Can Issue Publics Overcome Inequalities in Policy Knowledge?

Supplementary Information

Not for Print Publication

About the CHIP50 Survey

With support from the National Science Foundation, a team of scholars comprised of multiple principal investigators (Matthew Baum (Harvard University), James Druckman (Northwestern University/University of Rochester), David Lazer (Northeastern University), and Katherine Ognyanova (Rutgers University). Associate principal investigators include Roy Perlis (Harvard University) and Mauricio Santillana (Northeastern University) has assembled state-level survey capacity and made it available to the scholarly community.

CHIP50 survey participants are recruited by 22 vendors who use a variety of strategies and incentives to maintain online respondent panels. Respondents are channeled to surveys through PureSpectrum, an online polling platform that works with panel providers from all 50 states and D.C. PureSpectrum provides initial respondent identification, deduplication, and screening for quality, demographic qualifications, and location. Using the PureSpectrum API, the CHIP50 team has developed a system to launch and monitor multiple survey projects in all states and D.C., based on pre-specified quotas and qualifications (see below). The CHIP50 team monitors recruitment in real-time.

The Civic Health and Institutions Project data wave 32 was collected between 6/18/2024 and 7/28/2024 by PureSpectrum, an online panel management platform. Respondents were recruited from all 50 states and Washington, DC, with flexible state-level demographic quotas applied for gender, age, race, and ethnicity. Additional sample augments were used to oversample African American, Asian, and Hispanic respondents.

This survey was reviewed by the Institutional Review Board at a major state university and deemed exempt.

About the YouGov Survey

YouGov interviewed 1554 respondents from July 9 to July 17, 2024 who were then matched down to a sample of 1500 to produce the final dataset. The respondents were matched to a sampling frame on gender, age, race, and education. The sampling frame is a politically representative "modeled frame" of US adults, based upon the American Community Survey (ACS) public use microdata file, public voter file records, the 2020 Current Population Survey (CPS) Voting and Registration supplements, the 2020 National Election Pool (NEP) exit poll, and the 2020 CES surveys, including demographics and 2020 presidential vote.

The matched cases were weighted to the sampling frame using propensity scores. The matched cases and the frame were combined and a logistic regression was estimated for inclusion in the frame. The propensity score function included age, gender, race/ethnicity, years of education, and region. The propensity scores were grouped into deciles of the estimated propensity score in the frame and post-stratified according to these deciles.

The weights were then post-stratified on 2020 presidential vote choice as well as a four-way stratification of gender, age (4-categories), race (4-categories), and education (4-categories), to produce the final weight.

This survey was reviewed by the Institutional Review Board at a major state university and deemed exempt.

Summary Statistics

Variable	Mean	St. Dev.
White	0.70	0.46
Male	0.49	0.50
Upper Class	0.20	0.40
Senior	0.20	0.40
High Political Interest	0.38	0.49
Parent	0.25	0.44
LGBT	0.11	0.31
Gun in Home	0.35	0.48
Republican PID	0.51	0.35

Table S1: Summary Statistics.

Table S1 provides summary statistics for the variables used in the analysis.

Issue Publics

Table S2: Policies and Issue Publics

Policy	Issue Public	Mean Income	Mean Education
Minimum wage	Non-Upper Class	43,308	2.54
Income Tax	Upper Class	112,645	4.42
Medicaid expansion	Non-Upper Class	43,308	2.54
Gender care restriction	LGBT People	47,912	2.78
K-12 race restrictions	Parents	64,996	2.95
Abortion	Women	52,567	2.88
Open carry	Gun in Home	64,942	2.98
Sexual orientation discrimination	LGBT People	47,912	32.78
Photo ID vote	Racial Minorities	51,415	2.76
Legalized Marijuana	Younger People	55,777	2.83
	Total Sample	57,425	2.92

Notes: Mean income is measured in current (2024) dollars. Mean education is based on a 5-point scale (1-5).

Some of the issue publics that we examine overlap or are mutually exclusively opposite of the sociodemographic disparities discussed above. Thus, in Table S2, we also indicate whether each group is generally advantaged or disadvantaged with respect to key resources that facilitate policy knowledge: income, education, and free time. While we cannot measure free time directly in our data, we assume that older adults tend to have more free time, while parents with children at home tend to have less. The table shows that among the issue publics that we examine, the non-upper class, women, LGBT individuals, people under 30, and racial and ethnic minorities are typically disadvantaged in terms of these knowledge-relevant resources. In contrast, individuals in households with a gun and those in the upper class tend to be more advantaged. Parents with children at home are generally advantaged in terms of income and education but likely face constraints on their time.

