Methods and Data

Supplementary appendix to "Polarization and Its Discontents: How Americans Lost Faith in Each Other" (October 30, 2026)

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Summary. This appendix documents every number in the essay that was computed rather than quoted, and explains how the quoted numbers were collected. It is written to be read on its own. A reviewer who has not seen the code and does not know the datasets should be able to tell what was measured, how, how certain each estimate is, and where the evidence is thin. Section S2 describes the nine data sources; S3 sets out the definitions and conventions shared by all analyses; S4 explains each analysis in words, then gives its formula, results and caveats; S5 reports the robustness checks; S6 lists the limitations; S7 explains how to reproduce everything. Five analyses carry most of the essay's original evidence. The *timing test* (S4.5) shows that most of each long-run trend had happened before most Americans used social media. The *stacking analysis* (S4.9) shows that race, religion, education and place now predict party jointly far more strongly than in the 1970s: each additional Republican-leaning trait multiplied the odds of being Republican by 1.26 then and 2.63 in 2021–24, and the pattern holds among white partisans alone. "Stacking" here means that the traits increasingly point toward the same party; the traits themselves do not co-occur more often than before. A *scan of 23 characteristics* chosen from the theory of social cleavages (S4.7) shows that the four divides earn their place: with family status and gender close behind, they are the strongest predictors of party today, while economic class, which predicted party about as well as race in the 1970s, now predicts almost nothing. Traits fixed in childhood stack too, and most of the change happened within generations rather than through generational replacement (S4.10). Holding the district fixed, Republican House newcomers have voted further right than the same-party members they replaced since 1981, while Democratic newcomers have not (S4.16). The *cross-national comparison* (S4.14) finds that elite polarization is the strongest correlate of rising partisan hostility across countries ($r = +0.73$, 10 countries), but that association is not robust to correction for multiple comparisons and is weaker when measured over matching years. Three further points qualify the essay's media argument: the timing test is a chronology, not a measure of causes; recent randomized experiments find small but detectable effects of feed content on partisan hostility (S4.17); and the essay's broader causal chain—from stacked identities to hostility, factional nominees and distrust—is proposed, not tested. None of the analyses identifies a causal effect on its own.

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S1. Purpose and scope

The essay argues that American polarization grew out of a fifty-year realignment in which four old social divides—race, religion, education and place—came to line up behind the two parties; that political leaders led the divergence, with Republicans moving further; that a two-party, winner-take-all system compressed the divides onto a single line; and that safe seats and factional politics now sustain the hostility. It weighs this account against alternatives, chiefly media technology and economic shocks, using three tests: timing (did the supposed cause come first?), causal identification (is there experimental or quasi-experimental evidence?), and cross-national fit (does the explanation fit the countries that did not polarize?).

The essay's evidence is of three kinds, and this appendix treats them differently.

1. **Computed for this essay.** New tabulations of public data: the General Social Survey, the Cooperative Election Study, congressional roll-call scores, a published cross-national dataset, and Gallup and Pew trend series. Section S4 documents each one.
2. **Quoted from other studies.** Estimates such as the effect of Fox News on vote shares or of newspaper closures on ticket-splitting. These are reported as their authors state them and were not re-estimated. Section S4.17 lists them with notes on comparability.
3. **Interpretation.** Claims that tie the evidence together—for example, that stacked identities are the root of the hostility, or that the electoral system selects factional nominees. The essay labels these as interpretation; this appendix identifies which parts of them the data can and cannot test.

Most analyses here are descriptive: they show how quantities moved over time, across groups or across countries. Description can rule some explanations out—a cause cannot follow its effect—but it cannot by itself show that one thing caused another. Where the essay leans on causal evidence, that evidence comes from experiments and natural experiments run by others. Table S1 maps each of the essay's main empirical claims to its evidence.

Table S1 — The essay's main empirical claims and where they are documented.

Claim in the essay	Evidence	Kind	Section
Hostility rose because partisans cooled toward the other party (Fig. 1)	ANES thermometers, 1978–2020	Computed	S4.1
Congress polarized from the late 1970s; Republicans moved further (Figs. 3, 15)	Voteview roll-call scores	Computed	S4.2
Sorting rose far more than self-identified extremism (Fig. 4)	GSS	Computed	S4.3
Trust fell in two waves, institutions first (Figs. 5, 25, 26)	Pew, GSS, Gallup	Computed	S4.4
Most of each trend came before social media (Fig. 6, Table B.1)	All of the above	Computed	S4.5
The least-online age group sorted the most (Fig. 7)	GSS, CES; Boxell et al. (2017)	Computed and quoted	S4.6
Race, religion, education and place are the divides that matter now; class faded (Figs. 11, 12)	GSS	Computed	S4.7
Four divides opened one after another (Figs. 13, 14)	GSS, CES	Computed	S4.8
The divides now point toward the same party (Fig. 17)	GSS	Computed	S4.9
Traits fixed in childhood stack too; most change came within generations (Fig. 18)	GSS	Computed	S4.10
Party gaps on cultural issues opened after the 1980s (Fig. 16)	GSS	Computed	S4.11
Many 2024 voters are cross-pressured on economics and culture (Fig. 19)	CES	Computed	S4.12
The parties parted on immigration, trade, the pace of change and confidence in science; Democrats moved on the first three, Republicans on the fourth (Fig. 20)	GSS	Computed	S4.13
Two attitudes toward change predict party better than four identities and account for about half of the education and place gaps, little of the racial gap (Section 4)	GSS	Computed	S4.13

