Americans' Partisan Perspectives on Scientific Consensus & Authority

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Theory

Dueling value commitments
- Evidence-based policymaking for collective good vs individual autonomy

Duel gets explosive when linked to political party
- E.g. COVID-19 vaccines or masks; responses to climate change

Partisan divide usually explained as...
- (From the left) Republicans are "anti-science" — &/or selfish
- (From the right) Leftist scientists are biased — &/or deny individual liberty

Questions

Beyond well-known cases (climate, vaccines), is there a consistent partisan divide over individual autonomy versus scientific authority?

Can we characterize Democrats as "pro-science" and Republicans as "anti-science"?

- Are Democrats more likely than Republicans to align their policy preferences with what they perceive to be scientific consensus?

Is support for scientific authority contingent on perceiving scientists to be aligned with one's policy perspectives?

Findings

Consistent partisan divide over autonomy *vs*. scientific authority?
- Yes. On each of 12 issues, e.g. COVID-19 vaccines, abortion medication, race in school curricula

Are Democrats "pro-science" and Republicans "anti-science"?
- No. Democrats and Republicans *both* tend to think their own policy views align with scientific consensus (*if* they think there is a consensus).

Is support for scientific authority contingent on perceiving scientists to be aligned with one's policy views?
- Yes and no. On average trend; however, clearer among Democrats
  - The above also holds for *rejection* of individual/family autonomy

"Americans' Perspectives on Scientific Authority and Consensus" (APSAC)*

Part of USC's Understanding America Study

Fielded June-August 2024
- ~10 minutes

3078 completions out of selected sample of 4320, from recruited sample of ~15,000
- Data cleaning excluded 176 Rs

Final N = 2940 Rs, weighted to align sample to adult US residents

Suggestions for better title are welcome!

APSAC topics

Abortion (D)*

Books on sexuality (D)

Child vaccines (D)

Climate change (D)

COVID booster (D)

Puberty blockers (D)

Racial inequality (D)

Hard drugs (R)*

Parent at home (R)

Public health crisis (R)

Single parent marry (R)

Women's sports (R)

*(D) or (R) indicates whether policy proposal fits expected Democratic or Republican preferences

APSAC design

3 sets of policy questions (order randomized in each)

1. Agree with policy position?
2. Scientific consensus underlying position?
3. Who should have authority to decide policy – scientists/experts, or individuals/families?
   - Or "elected officials" or "religious leaders"?

Controls & moderators

- Age, gender, race, education, HH income, marital status, HH children, citizenship, religiosity, partisanship

Example

1. To what extent do you personally agree or disagree that ... *Generally speaking, adults should be encouraged to get an updated COVID vaccine.*

   - 7-point scale: strongly disagree to strongly agree. (No DK)

2. As far as you know, how much do scientists, doctors, or other relevant experts agree or disagree that ... *Generally speaking, COVID vaccines safely decrease adults' risk of developing serious COVID.*

   - 5-point scale: complete, or near-complete, disagreement; majority disagreement; mixed views – neither agreement nor disagreement; majority agreement; complete, or near complete, agreement. (Also DK)

3. [I]n your view, who should have the ***most*** authority or decision-making power, regarding. . . *Who is encouraged to get an updated COVID vaccine?*