Coding Guidelines

Here, we provide detailed information on the coding of each of the ten state policies we study.

My state bans employment discrimination on the basis of sexual orientation.

Coding decisions for each state are based off the designation of Movement Advancement Project.[1]

Yes	No
CA, CO, CT, DC, DE, HI, IA, IL, MA, MD, ME, MI, MN, NH, NJ, NM, NV, NY, OR, RI, UT, VA, VT, and WA	AK, AZ, FL, KS, KY, ND, NE, OH, PA, TX, AL, AR, GA, ID, IN, LA, MS, MT, MO, NC, OK, SC, SD, TN, WI, WV, and WY

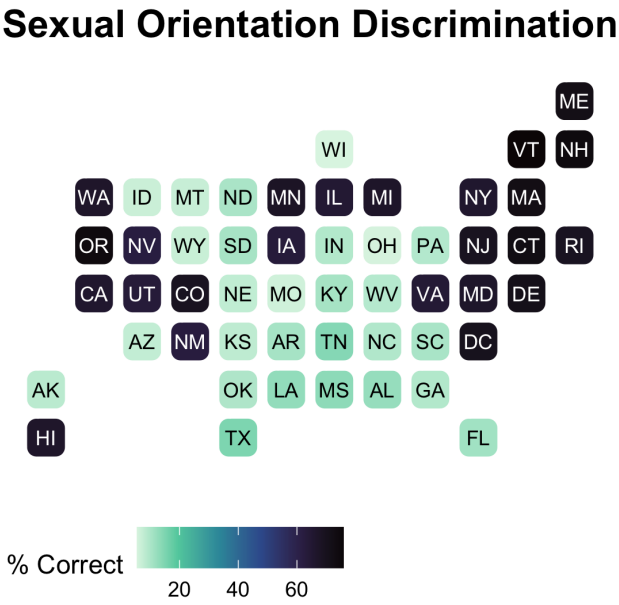


Figure S1: Percentage correct on Sexual Orientation Discrimination question, by state. Data are weighted at the state level.

[1] https://www.lgbtmap.org/equality_maps/employment_non_discrimination_laws/state

My state has passed a law restricting gender affirming care for transgender youth.

Coding decisions for each state are based off the designation of Movement Advancement Project,[2] the Human Rights Campaign,[3] the ACLU,[4] and UCLA's William's Institute of Law.[5]

Yes	No
AL, AR, AZ, FL, GA, IA, ID, IN, KY, LA, MS, MO, MT, NE, NC, ND, OH, OK, SC, SD, TN, TX, UT, WV, and WY	AK, CA, CO, CT, DC, DE, HI, IL, KS, MA, MD, ME, MI, MN, NH, NJ, NV, NM, NY, OR, PA, RI, VA, VT, WA, WI

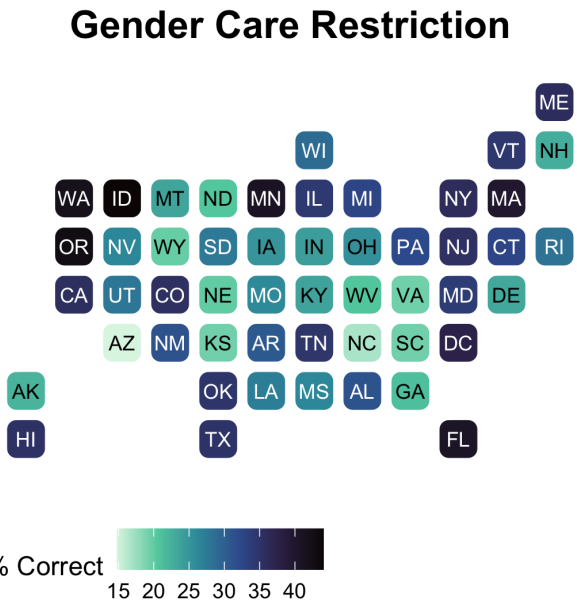


Figure S2: Percentage correct on Gender Care Restriction question, by state. Data are weighted at the state level.