Claim in the essay	Evidence	Kind	Section
A core dispute between openness to change and tradition, organized into two camps by amplifiers (media, social media, elite polarization, the two-party system) and turned into war by radical wings (a reactionary right, a progressive vanguard); institutional reform has modest effects (Sections 4, 10, 11; Fig. 22)	GSS; quoted studies	Interpretation	S4.13, S6
Elite polarization is the strongest cross-national correlate (Figs. 8, 21)	Boxell, Gentzkow & Shapiro (2024) data	Computed	S4.14
First-term House Republicans vote further right; first-term Democrats do not (Section 8)	Voteview	Computed	S4.15
In the same seat, Republican newcomers vote further right than their predecessors; Democratic newcomers do not (Fig. 24)	Voteview	Computed	S4.16
Feed experiments, safe seats, primaries, local news, perception gaps (Figs. 2, 9, 23, 28)	Published studies	Quoted	S4.17
Stacked identities breed hostility; safe seats select factional nominees; distrust is a verdict on them (Sections 3, 8–10; Figs. 22, 27)	Partly documented links	Interpretation	S6

S2. Data

Table S2 summarizes the sources; the paragraphs below describe each for readers who do not know them.

Table S2 — Data sources.

Source	Producer	Years used	Size	Mode	Weight	Used in
General Social Survey (GSS), cumulative file, Release 3a	NORC at the University of Chicago	1972–2024, 35 waves	75,699 respondents; 61,429 partisans	In person to 2018; mainly web in 2021; mixed in 2022 and 2024	WTSSPS	Figs. 4–7, 11–13, 16–18
Cooperative Election Study (CES), Common Content	University consortium; fielded by YouGov	2024	60,000 respondents	Online, opt-in panel	COMMONWEIGHT	Figs. 7, 14, 19
Voteview member file	Lewis et al., UCLA	1879–2025 (46th–119th Congress)	Every member of Congress	Roll-call records	None	Figs. 3, 6, 15, 24; Section 8
Boxell, Gentzkow & Shapiro (2024) replication package	Authors, Harvard Dataverse	About 1967–2020	12 countries, 149 surveys	National election studies	Authors'	Figs. 1, 6, 8, 21
Gallup Governance survey topline	Gallup	1972–2026	About 1,000 adults a year	Telephone	Gallup's	Figs. 5, 6, 26
Pew Research Center trust series and fact sheets	Pew	1958–2025	Compiled from many polls	Various	Pew's	Figs. 5, 6, 25
Published figures, entered by hand	Studies and reports cited in the essay	Various	—	—	—	Figs. 2, 9, 23, 28; text

General Social Survey. The GSS has interviewed a fresh, nationally representative sample of adults living in U.S. households roughly every one or two years since 1972. It is run by NORC at the University of Chicago with funding from the National Science Foundation, and its strength for this purpose is that it has asked many of the same questions, in the same words, for half a century. The cumulative file used here has 35 waves and 75,699 respondents. Interviews were conducted in person (with some by telephone) through 2018; the 2021 survey was conducted mainly online because of the pandemic, and the 2022 and 2024 surveys mixed in-person and web

interviews. The GSS uses a *split-ballot* design: many questions are asked of a random subset of respondents, so the number answering any one question is smaller than the full sample. All GSS estimates use WTSSPS, a post-stratification weight that the 2024 release supplies for every year and that adjusts the sample to Census totals.

Cooperative Election Study. The CES is a large online survey run by a cooperative of university research teams and fielded by YouGov. Respondents come from an opt-in internet panel and are selected and weighted to resemble the adult population. The 2024 Common Content has 60,000 respondents interviewed before the November election and again afterward; all items used here come from the pre-election wave and are weighted by COMMONWEIGHT. An opt-in sample is less suited than the GSS to estimating levels precisely, but the CES's size allows fine comparisons across groups, such as age bands or levels of church attendance, and it asks about specific policies that the GSS does not.

Voteview and DW-NOMINATE. Voteview publishes a score for every member of the House and Senate, estimated from all the roll-call votes they cast. The method, DW-NOMINATE, places members on a small number of dimensions so as to predict as well as possible who votes yea and who votes nay on each bill. The first dimension accounts for most voting in modern Congresses and is conventionally read as liberal (negative) to conservative (positive) on economic questions and the role of government; scores run from about -1 to $+1$. Because members serve across several Congresses and the method assumes that a member's position changes at most gradually over a career, scores can be compared across decades. The analyses use the member file `HSall_members.csv`, downloaded in October 2026, and only members coded Democratic or Republican.