   - Elected officials and policymakers
   - Scientists, doctors, or other experts
   - Faith-based or religious communities
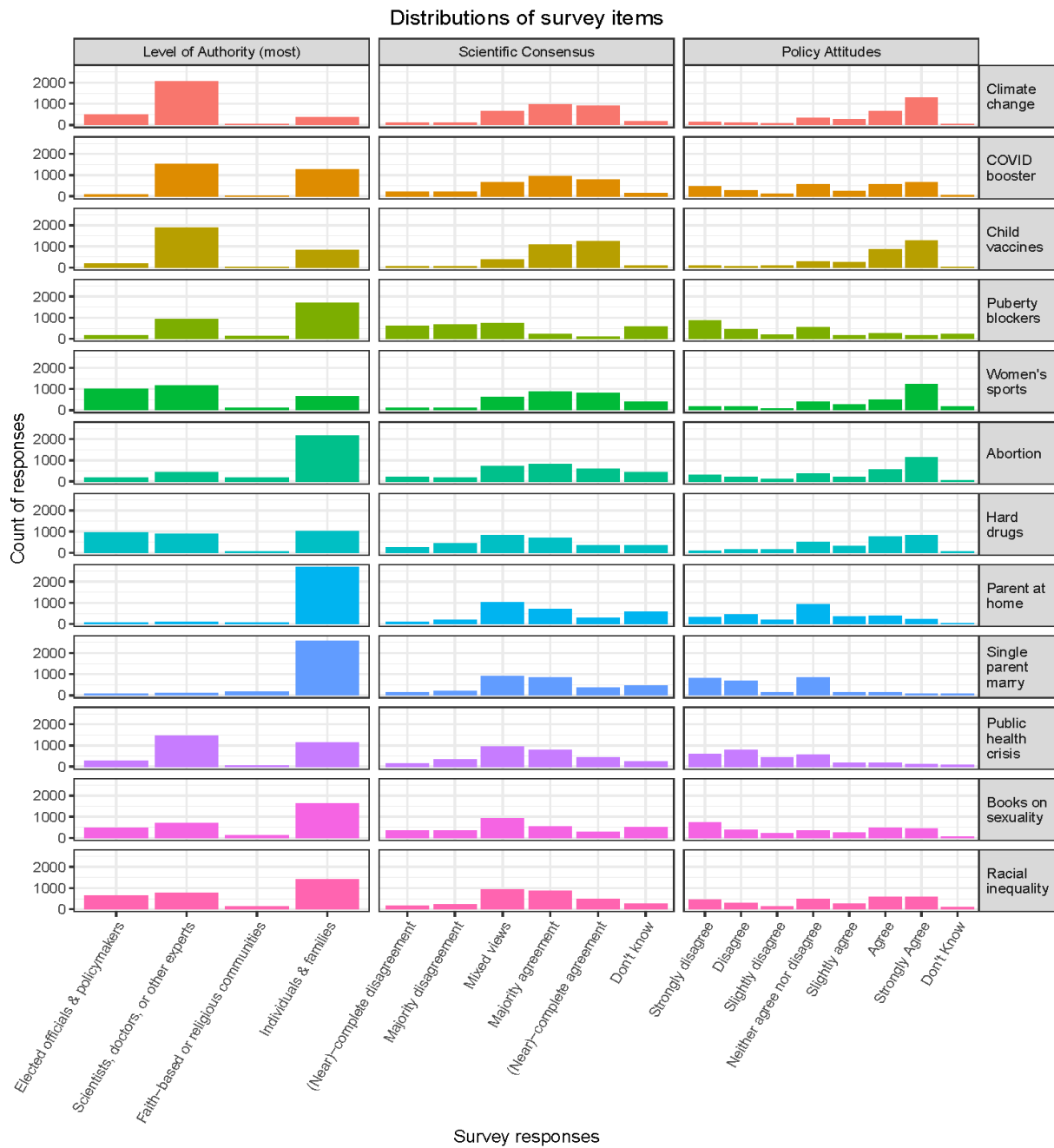   - Individuals and families

Figure 1: Distribution of Survey Items

Most popular Authority

- Scientists, doctors, or other experts
- Individuals & families

Most popular perceptions of Scientific Consensus

- Mixed views – neither agreement nor disagreement
- Majority agreement
- Complete, or near-complete, agreement

Most popular Policy Views

- Liberal

Level of Authority: 'For each issue, in your view, who should have most/least authority or decision–making power?'
Scientific Consensus: 'As far as you know, how much do scientists, doctors, or other relevant experts agree or disagree that X?'
Policy Attitudes: 'To what extent do you personally agree or disagree that X?'