[2]https://www.mapresearch.org/img/maps/citations-youth-medical-care-bans.pdf

[3]https://www.hrc.org/resources/attacks-on-gender-affirming-care-by-state-map

[4]https://www.aclu.org/legislative-attacks-on-lgbtq-rights-2024?impact=75136&state=OK

[5]https://williamsinstitute.law.ucla.edu/publications/2024-anti-trans-legislation/

My state allows individuals to openly carry a handgun in public places without a special permit or license.

Coding based on information from Giffords Law Center[6] and Everytown Research.[7]

Yes	No
AL, AK, AR, AZ, CO, DE, GA, ID, IL, IN, IA, KS, KY, LA, ME, MI, MO, MS, MT, NE, NV, NH, ND, NM, NC, PA, OH, OK, OR, SC, SD, TN TX, UT, VA, VT, WA, WV, WI, WY	CA, CT, DC, FL, IL, NJ, NY, HI, MD, MA, MN, RI

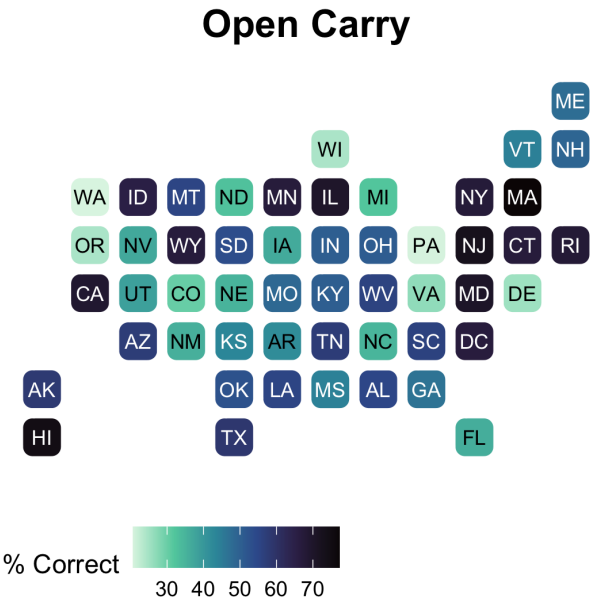


Figure S3: Percentage correct on Open Carry question, by state. Data are weighted at the state level.

[6]https://giffords.org/lawcenter/gun-laws/policy-areas/guns-in-public/open-carry/#footnote_23_5645

[7]https://everytownresearch.org/rankings/law/open-carry-regulated/

My state allows abortion until a pregnancy reaches 24 weeks.

All coding decisions for each state were made based on the information organized by Guttmacher[8] and U.S. News.[9]

Yes	No
AK, CA, CO, CT, DE, DC, HI, IL, ME, MD, MA, MI, MN, MT, NV, NH, NJ, NM, NY, OR, PA, RI, VT, VA, WA, WY	AL, AZ, AR, FL, GA, IA, ID, IN, KS, KY, LA, MO, MS, NE, NC, ND, OH, OK, SC, SD, TN, TX, UT, WV, WI

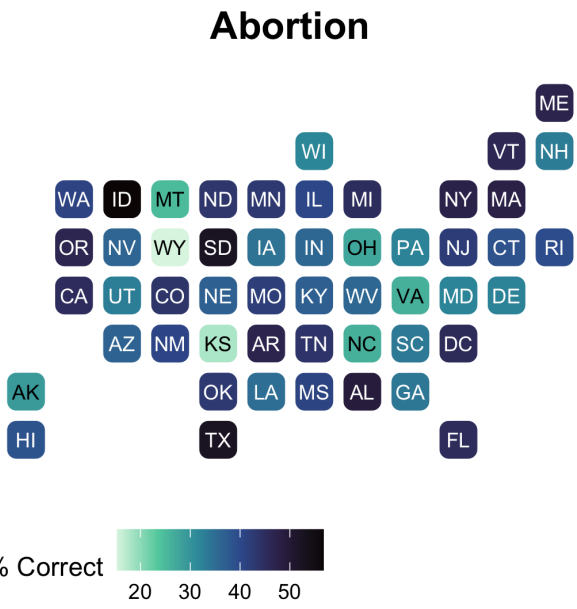


Figure S4: Percentage correct on Abortion question, by state. Data are weighted at the state level.