American National Election Studies, via Boxell, Gentzkow and Shapiro. Since 1978 the ANES has asked respondents to rate each party on a *feeling thermometer* from 0 (very cold) to 100 (very warm). The essay uses the averages of partisans' ratings of their own and of the other party published in the replication package of Boxell, Gentzkow and Shapiro (2024), for 17 ANES surveys from 1978 to 2020. The main series excludes leaners; the package's leaner-inclusive series is used as a check. ANES microdata require a registered login and were not downloaded; the 2024 values quoted in the note to Figure 1 come from the University of Arizona Voter Project's tabulation and are not computed here.

The cross-national dataset. For twelve OECD democracies—Australia, Britain, Canada, Denmark, France, Germany, Japan, New Zealand, Norway, Sweden, Switzerland and the United States—Boxell, Gentzkow and Shapiro (2024) assembled national election studies that ask respondents to rate parties, and computed for each survey an index of *affective polarization*: how much more warmly partisans rate their own party than other parties, in thermometer points. The 149 surveys run from 1967 to 2020, with between 6 and 42 per country. The package also

supplies, for each country, the linear trend in nine candidate drivers of polarization, such as internet use, inequality and experts' ratings of how far apart the parties' elites stand (S4.14).

Gallup. Gallup's Governance survey is conducted each September by telephone with about 1,000 adults; for the September 1–17, 2026 survey Gallup reports a margin of sampling error of $\pm$4 points, larger for questions asked of half the sample. Three trend questions are used: trust and confidence in "the American people as a whole when it comes to making judgments under our democratic system about the issues facing our country," in "the men and women in political life in this country who either hold or are running for public office," and in the mass media. The first was asked in 1974 and 1976 and in most years from 2001 to 2026, so there is a 25-year gap. Series are read from the trend tables of the published topline, taking the "great deal" plus "fair amount" total.

Pew Research Center. Pew's series on trust in the federal government ("just about always" or "most of the time") compiles polls from Pew, the ANES, Gallup and several media polls back to 1958, with a smoothed trend; Pew also publishes the series by party. Pew fact sheets supply the shares of adults using the internet, social media and smartphones.

Published figures entered by hand. Values that exist only in published reports and papers—for example, the number of House districts that split their presidential and congressional votes, or the estimated effects in the social media experiments—were entered by hand into files in `data/Published figures - hand-entered/`. Every row records the value, its unit, the source URL and either a verbatim quotation or the table or chart it was read from.

Three further series are in the data folder but used only in the text or not at all: the World Inequality Database's top 1% income share (via Our World in Data), the FRED household-income Gini index, and World Bank internet-use figures.

S3. Definitions and conventions

S3.1 Partisans

Both the GSS and the CES ask party identification in two steps: whether the respondent thinks of themselves as a Republican, Democrat or independent, and then how strongly, or, for independents, which party they lean toward. The result is a 7-point scale. Throughout, **partisans** are Democrats and Republicans *including leaners*—independents who say they lean toward a party—because leaners vote much like weak partisans (Keith et al. 1992). Pure independents and supporters of other parties are excluded from party comparisons. In the GSS this means PARTYID codes 0–2 (Democrats) and 4–6 (Republicans); in the CES, PID7 codes 1–3 and 5–7. Section S5 repeats the main GSS analyses without leaners.

S3.2 Weights

GSS estimates are weighted by WTSSPS and CES estimates by COMMONWEIGHT, so that they describe the adult population rather than the sample. Roll-call scores and the cross-national country trends are unweighted.

S3.3 Missing answers, split ballots and question formats

Answers of "don't know," refusals, and questions not asked of a respondent are treated as missing. Each estimate uses every respondent who answered the questions it needs; nothing is imputed. Indexes average the items a respondent answered, subject to a minimum stated with each index. Shares based on fewer than 30 respondents are not reported (100 in Figure 17).

From 2021, the GSS asked some questions in more than one format, and format is tied to interview mode. In 2022 and 2024 the original question on trusting other people was asked only in interviewer-administered interviews (in person, by phone or multimode); web respondents answered one of two other versions, with or without a visible "it depends" option. The original question was not asked at all in 2021, so that year is missing from the interpersonal-trust series. Keeping the original format keeps the wording comparable with earlier decades, but it restricts recent estimates to respondents selected partly by interview mode, so recent levels are less comparable than earlier ones (S4.4). About half of recent respondents also answered the abortion question in a grid format; the essay uses the original item, and S5 shows the alternative.

S3.4 Periods and smoothing

Single GSS years are noisy, especially for small groups, so many results pool surveys into periods (for example, the 1970s or 2021–24). Charts that show yearly values draw a centered three-survey average: each point is the mean of that survey and its two neighbors, and of only two surveys at either end of a series. Congress n is dated to its first year, $1789 + 2(n - 1)$.

S3.5 Uncertainty

For a weighted share near 50% based on 1,000 respondents, sampling error alone gives a 95% margin of about ± 3 points, and the GSS's clustered design makes the true margin somewhat larger. Shares in the essay's charts are shown without margins, and the essay avoids drawing conclusions from differences of a few points. Where the argument depends on a comparison, intervals are reported. For the stacking models (S4.9), intervals use standard errors clustered by survey year, variance stratum and primary sampling unit (VSTRAT and VPSU), which the GSS supplies from 1975; respondents in 1972–74 are treated as their own clusters. This design-based approximation ignores the gain from stratification, so it errs toward wider intervals. Bootstrap intervals that resample individual respondents, which ignore the design, are reported for descriptive shares. Weighting alone reduces the effective size of the 2021–24 stacking sample from 7,488 to about 3,699. The cleavage scan (S4.7) scores models out of sample, with folds formed

from whole sampling clusters, and its intervals come from a bootstrap that resamples whole clusters. The cross-national correlations use intervals from Fisher's z transformation (S4.14).

