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 ($N = 36,079$)

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	0.360		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
Post-Trump (2017–2021)	0.097		0	1
COVID-19 (2020–2021)	0.060		0	1
Cohort	1950.483	20.864	1885	2003

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 3
Constant	10.172***	−3.930	10.045***
	(2.599)	(3.675)	(2.599)
Year	−0.005***	0.002	−0.005***
	(0.001)	(0.002)	(0.001)
Female	−0.290***	−0.292***	−0.292***
	(0.023)	(0.023)	(0.023)
Non-White	−0.422***	−0.424***	−0.424***
	(0.032)	(0.032)	(0.032)
Education (Years)	0.071***	0.070***	0.070***
	(0.007)	(0.007)	(0.007)
High School	−0.015	−0.018	−0.016
	(0.031)	(0.031)	(0.031)
Bachelor	0.275***	0.271***	0.274***
	(0.052)	(0.052)	(0.052)
Graduate	0.268***	0.262***	0.267***
	(0.069)	(0.069)	(0.069)
South	−0.147***	−0.144***	−0.144***
	(0.024)	(0.024)	(0.024)
Church Attendance	−0.043***	−0.042***	−0.042***
	(0.004)	(0.004)	(0.004)
Family Income	0.109***	0.110***	0.109***
	(0.013)	(0.013)	(0.013)
Age	−0.343***	−0.351***	−0.352***
	(0.039)	(0.039)	(0.039)
Age^2	0.031***	0.032***	0.032***
	(0.004)	(0.004)	(0.004)
Independent	−0.081***	−0.074***	−0.076***
	(0.027)	(0.027)	(0.027)
Republican	−0.016	0.008	0.000
	(0.031)	(0.032)	(0.031)
Moderate	−0.217***	8.971**	−0.135**
	(0.029)	(4.077)	(0.059)
Conservative	−0.207***	31.860***	0.042
	(0.031)	(4.258)	(0.063)
Post-Reagan (1981–2021)	−0.050	−0.055	0.069
	(0.038)	(0.038)	(0.058)
Bush (2001–2008)	−0.041	−0.038	0.024
	(0.037)	(0.037)	(0.067)
Post-Trump (2017–2021)	0.140**	0.139**	0.428***
	(0.065)	(0.065)	(0.111)
Year × Moderate		−0.005**	
		(0.002)	
Year × Conservative		−0.016***	
		(0.002)	

	Model 1	Model 2	Model 3
Moderate × Post-Reagan			−0.092
			(0.069)
Moderate × Bush			0.003
			(0.088)
Moderate × Post-Trump			−0.311**
			(0.145)
Conservative × Post-Reagan			−0.266***
			(0.072)
Conservative × Bush			−0.193**
			(0.090)
Conservative × Post-Trump			−0.528***
			(0.149)
Including Year 2021	No	No	No
AIC	44597.317	44539.579	44568.878
BIC	44765.950	44725.075	44788.100
Log Likelihood	−22278.659	−22247.790	−22258.439
Num. obs.	33916	33916	33916