[8]https://states.guttmacher.org/policies/georgia/abortion-policies

[9]https://www.usnews.com/news/best-states/articles/a-guide-to-abortion-laws-by-state

The minimum wage in my state is greater than $10/hour.

The National Conference of State Legislatures (NCSL) tracks the minimum wage laws in each state.[10]

Yes	No
AK, AZ, AR, CA, CO, CT, DE, DC, FL, HI, IL, ME, MD, MA, MI, MN, MO, MT, NE, NV, NJ, NM, NY, OH, OR, RI, SD, VT, VA, WA	AL, GA, ID, IN, IA, KS, KY, LA, MS, NH, NC, ND, OK, PA, SC, TN, TX, UT, WV, WI, WY

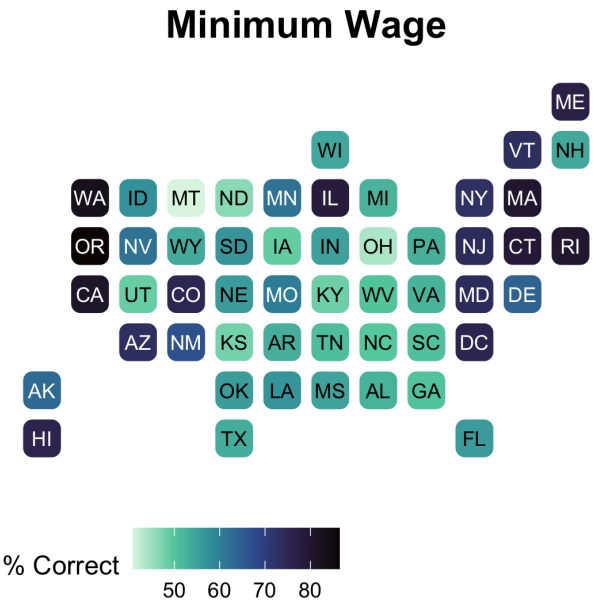


Figure S5: Percentage correct on Minimum Wage question, by state. Data are weighted at the state level.

[10]https://www.ncsl.org/labor-and-employment/state-minimum-wages

My state requires its residents to pay a personal income tax.

The Tax Policy Center organized by the Urban Institute and Brookings Institute provide personal income tax information for each state.[11]

Yes	No
AL, AZ, AR, CA, CO, CT, DE, GA, ID, IN, HI, KY, IA, MI, KS, MS, LA, ME, NC, MD, KY, MS, PA, UT, MN, MO, MT, NE, NJ, NM, NY, ND, OH, OK, OR, RI, SC, VT, VA, WV, WI, DC	AK, FL, NH, NV, SD, TN, TX, WA, WY

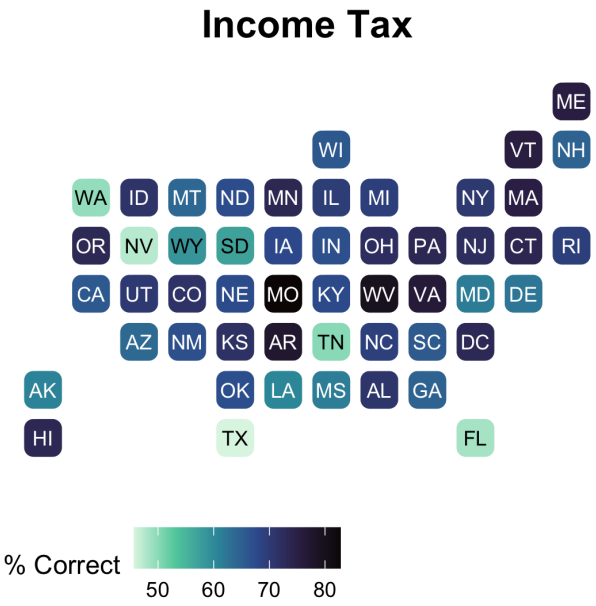


Figure S6: Percentage correct on Income Tax question, by state. Data are weighted at the state level.

[11] https://www.taxpolicycenter.org/statistics/state-individual-income-tax-rates

My state has expanded Medicaid coverage to cover more low-income people in accordance with the Affordable Care Act.