S3.6 Key survey questions

Table S3 — GSS questions used, with abridged wording and the coding used here.

Variable	Question (abridged)	Coding used
PARTYID	Generally speaking, do you think of yourself as a Republican, Democrat, independent, or what? (with follow-ups on strength and leaning)	0 strong Democrat ... 6 strong Republican; 7 other party excluded
POLVIEWS	Place yourself on a seven-point scale from extremely liberal (1) to extremely conservative (7)	4 = moderate; 1 or 7 = extreme
TRUST	Generally speaking, would you say that most people can be trusted or that you can't be too careful in life?	Share "can be trusted" among "can be trusted," "can't be too careful" and "depends"
ATTEND	How often do you attend religious services?	Weekly or more = 7–8; never or less than once a year = 0–1
DEGREE	Highest degree	No four-year degree = 0–2; bachelor's or higher = 3–4
RACE	Respondent's race	White = 1; nonwhite = 2–3
XNORCSIZ	Size and type of place where the respondent lives, from the sample address	Small cities, towns and open country outside metropolitan areas = 7–10; central cities over 50,000 = 1–2
EQWLTH	Should the government reduce income differences between rich and poor (1) or not concern itself with them (7)?	Government should = 1–3
HELPSICK	Is it the government's responsibility to help people pay doctor and hospital bills (1), or should people take care of themselves (5)?	Government should = 1–2
HELPPOOR	Should the government do everything possible to improve the standard of living of poor Americans (1), or should each person take care of themselves (5)?	Index item
NATFARE	Are we spending too much, too little or about the right amount on welfare?	Index item
ABANY	Should it be possible for a pregnant woman to obtain a legal abortion if she wants it for any reason?	Yes = 1

Variable	Question (abridged)	Coding used
HOMOSEX	Are sexual relations between two adults of the same sex always wrong, almost always wrong, wrong only sometimes, or not wrong at all?	"Not wrong at all" = 4
PREMARSX	Same scale, for sex between a man and a woman before marriage	Index item
GRASS	Should the use of marijuana be made legal or not?	Index item

S4. Analyses

Each subsection states the question, the measure, the method in words and then as a formula where useful, the results, and the main caveats.

S4.1 Feelings toward the two parties (Figure 1)

Question. Did partisan hostility rise because partisans came to like their own party more, or the other party less?

Measure and method. For each ANES survey, the average thermometer rating that Democratic and Republican identifiers give their own party ("in-party") and the other party ("out-party"), and the gap between them. The share of the gap's increase that comes from cooling toward the other party is

$$\text{share} = \frac{\text{out}_{1978} - \text{out}_{2020}}{\text{gap}_{2020} - \text{gap}_{1978}}$$

Results. In-party ratings were 74.4 in 1978 and 74.9 in 2020; out-party ratings fell from 47.0 to 18.6; the gap rose from 27.4 to 56.3 points. Cooling toward the other party accounts for $(47.02 - 18.58) \,/\, (56.31 - 27.38) = 98.3\%$ of the increase. With leaners included the figure is 98.7%.

Caveats. The ANES moved from face-to-face to largely online interviewing in recent surveys, and ratings can differ by mode. The 2024 values in the note to Figure 1 (70 for one's own party, 21 for the other, including leaners) are quoted from another tabulation and are comparable to the leaner-inclusive series (71.4 and 19.6 in 2020), not to the main series.

S4.2 Polarization in Congress (Figures 3 and 15; essay Sections 1, 5 and 7, Appendix C)

Question. When did the parties in Congress pull apart, and which party moved more?

Measures. For each Congress and chamber: the *party distance*, the Republican mean minus the Democratic mean of first-dimension DW-NOMINATE scores; the *moderate share*, members with a score between -0.25 and $+0.25$; and *overlap*, the number of Democrats more conservative than

the most liberal Republican plus Republicans more liberal than the most conservative Democrat. "The South" follows Voteview's convention: the eleven former Confederate states plus Kentucky and Oklahoma.

Results. The House party distance reached its twentieth-century low in 1947 (0.52), stood at 0.57 in 1977 and reached 0.91 in 2025. The share of the post-1977 rise that came before Fox News launched in 1996 is

$$\frac{d_{1995} - d_{1977}}{d_{2025} - d_{1977}} = 0.55$$

where d is the distance and 1995 is the Congress elected in November 1994; measured from the 1947 low, the share is 0.61. Moderates were 40% of the House in 1971 and 9% in 2025. The parties last overlapped in the 2001–02 House and the 2003–04 Senate. Between 1971 and 2025 the average House Republican moved from +0.25 to +0.52 and the average Democrat from −0.31 to −0.39: a rightward move of 0.27 against a leftward move of 0.08, a ratio of about 3.6. The Senate, whose constituencies are never redistricted, polarized about as much: its distance rose from 0.59 in 1977 to 0.92 in 2025, against 0.57 to 0.91 in the House.