Table 1: Policy Attitudes and Perceptions of Scientific Consensus, by Party Identification

|	Mean Policy Attitudes				Mean Perception of Scientific Consensus			
	Overall	Democrats	Republicans	Difference (Ds - Rs)	Overall	Democrats	Republicans	Difference (Ds - Rs)
Abortion	5.0	6.0	3.4	2.6	3.5	3.9	3.0	0.9
Racial inequality	4.4	5.6	3.0	2.6	3.4	3.8	2.9	0.9
COVID booster	4.3	5.6	3.0	2.6	3.6	4.1	3.0	1.1
Books on sexuality	3.6	4.9	2.3	2.6	3.0	3.5	2.4	1.1
Puberty blockers	3.0	4.1	1.9	2.2	2.3	2.7	1.9	0.8
Climate change	5.6	6.5	4.5	2	3.9	4.3	3.3	1.0
Child vaccines	5.7	6.2	5.2	1	4.1	4.4	3.8	0.6
Hard drugs	5.2	4.9	5.6	-0.7	3.2	3.2	3.2	0
Parent at home	4.0	3.7	4.4	-0.7	3.4	3.2	3.5	-0.3
Single parent marry	2.9	2.6	3.3	-0.7	3.4	3.3	3.6	-0.3
Public health crisis	3.0	2.5	3.7	-1.2	3.4	3.1	3.7	-0.6
Women's sports	5.4	4.7	6.3	-1.6	3.8	3.6	4.0	-0.4
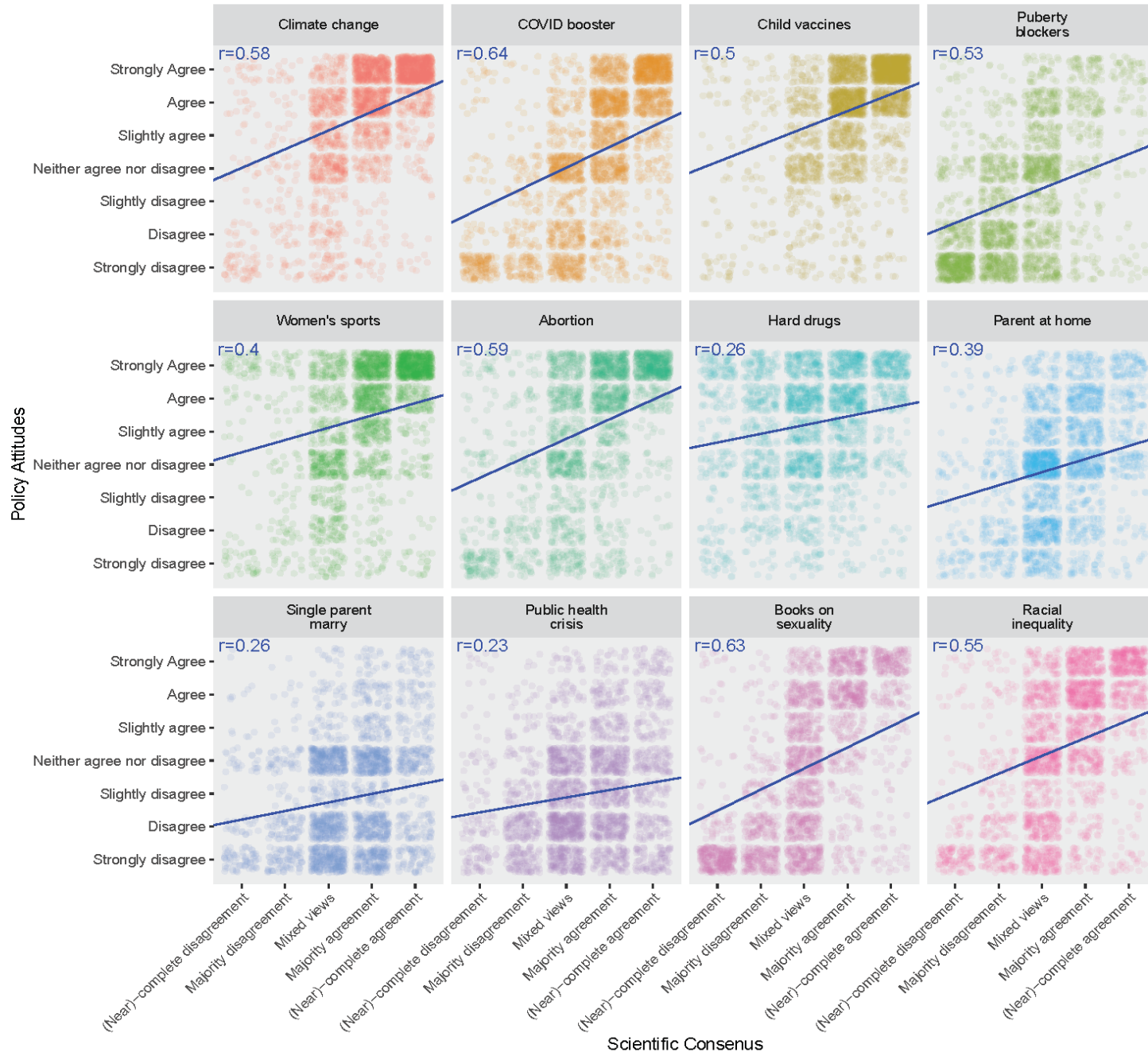
Figure 2: Correlation between Perception of Scientific Consensus & Policy View