KFF has organized information of Health Policy and the Affordable Care Act (ACA) Medicaid expansion status of each state.[12]

Yes	No
AK, AZ, AR, CA, CO, CT, DE, DC, HI, ID, IL, IN, IA, KY, LA, ME, MD, MA, MI, MN, MO, MT, NE, NV, NH, NJ, NM, NY, NC, ND, OH, OK, OR, PA, RI, SD, UT, VT, VA, WA, WV	AL, FL, GA, KS, MS, SC, TN, TX, WI, WY

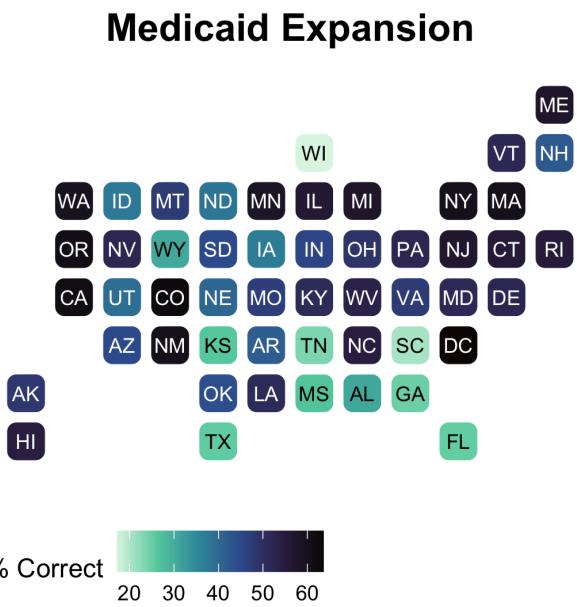


Figure S7: Percentage correct on Medicaid Expansion question, by state. Data are weighted at the state level.

[12]https://www.kff.org/affordable-care-act/state-indicator/state-activity-around-expanding-medicaid-under-the-afford

My state has passed a law restricting the ability of K-12 teachers to discuss issues related to race and racism in the classroom.

We relied on the information from PEN America Index of Educational Gag Orders.[13] and Education Week.[14]

Yes	No
ID, MT, ND, SD, IA, UT, OK, TX, AL, AR, KY, MS, TN, VA, SC, GA, FL	AK, AZ, WA, OR, WY, CO, NM, NE, MO, KS, LA, MN, WI, IL, IN, MI, OH, WV, MD, PA, NC, NY, CT, RI, NH, NJ, ME, HI, CA, NV, DE, MA, VT, DC

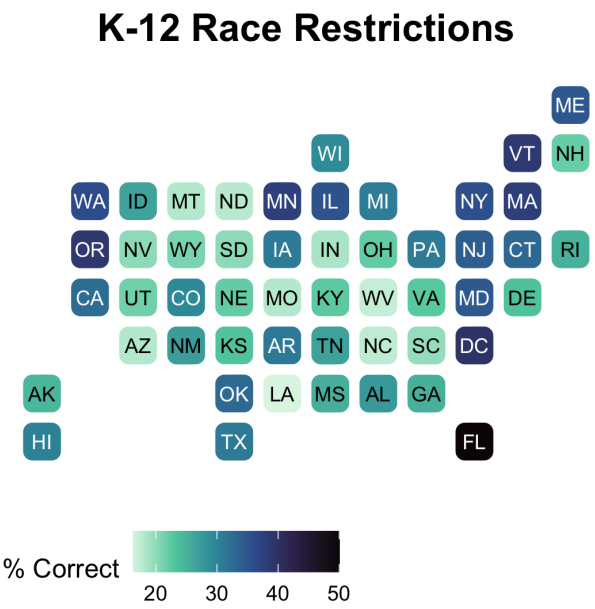


Figure S8: Percentage correct on K-12 Race Restrictions question, by state. Data are weighted at the state level.

[13]https://airtable.com/appg59iDuPhlLPPFp/shrtwubfBUo2tuHyO/tbl49yod7l01o0TCk/viw6VOxb6SUYd5nXM?blocks=hide

[14]https://www.edweek.org/policy-politics/map-where-critical-race-theory-is-under-attack/2021/06

My state requires individuals to present photo identification to vote in a presidential election.