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

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

	Model 4	Model 5	Model 6
Constant	14.371***	−8.700**	14.020***
	(2.581)	(3.487)	(2.578)
Year	−0.007***	0.004**	−0.007***
	(0.001)	(0.002)	(0.001)
Female	−0.289***	−0.293***	−0.293***
	(0.022)	(0.022)	(0.022)
Education (years)	0.078***	0.078***	0.079***
	(0.006)	(0.006)	(0.006)
High School	0.009	0.004	0.005
	(0.030)	(0.030)	(0.030)
Bachelor	0.304***	0.292***	0.290***
	(0.050)	(0.050)	(0.050)
Graduate	0.279***	0.262***	0.260***
	(0.065)	(0.066)	(0.066)
Church Attendance	−0.055***	−0.053***	−0.054***
	(0.004)	(0.004)	(0.004)
Family Income	0.137***	0.137***	0.136***
	(0.012)	(0.012)	(0.012)
Age	−0.362***	−0.375***	−0.373***
	(0.037)	(0.038)	(0.038)
Age^2	0.035***	0.036***	0.036***
	(0.004)	(0.004)	(0.004)
Independent	−0.061**	−0.043*	−0.040
	(0.026)	(0.026)	(0.026)
Republican	0.018	0.058*	0.053*
	(0.030)	(0.030)	(0.030)
Moderate	−0.256***	20.897***	−0.115*
	(0.028)	(3.671)	(0.059)
Conservative	−0.269***	45.225***	0.051
	(0.030)	(3.833)	(0.063)
Post-Reagan (1981–2021)	−0.069*	−0.076**	0.046
	(0.038)	(0.038)	(0.058)
Bush (2001–2008)	−0.045	−0.040	0.032
	(0.037)	(0.037)	(0.067)
Post-Trump (2017–2021)	0.125*	0.124*	0.414***
	(0.064)	(0.065)	(0.111)
COVID-19 (2020–2021)	0.150**	0.145**	0.642***
	(0.072)	(0.073)	(0.135)
Year × Moderate		−0.011***	
		(0.002)	
Year × Conservative		−0.023***	
		(0.002)	
Moderate × Post-Reagan			−0.098
			(0.069)

	Model 4	Model 5	Model 6
Moderate × Bush	5		−0.011
			(0.088)
Moderate × Post-Trump			−0.322**
			(0.144)
Moderate × COVID-19			−0.579***
			(0.181)
Conservative × Post-Reagan			−0.256***
			(0.072)
Conservative × Bush			−0.210**
			(0.089)
Conservative × Post-Trump			−0.516***
			(0.149)
Conservative × COVID-19			−0.875***
			(0.187)
Including Year 2021	Yes	Yes	Yes
AIC	47517.387	47379.057	47353.256
BIC	47678.763	47557.420	47582.580
Log Likelihood	−23739.694	−23668.528	−23649.628
Num. obs.	36079	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.

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

	Model 1	Model 2	Model 3
Year	−0.001***	−0.001***	−0.001***
	(0.000)	(0.000)	(0.000)
Female	−0.068***	−0.068***	−0.068***
	(0.005)	(0.005)	(0.005)
Non-White	−0.098***	−0.098***	−0.098***
	(0.007)	(0.007)	(0.007)
Education (Years)	0.016***	0.016***	0.016***
	(0.002)	(0.002)	(0.002)
High School	−0.003	−0.004	−0.004
	(0.007)	(0.007)	(0.007)
Bachelor	0.064***	0.063***	0.064***
	(0.012)	(0.012)	(0.012)
Graduate	0.062***	0.061***	0.062***
	(0.016)	(0.016)	(0.016)
South	−0.034***	−0.033***	−0.033***
	(0.006)	(0.006)	(0.006)
Church Attendance	−0.010***	−0.010***	−0.010***
	(0.001)	(0.001)	(0.001)
Family Income	0.025***	0.025***	0.025***
	(0.003)	(0.003)	(0.003)
Age	−0.016***	−0.016***	−0.016***
	(0.002)	(0.002)	(0.002)
Independent	−0.019***	−0.017***	−0.018***
	(0.006)	(0.006)	(0.006)
Republican	−0.004	0.002	0.000
	(0.007)	(0.007)	(0.007)
Moderate	−0.050***	−0.051***	−0.051***
	(0.007)	(0.007)	(0.007)
Conservative	−0.048***	−0.049***	−0.049***
	(0.007)	(0.007)	(0.007)
Post-Reagan (1981–2021)	−0.012	−0.013	−0.013
	(0.009)	(0.009)	(0.009)
Bush (2001–2008)	−0.010	−0.009	−0.009
	(0.009)	(0.009)	(0.009)
Post-Trump (2017–2021)	0.032**	0.032**	0.031**
	(0.015)	(0.015)	(0.015)
Including Year 2021	No	No	No
AIC	44597.317	44539.579	44568.878
BIC	44765.950	44725.075	44788.100
Log Likelihood	−22278.659	−22247.790	−22258.439
Num. obs.	33916	33916	33916