All positive correlations: .23 (public health crisis) to .64 (COVID booster)

Strength of correlation may reflect politicization of debate

Patterns do *not* reflect novelty of issue, or "normal" vs. "post-normal" science

Patterns do not reflect popularity. Note different intercepts (e.g., child vaccines vs. racial inequality; hard drugs vs. single parent)
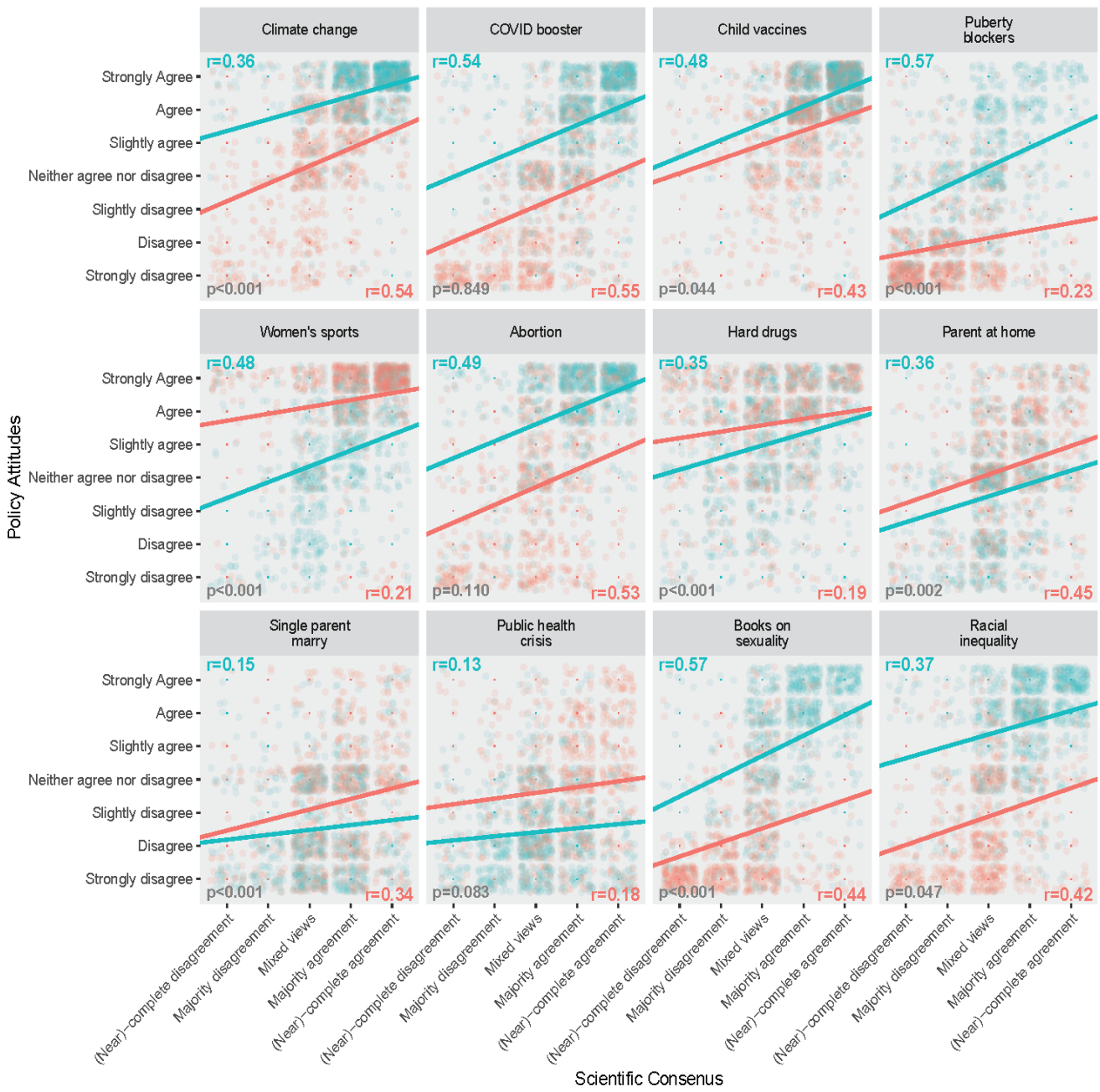
Figure 3: Correlation Between Perception of Scientific Consensus & Policy View *by Partisanship*