Ballotpedia updates a reference page for the states which require citizens to vote in a presidential election with a valid photo identification.[15]

Yes	No
AL, AR, FL, GA, ID, IN, KS, KY, LA, MI, MS, MO, MT, NE, NH, NC, OH, OK, RI, SC, SD, TN, TX, WI	CA, DC, HI, IL, ME, MD, MA, MN, NV, NJ, NM, NY, OR, PA, VT, WA, AK, AZ, CO, CT, DE, IA, ND, UT, VA, WV, WY

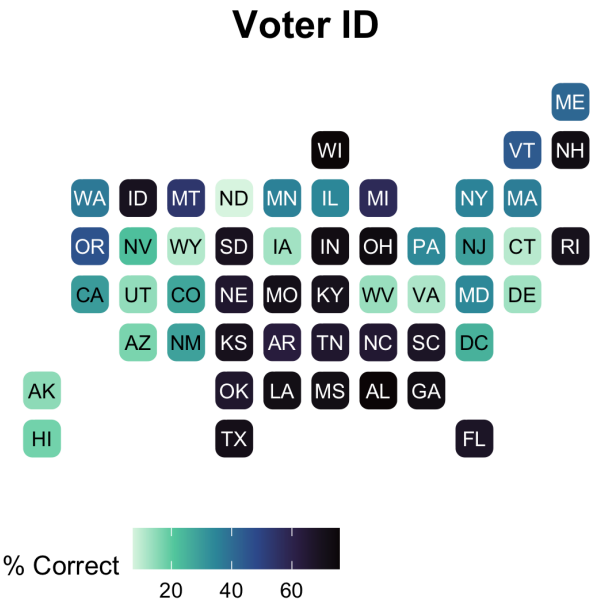


Figure S9: Percentage correct on Voter ID question, by state. Data are weighted at the state level.

[15]https://ballotpedia.org/Voter_identification_laws_by_state

My state has legalized marijuana for recreational use.

The legal status of recreational marijuana use in the U.S. is tracked by Pew Research Center.[16]

Yes	No
AK, WA, OR, CA, NV, AZ, NM, CO, MN, MO, IL, MI, VA, OH, MD, DE, DC, NJ, NY, CT, RI, VT, MA, ME, MT	HI, UT, ND, SD, OK, LA, AR, MS, KY, AL, WV, FL, PA, NH, ID, WY, TX, NE, KS, IA, WI, TN, IN, GA, NC, SC

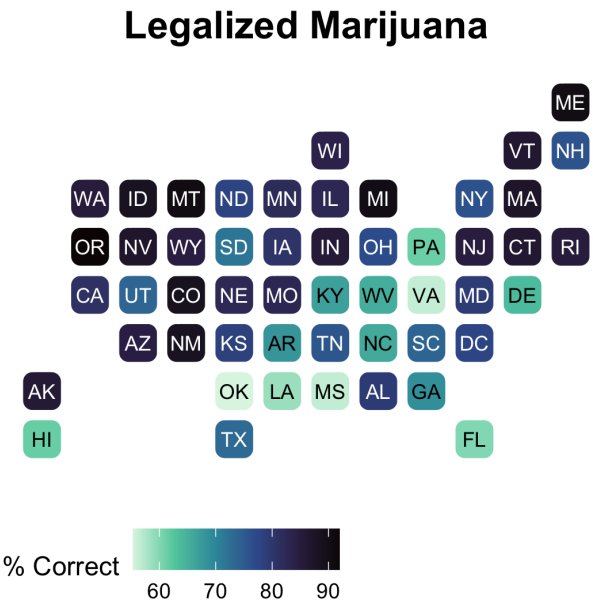


Figure S10: Percentage correct on Legalized Marijuana question, by state. Data are weighted at the state level.