Caveats. DW-NOMINATE summarizes voting, which reflects party discipline and which bills reach the floor as well as members' own views; part of the measured divergence may be stronger party control of the agenda rather than more extreme preferences. Comparisons across decades assume that the first dimension means the same thing throughout.

S4.3 Sorting and ideological self-placement (Figure 4; Appendix A)

Question. Did Americans move to the ideological extremes, or did they sort into the party that matches their ideology?

Measures. For each GSS year with at least 300 valid answers, the weighted Pearson correlation between party identification (PARTYID, 0–6) and ideological self-placement (POLVIEWS, 1–7), among all respondents who answered both, including pure independents. The shares of respondents placing themselves at the midpoint (moderate) and at either end (extremely liberal or extremely conservative).

Results. The correlation rose from 0.17 in 1974 to 0.63 in 2024 (averages 0.20 in the 1970s and 0.63 in 2021–24). Moderates were 40.2% of respondents in 1974 and 37.5% in 2024; the extremes rose from 4.3% to 10.0%. Party–ideology alignment increased sharply while moderate self-identification remained common; the extremes also grew. The two changes are on different scales (a correlation and a share), so their sizes cannot be ranked against each other. `results/gss.json` reports the same correlation for nine other attitudes and social groups.

Caveats. Self-placement is an imperfect measure of policy views: "moderate" can mean uncertain or uninterested as well as centrist, and the meaning of "liberal" and "conservative" has shifted over time. The correlation treats both scales as evenly spaced.

S4.4 Trust (Figures 5, 25 and 26; essay Sections 1 and 9)

Question. How did trust fall, and in what order?

Three different measures. The essay distinguishes trust in the federal government (Pew), *interpersonal* trust—whether "most people can be trusted" (GSS)—and confidence in the American people's *political judgment* (Gallup). The second and third are related but different: the first concerns how strangers will treat you, the second whether your fellow citizens choose wisely at the ballot box.

Results. Trust in the federal government was 77% in 1964, about a quarter by 1980 and 17% in September 2025 (Pew). Interpersonal trust fell from 47% in 1972 to 25% in 2024 on the original question (GSS). The recent level is uncertain. In 2022–24 that question was asked only in interviewer-administered interviews, and the two web versions give very different answers: 9–18% when "it depends" is shown and 29–39% when it is not. Two checks support the direction of the decline. Among in-person respondents only, the original question gives 31.5% in 2016, 34.1% in 2018, 27.1% in 2022 and 23.7% in 2024. And in 2022 and 2024 the GSS randomly assigned households to be contacted first in person or first by web; the original question gives nearly the same estimate in both groups (26.3% and 26.1% in 2022; 24.5% and 25.0% in 2024). The fall from the 1970s to the 2020s is therefore robust; the exact current level, and the timing share for this series in S4.5, should be read as approximate. Confidence in the people's judgment was 86% in 1976, 70% or higher in every reading from 1974 to 2009 (the lowest, 70%, in 2007), and 51% in 2026, the lowest on record; it fell in 13 of the 15 surveys after 2009.

The order of decline. The essay suggests that distrust of politicians came first and distrust of voters followed. To test whether the two Gallup series move together from year to year, the year-on-year change in trust in the people was correlated with the same year's change in trust in politicians, using only consecutive annual surveys since 2001. The correlation is weak ($r = 0.12$, $p = 0.65$, 17 pairs), and no stronger with the previous year's change in trust in politicians ($r = 0.26$, $p = 0.41$, 12 pairs). The *levels* of the two series are strongly correlated ($r = 0.82$ over 22 surveys), but mainly because both trend down. The evidence for the essay's interpretation is therefore the sequence: trust in politicians fell 17 points between 2008 and 2009, and trust in the people began falling the following year. That is consistent with the essay's mechanism but does not establish it.

Partisan seesaw. Pew's trust-in-government series by party shows trust rising among supporters of the president's party and falling among the other side at every change of party in the White House. The 2024–25 reversal the essay describes coincided with substantial changes in

the federal workforce, so it reflects policy as well as partisanship; the long series is the better evidence. The average absolute gap between the parties was 7 points in the 1970s, 15 in the 2010s and 18 in the 2020s.

Caveats. Gallup did not ask the people question between 1977 and 2000, so the long-run decline rests on two early readings. The GSS changed mode and question formats after 2020 (S3.3).

S4.5 The timing test (Figure 6; essay Appendix B)

Question. Had most of each trend already happened before partisan cable news and social media arrived?

Logic. A cause must come before its effect. If a trend was largely complete before a medium existed, the medium cannot have started it, although it could have accelerated or sustained it.