All positive correlations (although controlling partisanship dampens some)

Neither party "more aligned" with perception of scientific consensus

Parties similar in which issues generate most/least alignment

- *Democrats*: puberty blockers (.57); women's sports (.48); books on sexuality (.57); COVID booster (.54); abortion (.49); child vaccines (.48)

- *Republicans*: climate change (.54); parent at home (.45); books on sexuality (.44); COVID booster (.55); abortion (.53); child vaccines (.43)

Perceived consensus is not everything—often large intercept differences (esp. climate change, COVID booster, puberty blockers, women's sports, abortion, books on sexuality, racial inequality)

Table 2: Policy Attitudes and Grants of Authority, by Party Identification

	Grants of Authority (in %s)							
	Overall		Democrats		Republicans		8. Difference (Ds - Rs)	
	Experts	Individuals	Experts	Individuals	Experts	Individuals	Experts	Individuals
Abortion	15.7%	70.5%	20.7%	73%	12.7%	62.4%	8%	10.6%
Racial inequality	23.4	49.3	37.4	31.2	8.4	68	29.0	-36.8
COVID booster	48.9	45.2	69.8	23.9	28.9	65.9	40.9	-42
Books on sexuality	20.1	58.3	33.7	44.4	7.6	69.2	26.1	-24.8
Puberty blockers	30.9	57.9	37.4	54.5	23.6	60.3	13.8	-5.8
Climate change	67.1	14.1	75.6	4.8	57	23.6	18.6	-18.8
Child vaccines	60.6	31.4	76	16.7	45.3	46.5	30.7	-29.8
Hard drugs	27.9	38.2	35.7	33.6	21.4	37.4	14.3	-3.8
Parent at home	4.5	90	7.2	87.5	2.0	90.4	5.2	-2.9
Single parent marry	3.4	85.5	5.1	85.4	2	85.5	3.1	-0.1
Public health crisis	45.4	41.8	62.3	24.4	27	60.3	35.3	-10.9
Women's sports	36.4	25.3	49.1	20.1	21.1	28.6	28.0	-8.5

Table 3: Support for Scientific Authority Regressed onto Alignment of Policy View & Consensus, *by Partisanship*

Democrats: Regression coefficients positive and statistically significant (p < .05) in 8 of 12 cases

Republicans: Regression coefficients positive and statistically significant (p < .05) in 2 of 12 cases

- Childhood vaccines & climate
- Meaningful exceptions? Strong evidence base for opposite view

Caveat: Dem vs. Rep coefficients often *not statistically different from one another* (7 of 12 cases)