[16]https://www.pewresearch.org/short-reads/2024/04/10/facts-about-marijuana/

Regression Tables

Table S3: Multilevel Linear Regression Model Results

	Sum of Correct Responses
White	0.50***
	(0.05)
Male	0.23***
	(0.03)
Upper Class	0.84***
	(0.05)
Senior	0.59***
	(0.05)
Parent	-0.01
	(0.04)
LGBT	0.25***
	(0.06)
Gun in Home	0.51***
	(0.04)
Democratic PID	0.10***
	(0.01)
Intercept	3.43***
	(0.08)
Observations	25,837

The outcome variable ranges from 0 to 10 correct answers. Standard errors are in parentheses. All independent variables are scaled to range from 0-1. The model includes random intercepts for state and county. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

	Minimum Wage	Income Tax	Medicaid Expansion	Gender Care	K-12 Race Restrictions
White	0.03**	0.11***	0.01	0.06***	0.03**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Male	0.00	0.09***	0.02**	0.04***	0.03***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Upper Class		0.15***		0.14***	0.14***
		(0.01)		(0.01)	(0.01)
Not Upper	-0.02*		-0.05***		
Class	(0.01)		(0.01)		
Senior	-0.04***	0.16***	0.07***	0.06***	0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Parent	-0.01	-0.01	0.04***	-0.02**	-0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
LGBT	0.04***	-0.02	0.00	0.09***	0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Gun in Home	0.03***	0.05***	0.02*	0.02***	0.03**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Democratic PID	0.01**	-0.00	0.02***	0.02***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Intercept	0.58***	0.47***	0.37***	0.11***	0.10***
	(0.03)	(0.02)	(0.02)	(0.01)	(0.01)
Observations	25837	25837	25837	25837	25837

Table S4: Multilevel linear probability model results. The outcome variable ranges from 0 to 1, indicating a correct answer to the knowledge question. Standard errors are in parentheses. All independent variables are scaled to range from 0-1. The model includes random intercepts for state and county. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

	Abortion	Open Carry	Sexual Orientation	Photo ID	Legalized Marijuana
White	0.05***	0.04***	0.02		0.07***
	(0.01)	(0.01)	(0.01)		(0.01)
Not White				-0.07***	
				(0.01)	
Male		0.07***	0.02*	0.00	-0.00
		(0.01)	(0.01)	(0.01)	(0.01)
Female	0.04***				
	(0.01)				
Upper Class	0.14***	0.01	0.08***	0.09***	0.03***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Senior	0.08***	0.03**	0.04**	0.14***	
	(0.01)	(0.01)	(0.01)	(0.02)	
Not Senior					-0.01
					(0.01)
Parent	-0.01	0.05***	0.00	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
LGBT	0.06***	-0.02	0.04***	-0.02	0.04**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Gun in Home	0.07***	0.15***	0.03**	0.05***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Democratic PID	0.02***	-0.00	0.01***	0.00**	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
Intercept	0.18***	0.37***	0.27***	0.40***	0.68***
	(0.02)	(0.02)	(0.03)	(0.03)	(0.03)
Observations	25837	25837	25837	25837	25837

Table S4 Continued

	Minimum Wage	Income Tax	Medicaid Expansion	Gender Care	K-12 Race Restrictions
White	0.03**	0.10***	0.01	0.05***	0.02**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Male	-0.01	0.07***	0.01	0.01	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Not Upper Class	-0.01		-0.02*		
	(0.01)		(0.01)		
Senior	-0.05***	0.14***	0.04***	0.03***	0.03**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Parent	-0.01	-0.01	0.04***	-0.02**	-0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
LGBT	0.04**	-0.03*	-0.00	0.08***	0.05***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Gun in House	0.03***	0.05***	0.01	0.02*	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
PID 7 Scale	0.01**	-0.00	0.02***	0.02***	0.02***
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
High Political Interest	0.05***	0.11***	0.12***	0.16***	0.14***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Upper Class		0.13***		0.11***	0.11***
		(0.01)		(0.01)	(0.01)
Intercept	0.56***	0.46***	0.33***	0.09***	0.08***
	(0.03)	(0.02)	(0.02)	(0.01)	(0.01)
Observations	25820	25820	25820	25820	25820

Table S5: Multilevel linear probability model results. The outcome variable ranges from 0 to 1, indicating a correct answer to the knowledge question. Standard errors are in parentheses. All independent variables are scaled to range from 0-1. The model includes random intercepts for state and county. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$