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

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

	Model 4	Model 5	Model 6
Year	−0.002***	−0.002***	−0.002***
	(0.000)	(0.000)	(0.000)
Female	−0.067***	−0.068***	−0.068***
	(0.005)	(0.005)	(0.005)
Education (Years)	0.018***	0.018***	0.018***
	(0.001)	(0.001)	(0.001)
High School	0.002	0.001	0.001
	(0.007)	(0.007)	(0.007)
Bachelor	0.071***	0.068***	0.067***
	(0.012)	(0.012)	(0.012)
Graduate	0.065***	0.061***	0.060***
	(0.015)	(0.015)	(0.015)
Church Attendance	−0.013***	−0.012***	−0.012***
	(0.001)	(0.001)	(0.001)
Family Income	0.032***	0.032***	0.031***
	(0.003)	(0.003)	(0.003)
Age	−0.011***	−0.012***	−0.012***
	(0.002)	(0.002)	(0.002)
Independent	−0.014**	−0.010*	−0.009
	(0.006)	(0.006)	(0.006)
Republican	0.004	0.013*	0.012*
	(0.007)	(0.007)	(0.007)
Moderate	−0.060***	−0.060***	−0.059***
	(0.006)	(0.006)	(0.006)
Conservative	−0.063***	−0.064***	−0.063***
	(0.007)	(0.007)	(0.007)
Post-Reagan (1981–2021)	−0.016*	−0.018**	−0.018**
	(0.009)	(0.009)	(0.009)
Bush (2001–2008)	−0.010	−0.009	−0.010
	(0.009)	(0.009)	(0.009)
Post-Trump (2017–2021)	0.029*	0.029*	0.027*
	(0.015)	(0.015)	(0.015)
COVID-19 (2020–2021)	0.035**	0.034**	0.030*
	(0.017)	(0.017)	(0.017)
Including Year 2021	Yes	Yes	Yes
AIC	47517.387	47379.057	47353.256
BIC	47678.763	47557.420	47582.580
Log Likelihood	−23739.694	−23668.528	−23649.628
Num. obs.	36079	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.

Model 2 and 5 Variations

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

	Model 2	Model 2 Variation
Constant	−3.930	0.425
	(3.675)	(6.786)
Year	0.002	−0.000
	(0.002)	(0.003)
Female	−0.292***	−0.291***
	(0.023)	(0.023)
Non-White	−0.424***	−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	0.262***	0.261***
	(0.069)	(0.069)
South	−0.144***	−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	−0.351***	−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	0.008	0.008
	(0.032)	(0.032)
Moderate	8.971**	4.882
	(4.077)	(6.057)
Conservative	31.860***	30.229***
	(4.258)	(6.277)
Post-Reagan (1981–2021)	−0.055	−0.041
	(0.038)	(0.049)
Bush (2001–2008)	−0.038	−0.019
	(0.037)	(0.055)
Post-Trump (2017–2021)	0.139**	0.147*
	(0.065)	(0.087)
Year × Moderate	−0.005**	−0.003
	(0.002)	(0.003)

	Model 2	Model 2 Variation
Year × Conservative	−0.016***	−0.015***
	(0.002)	(0.003)
Post-2010s (2010–2021)		−24.595
		(38.559)
Post-2010s × Moderate		30.207
		(46.359)
Post-2010s × Conservative		53.499
		(47.698)
Year × Post-2010s		0.012
		(0.019)
Year × Post-2010s × Moderate		−0.015
		(0.023)
Year × Post-2010s × Conservative		−0.027
		(0.024)
Including Year 2021	No	No
AIC	44539.579	44549.261
BIC	44725.075	44785.347
Log Likelihood	−22247.790	−22246.631
Num. obs.	33916	33916

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

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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