Topic	Party ID	Estimate (w. covariates)	P-value (w. covariates)
Child vaccines	Dem Repub	0.23 0.35	**<0.001** **<0.001**
Climate change	Dem Repub	0.15 0.10	**0.002** **0.02**
Racial inequality	Dem Repub	0.14 0.03	**<0.001** 0.36
COVID booster	Dem Repub	0.18 0.02	**<0.001** 0.64
Puberty blockers	Dem Repub	0.14 -0.02	**0.001** 0.55
Books on sexuality	Dem Repub	0.10 -0.05	**0.002** 0.04
Abortion	Dem Repub	0.07 0.04	**0.03** 0.18
Hard drugs	Dem Repub	0.09 0.01	**0.02** 0.78
Women's sports	Dem Repub	0.02 -0.01	0.63 0.79
Parent at home	Dem Repub	0.01 0.01	0.70 0.71
Single parent marry	Dem Repub	-0.01 0.05	0.59 0.07
Public health crisis	Dem Repub	0.06 -0.06	0.16 0.16

Summary

Ds and Rs:

1) disagree on policy views,

2) agree that – if there is scientific consensus – it agrees with their view,

3) disagree on how much authority to grant to experts, often conditional on having science "on their side,"

4) disagree on how much authority to grant individuals and families, also often conditional on perception of congenial science

UPSHOT: Dems more "pro" scientific authority & Reps more "pro" autonomy; however, Reps do not perceive selves as "anti-science"

Thanks and Acknowledgments

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Additional slides

What is going on?

Information bubbles: Ds and Rs exposed to information biased by their partisan affiliation—social networks and media. On specific policies, they "follow the evidence" to which they are exposed.

Motivated reasoning: Ds and Rs start with policy view, then seek scientific evidence in support of that view and counterargue contradictory evidence.

Back to partisan trust/mistrust: Rs (correctly) perceive scientists to be mostly leftist/Democrat, so inclined to disbelieve purported scientific consensus
- Ds perceive scientists to be objective experts

Ideological commitments: Ds accept expertise as authoritative, except when they (strongly?) disagree. Rs assume intrinsic value of individual autonomy, with some exceptions.

Table 4: Support for Individuals/Families Regressed onto Alignment of Policy View & Consensus, *by Partisanship*

Democrats: Regression coefficients negative and statistically significant (p < .05) in 10 of 12 cases

Republicans: Regression coefficients negative and statistically significant (p < .05) in 4 of 12 cases

Topic	Party ID	Estimate (w. covariates)	P-value (w. covariates)
Child vaccines	Dem Repub	-0.22 -0.35	**<0.001** **<0.001**
Climate change	Dem Repub	-0.10 -0.06	**0.001** 0.13
Racial inequality	Dem Repub	-0.13 -0.002	**<0.001** 0.96
COVID booster	Dem Repub	-0.22 -0.05	**<0.001** **0.005**
Puberty blockers	Dem Repub	-0.12 0.03	**0.005** 0.51
Books on sexuality	Dem Repub	-0.01 0.07	**0.01** 0.09
Abortion	Dem Repub	-0.04 0.09	**0.03** 0.03
Hard drugs	Dem Repub	-0.10 -0.17	**0.01** **<0.001**
Women's sports	Dem Repub	-0.15 0.02	**<0.001** 0.01
Parent at home	Dem Repub	0.01 0.01	0.80 0.61
Single parent marry	Dem Repub	-0.05 -0.11	0.30 **0.01**
Public health crisis	Dem Repub	-0.07 0.06	**0.03** 0.20

Table 5: Percent Respondents Whose Policy Attitude Contradicts Perceived Scientific Consensus, by Partisanship

topics	% of Discordance		% Differences	
	% democrat	% republican	% diff	p-value
Climate change	4.3	11.9	-7.6	<0.001
COVID booster	7.6	19.9	-12.3	<0.001
Child vaccines	4.0	11.4	-7.4	<0.001
Puberty blockers	16.0	9.8	6.3	0.005
Women's sports	12.0	11.2	0.8	0.717
Abortion	6.7	21.8	-15.1	<0.001
Hard drugs	27.9	33.9	-6.0	0.043
Parent at home	27.4	20.7	6.6	0.053
Single parent marry	58.1	47.1	-10.9	0.003
Public health crisis	48.5	45.3	3.2	0.348
Books on sexuality	8.1	12.7	-4.6	0.021
Racial inequality	8.6	25.1	-16.5	<0.001