Method. Readings within each calendar year are averaged (the Pew series is already a smoothed trend before this step), smoothed with a centered three-observation mean, and linearly interpolated to calendar years. Two ANES series are shown: the in-party minus out-party gap, and coldness toward the other party (the out-party rating, sign-flipped). Their intermediate paths differ—the out-party series was half complete in 2006, the gap in 2004—even though out-party cooling accounts for almost all of the gap's long-run rise. Progress in year t is the share of the series' total change completed by then:

$$p_t = \frac{x_t - x_{\text{start}}}{x_{\text{end}} - x_{\text{start}}}$$

Declining series (trust) are sign-flipped so that progress always means more distrust or more polarization. Start points mark the beginning of each modern trend: the mid-1960s peak of trust in government, the 1967 low of House polarization (the lowest Congress between 1960 and 1985), and each survey's first year otherwise. The milestone dates are Fox News's launch (October 1996), Facebook's opening to anyone over 13 (September 2006), the first Pew survey in which half of adults used social media (2011) and the first in which half owned a smartphone (2013). "Half done by" is the first year in which a series reached half of its total change.

Table S4 — Share of each trend completed by each milestone.

Series	Source	Range	Half done by	1996	2006	2011	2013
Distrust of the federal government	Pew, 1964–2025	1964–2025	1973	84%	78%	96%	97%
Polarization in Congress	Voteview House, 1967–2025	1967–2025	1994	59%	73%	84%	90%
Party–ideology sorting	GSS, 1974–2024	1974–2024	2004	40%	60%	67%	67%
In-party minus out-party gap	ANES, 1978–2020	1978–2020	2004	21%	60%	73%	80%
Coldness toward the other party	ANES, 1978–2020	1978–2020	2006	25%	50%	72%	81%
Distrust of other people	GSS, 1972–2024	1972–2024	1992	59%	66%	71%	74%
Distrust of the people's judgment	Gallup, 1974–2026	1974–2026	2011	15%	33%	55%	71%

Robustness. Table S5 repeats the test without smoothing and with a five-observation window, and with earlier start points for the two series whose start is a judgment call. Every series except Gallup's trust in the people's judgment is at least 66% complete by 2011 under every variant; that series is 50–55% complete. The ordering of the middle series changes with the smoothing window, and the half-way year of interpersonal distrust is sensitive to it (1983 without smoothing, 1992 with it), because that series is noisy in the 1980s.

Table S5 — Share complete by 2011 (and half-way year) under other choices.

Series	No smoothing	Three-survey (essay)	Five-survey	Earlier start
Distrust of the federal government	99% (1973)	96% (1973)	96% (1974)	96% (1973); start 1958
Polarization in Congress	87% (1994)	84% (1994)	85% (1995)	84% (1994); start 1947
Party–ideology sorting	68% (2004)	67% (2004)	66% (2005)	—
In-party minus out-party gap	66% (2006)	73% (2004)	79% (2004)	—
Coldness toward the other party	69% (2008)	72% (2006)	75% (2005)	—
Distrust of other people	67% (1983)	71% (1992)	80% (1992)	—
Distrust of the people's judgment	50% (2011)	55% (2011)	50% (2011)	—

Caveats. The test is a descriptive chronology. The share is of the net change between two chosen, smoothed endpoints, not a share of change caused by anything. A milestone such as half of adults using social media is not the date exposure began: early adopters, journalists and politicians were online earlier, and effects can spill over to non-users. Centered smoothing uses readings from after the date being evaluated, and a three-observation window spans different numbers of years in different series. What the test shows is that several trends began well before contemporary social media; it cannot measure how much of the later rise social media caused, nor identify any alternative cause. Interpolation across long gaps (Gallup's 1977–2000 gap, the ANES's four-year intervals) makes the share at a given date approximate, and the latest interpersonal-trust reading carries the format caveat of S4.4.

S4.6 Age, social media and sorting (Figure 7)

Question. If online media drove polarization, the heaviest users—the young—should have polarized fastest. Did they?

Method. In the GSS, the PARTYID–POLVIEWS correlation is computed separately for ages 18–39, 40–64 and 65 and older in each year with at least 150 respondents in the group; the 1996–2016 change compares the averages of 1994–98 and 2014–18. In the CES, for four age bands: the share who used social media in the past 24 hours (CC24_300_1); the share who posted about politics there (CC24_300d_1 or _2); the correlation between 7-point party identification and 5-point ideology (IDEO5); and the share of partisans who are *ideologically consistent*—Democrats left of center on both the economic and cultural scales of S4.12, or Republicans right of center on both, with a score of exactly 0.5 counted half on each side, the same rule as the map (S4.12).

Results. In the GSS the correlation rose by 0.21 among those 65 and older and by 0.14 among those 18–39. Boxell, Gentzkow and Shapiro (2017), using an index of eight ANES measures, report growth of 0.47 index points among those 65 and older and 0.23 among those 18–39 (quoted, not recomputed). Table S6 gives the CES results.

Table S6 — Social media use and sorting by age, CES 2024.

Age	Used social media in past 24 hours	Posted about politics	Party–ideology r	r among users	r among non-users	Consistent partisans
18–29	92%	20%	0.71	0.72 (n = 7,261)	0.53 (n = 483)	67%
30–44	88%	23%	0.71	0.72 (n = 9,062)	0.58 (n = 1,143)	73%
45–64	80%	22%	0.70	0.72 (n = 16,978)	0.63 (n = 3,980)	73%
65+	69%	20%	0.75	0.76 (n = 11,922)	0.72 (n = 5,006)	79%

Caveats. Differences between age groups mix the effects of age, generation and period. Within each age group, social media users are somewhat *more* sorted than non-users, but users choose to use social media, so this comparison cannot separate the effect of use from the kind of people who use it. The across-age comparison is the more informative one: the group that uses social media least is the most sorted. Even so, it cannot by itself rule out a media effect, which could act through other people or through politicians; and the CES's oldest respondents are, by construction, internet users.