	Abortion	Open Carry	Sexual Orientation	Photo ID	Legalized Marijuana
White	0.04***	0.03**	0.02		0.07***
	(0.01)	(0.01)	(0.01)		(0.01)
Female	0.05***				
	(0.01)				
Upper Class	0.11***	-0.00	0.06***	0.07***	0.02*
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Senior	0.05***	0.01	0.03*	0.12***	
	(0.01)	(0.01)	(0.01)	(0.02)	
Parent	-0.01	0.05***	0.00	-0.02	-0.02
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
LGBT	0.06***	-0.02	0.04***	-0.03*	0.03**
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Gun in House	0.06***	0.14***	0.02**	0.05***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
PID 7 Scale	0.02***	-0.00	0.01***	0.00*	0.00**
	(0.00)	(0.00)	(0.00)	(0.00)	(0.00)
High Political Interest	0.13***	0.09***	0.08***	0.10***	0.06***
	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Male		0.06***	0.01	-0.01	-0.01
		(0.01)	(0.01)	(0.01)	(0.01)
Not White				-0.06***	
				(0.01)	
Not Senior					0.00
					(0.01)
Intercept	0.14***	0.36***	0.26***	0.38***	0.66***
	(0.01)	(0.02)	(0.03)	(0.03)	(0.03)
Observations	25820	25820	25820	25820	25820 >

Table S5 Continued

Table S6: Disparities Within Issue Publics.

Issue:	Minimum Wage	Income Tax	Medicaid Expansion	Gender Care Restriction	K-12 Race Restrictions	Abortion	Open Carry	Sexual Orientation Discrimination	Photo ID Vote	Legalized Marijuana
Public:	Non-Upper Class	Upper Class	Non-Upper Class	LGBT	Parents	Women	Gun Owners	LGBT People	Racial Minorities	Younger People
White	0.04***	0.13***	0.01	0.10***	0.00	0.05**	0.05*	0.03		0.07***
	(0.01)	(0.01)	(0.01)	(0.02)	(0.02)	(0.02)	(0.02)	(0.02)		(0.01)
Male	0.01	0.02*	0.02*	0.07*	0.03*		0.09***	0.05*	0.01	-0.00
	(0.01)	(0.01)	(0.01)	(0.03)	(0.01)		(0.02)	(0.02)	(0.01)	(0.01)
Senior	-0.05***	0.10***	0.05***	0.11**	0.03	0.05***	-0.00	0.07	0.14***	
	(0.01)	(0.01)	(0.01)	(0.04)	(0.03)	(0.01)	(0.02)	(0.04)	(0.02)	
Parent	0.01	-0.07***	0.05***	-0.04		-0.00	0.05***	-0.02	-0.01	-0.01
	(0.01)	(0.01)	(0.01)	(0.02)		(0.01)	(0.01)	(0.02)	(0.02)	(0.01)
LGBT	0.04**	0.02	-0.00		0.01	0.05**	-0.04		-0.03	0.03*
	(0.01)	(0.02)	(0.02)		(0.02)	(0.02)	(0.02)		(0.03)	(0.01)
Gun in House	0.04***	-0.01	0.01	0.03	0.05***	0.07***		0.03	0.05**	0.06***
	(0.01)	(0.01)	(0.01)	(0.03)	(0.01)	(0.01)		(0.02)	(0.02)	(0.01)
PID 7 Scale	0.01**	-0.00	0.02***	0.05***	0.02***	0.02***	-0.01***	0.01*	0.02***	0.00*
	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)	(0.00)	(0.01)	(0.00)	(0.00)
Upper Class				0.15***	0.15***	0.14***	-0.01	0.09***	0.08***	0.02
				(0.03)	(0.02)	(0.01)	(0.01)	(0.03)	(0.02)	(0.01)
Intercept	0.54***	0.70***	0.33***	-0.01	0.11***	0.20***	0.54***	0.28***	0.28***	0.68***
	(0.03)	(0.02)	(0.02)	(0.04)	(0.02)	(0.02)	(0.03)	(0.05)	(0.04)	(0.02)
Observations	17780	8057	17780	2325	6426	14440	9173	2325	7268	18871

Multilevel linear model results. The outcome variable ranges from 0 to 1 denoting whether the respondent gave a correct answer to that particular policy question. The "Public" row denotes the subset of respondents included in the model. Standard errors are in parentheses. All independent variables are scaled to range from 0-1. The model includes random intercepts for state and county. * $p < 0.05$ ** $p < 0.01$ *** $p < 0.001$