moderate	0.139**	0.147*
	(0.065)	(0.087)
Year × Conservative	−0.005**	−0.003
	(0.002)	(0.003)
Post-2010s (2010–2021)	−0.016***	−0.015***
	(0.002)	(0.003)
Post-2010s × Moderate		0.012
		(0.019)
Post-2010s × Conservative		30.185
		(46.359)
Year × Post-2010s		53.499
		(47.698)
Year × Post-2010s × Moderate		−0.015
		(0.023)
Year × Post-2010s × Conservative		−0.027
		(0.024)
Including Year 2021	No	No
AIC	44542.010	44549.962
BIC	44735.938	44786.049
Log Likelihood	−22248.005	−22246.981
Num. obs.	33917	33917

***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

Note: Numbers in parentheses represent standard errors. The reference category for political party affiliation is Democrat. The reference category for political ideology is liberal. Age^2 is a squared term.

Table 7. Logit Models 5 Predicting Public Confidence in Science (II)

	Model 5	Model 5 Variation
Constant	−8.700**	2.211
	(3.487)	(6.760)
Year	0.004**	−0.001
	(0.002)	(0.003)
Female	−0.293***	−0.292***
	(0.022)	(0.022)
Education (years)	0.078***	0.079***
	(0.006)	(0.006)
High School	0.004	0.003
	(0.030)	(0.030)
Bachelor	0.292***	0.287***
	(0.050)	(0.050)
Graduate	0.262***	0.256***
	(0.066)	(0.066)
Church Attendance	−0.053***	−0.053***
	(0.004)	(0.004)
Family Income	0.137***	0.137***
	(0.012)	(0.012)
Age	−0.375***	−0.372***
	(0.038)	(0.038)
Age^2	0.036***	0.036***
	(0.004)	(0.004)
Independent	−0.043*	−0.040
	(0.026)	(0.026)
Republican	0.058*	0.059*
	(0.030)	(0.030)
Moderate	20.897***	6.780
	(3.671)	(6.038)
Conservative	45.225***	30.888***
	(3.833)	(6.260)
Post-Reagan (1981–2021)	−0.076**	−0.071
	(0.038)	(0.049)
Bush (2001–2008)	−0.040	−0.034
	(0.037)	(0.054)
Post-Trump (2017–2021)	0.124*	0.137
	(0.065)	(0.088)
COVID-19 (2020–2021)	0.145**	0.151*
	(0.073)	(0.083)
Year × Moderate	−0.011***	−0.003
	(0.002)	(0.003)
Year × Conservative	−0.023***	−0.016***
	(0.002)	(0.003)
Post-2010s (2010–2021)		−108.512***
		(32.050)

	Model 5	Model 5 Variation
Post-2010s × Moderate		141.683***
		(30.285)
Post-2010s × Conservative		189.350***
		(31.129)
Year × Post-2010s		0.054***
		(0.016)
Year × Post-2010s × Moderate		−0.070***
		(0.015)
Year × Post-2010s × Conservative		−0.094***
		(0.015)
Including Year 2021	Yes	Yes
AIC	47379.057	47347.309
BIC	47557.420	47576.633
Log Likelihood	−23668.528	−23646.655
Num. obs.	36079	36079

***$p < 0.01$; **$p < 0.05$; *$p < 0.1$

Note: The variables "Non-White" and "South" are excluded from models 4, 5, and 6. Numbers in parentheses represent standard errors. The reference category for political party affiliation is Democrat. The reference category for political ideology is liberal. Age^2 is a squared term.

References

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