S4.7 Which divides? A scan of 23 characteristics (Figures 11 and 12)

Question. Are race, religion, education and place the right divides to follow, or were they chosen because they fit the story? And which divides faded?

Candidates. The list comes from the theory of social cleavages. Lipset and Rokkan (1967) traced Western party systems to four conflicts: owners against workers (class), church against state (religion), countryside against city (place) and the national center against its periphery (here, the South). To these the list adds race, education, gender, age and family status, and four characteristics the GSS asked only in some years or of part of the sample: gun ownership, union membership, nativity and military service. Where the GSS allows, a divide is measured twice, once by an adult characteristic and once by one fixed by birth or upbringing (where someone

lives now and where they grew up; their degree and their father's). That gives 23 characteristics (Table S7). The list was drawn up after an exploratory look at simple gaps for many of the same characteristics, so it is not blind to the data. Every characteristic examined is reported, including those that do not fit the essay's account.

Method 1: gaps. For each characteristic and period: the weighted Republican share among partisans who have it, minus the share among those who do not. The 95% intervals come from a weighted linear probability model with standard errors clustered by survey year, variance stratum and primary sampling unit (S3.5). Each group is compared with everyone else, so these gaps are smaller than those in Figure 13, which compares opposite ends of each divide.

Table S7 — The 23 candidate characteristics, their GSS coding, and the gap in Republican share between partisans with and without each, in the 1970s and 2021–24 (percentage points, with 95% intervals clustered by sampling unit). Italic labels are fixed by birth or upbringing.

Characteristic	Family	GSS coding	1970s	2021–24
Calls self middle or upper class	Class	CLASS 3–4	+15.0 [+13, +17]	+0.1 [−3, +3]
Top third of family income	Class	REALINC, top third within each year	+10.1 [+8, +13]	+3.0 [0, +6]
Self-employed	Class	WRKSLF 1	+10.3 [+7, +14]	+5.7 [+1, +10]
Union household	Class	UNION 1–3 (self or spouse)	−13.8 [−17, −10]	−8.8 [−15, −3]
White	Race	RACE 1	+25.4 [+23, +28]	+33.6 [+30, +37]
Belongs to a fundamentalist denomination	Religion	FUND 1 (NORC's classification)	−7.0 [−9, −4]	+18.6 [+14, +23]
Attends services weekly or more	Religion	ATTEND 7–8	+3.0 [+1, +5]	+18.7 [+15, +23]
No religion	Religion	RELIG 4	−7.4 [−12, −3]	−25.6 [−29, −22]
Raised in a fundamentalist denomination	Religion	FUND16 1	−4.9 [−8, −2]	+8.6 [+5, +13]
Raised with no religion	Religion	RELIG16 4	+0.6 [−8, +9]	−5.9 [−11, −1]
No four-year degree	Education	DEGREE 0–2	−11.1 [−15, −7]	+14.4 [+11, +18]
Father has no four-year degree	Education	PADEG 0–2	−18.5 [−24, −13]	+11.5 [+7, +16]
Lives in a small town or the countryside	Place	XNORCSIZ 7–10	+7.8 [+5, +11]	+20.5 [+15, +26]

Characteristic	Family	GSS coding	1970s	2021–24
Grew up in the countryside or a small town	Place	RES16 1–3	+4.8 [+3, +7]	+15.6 [+13, +19]
Lives in the South	Region	REGION 3	−4.6 [−7, −2]	+9.9 [+6, +14]
Grew up in the South	Region	REG16 3	−9.5 [−12, −7]	+7.7 [+4, +12]
Gun in the household	Guns	OWNGUN 1 (refusals missing)	+6.5 [+4, +10]	+29.3 [+26, +33]
Married	Family	MARITAL 1	+6.3 [+4, +9]	+13.5 [+10, +17]
Has children	Family	CHILDS ≥ 1	+3.2 [+1, +6]	+15.5 [+12, +19]
Woman	Gender	SEX 2	−0.9 [−3, +1]	−10.0 [−13, −7]
Aged 60 or older	Age	AGE ≥ 60	+6.3 [+4, +9]	+2.8 [0, +6]
Born in the United States	Nativity	BORN 1	+1.3 [−9, +11]	+17.7 [+13, +22]
Military veteran	Military service	VETYEARS 1–4	+0.3 [−3, +4]	+14.0 [+9, +19]

Method 2: contributions. Many characteristics overlap: evangelicals are disproportionately white, Southern and rural. The second method therefore asks how much each *family* of characteristics adds to a prediction of party when the others are already known. A weighted logit of Republican identity is fitted on nine families: race, religion, education, place, region, class, gender, age (with a squared term) and family status (Table S8 lists their members). Fit is McFadden's pseudo-R^2, computed out of sample. The partisans of each period are split into five folds by whole sampling cluster; each fold is scored by a model fitted to the other four; and the result is compared with an intercept-only model scored the same way:

$$R^2_{\text{oos}}(S) = 1 - \frac{\sum_k \sum_{i \in k} w_i \, \ell_i(\hat{\beta}^S_{-k})}{\sum_k \sum_{i \in k} w_i \, \ell_i(\hat{\alpha}_{-k})}$$

Here ℓ is the log loss, S a set of families, and the hats mark coefficients estimated without fold k. The total for all nine families is divided among them by Shapley (1953) values. For family j in the set F of nine,

$$\phi_j = \sum_{S \subseteq F \setminus \{j\}} \frac{|S|!\,(|F| - |S| - 1)!}{|F|!} \Big[R^2_{\text{oos}}(S \cup \{j\}) - R^2_{\text{oos}}(S) \Big]$$

In words: the family's average gain in fit over every order in which the nine families could be added (512 models per period). The nine shares add up to the total. They do not depend on

the direction of an association, but they do depend on how common a characteristic is: a divide that splits partisans evenly predicts more than one that isolates a small group. Respondents missing any characteristic are dropped (10–15% of partisans per period, mostly for income). Intervals for the 1970s and 2021–24, and for the change between them, come from 200 cluster-bootstrap resamples, each repeating the whole out-of-sample calculation. A greedy forward search, which adds at each step the family that most improves out-of-sample fit, gives a second ranking. Each characteristic asked of only part of the sample is tested by adding it as a tenth family on the subsample that was asked.

Table S8 — Each family's contribution to predicting party, by period: its Shapley share of the out-of-sample pseudo-R^2, in percentage points. The families are race (white); religion (weekly attendance, fundamentalist denomination, no religion); education (no four-year degree); place (small town or countryside); region (South); class (top income third, middle or upper class, self-employed); gender (woman); age (age and its square); and family status (married, has children). The last column gives 95% intervals from 200 cluster-bootstrap resamples, each repeating the out-of-sample calculation; Figure 12 shows intervals for the 1970s and 2021–24. Out of sample, a family that adds noise rather than information can score slightly below zero.

Family	1970s	1980s	1990s	2000s	2010s	2021–24	Change [95% interval]
Race	2.0	4.2	4.6	5.6	6.4	6.3	+4.3 [+2.5, +6.3]
Religion	0.2	0.1	0.9	1.9	3.3	5.9	+5.7 [+4.4, +7.8]
Education	0.3	0.3	0.2	0.0	0.1	1.4	+1.1 [+0.3, +2.0]
Place	0.4	0.0	0.0	0.1	0.0	1.0	+0.7 [−0.3, +1.5]
Region	0.1	0.1	0.0	0.0	0.1	0.6	+0.5 [−0.1, +1.2]
Class	1.8	1.5	1.2	1.1	1.1	0.1	−1.7 [−2.4, −1.0]
Gender	0.0	0.1	0.5	0.7	0.4	1.0	+1.0 [+0.5, +1.6]
Age	0.5	0.5	0.6	0.2	0.0	0.3	−0.1 [−0.7, +0.2]
Family	0.0	0.2	0.4	0.8	0.8	1.2	+1.2 [+0.4, +1.6]
All nine, out of sample	**5.3**	**6.9**	**8.4**	**10.4**	**12.2**	**17.8**	+12.5 [+8.9, +15.0]
All nine, in sample	5.7	7.3	8.7	10.7	12.8	18.4	
Share of the total from the four divides	65%	74%	71%	76%	85%	86%	
Share from the four-trait count	64%	74%	63%	68%	66%	62%	

Family	1970s	1980s	1990s	2000s	2010s	2021–24	Change [95% interval]
Partisans	6,970	9,770	8,867	8,595	7,823	6,333	

Results. Three findings matter for the essay.

1. *Class faded.* Calling oneself middle or upper class went from 15 points more Republican to no difference, the top income third from 10 to 3 points, and self-employment from 10 to 6; union households went from 14 points less Republican to 9. In the decomposition, class was the second-strongest family in the 1970s, with about a third of the total, and is the weakest in 2021–24; its decline is clear of sampling error. Most of the fading came after 2014: the class-identity gap was 11 to 13 points in every survey from 2004 to 2014, 10 in 2016, 6 in 2018, 2 in 2021 and about −1 to −2 in 2022–24, and the income gap fell over the same years.
2. *Race and religion now dominate.* In 2021–24 they account for 35% and 33% of the total; education (8%), family status (7%), place (6%) and gender (6%) follow. Race's share rose partly because the nonwhite share of partisans doubled (12% to 24%), religion's partly because Americans with no religion grew from 6% to 25% of partisans. The forward search adds religion, race and education first in 2021–24, and race, class and age first in the 1970s.
3. *The four divides earn their place, with amendments.* The essay's four families reproduce 86% of the nine-family total in 2021–24 (65% in the 1970s). The simple four-trait count of S4.9, which measures religion by attendance alone, reproduces 62%. Place's contribution in 2021–24 is about equal to those of family status and gender, and its rise since the 1970s is not distinguishable from zero once the other families are held fixed.

Among the characteristics asked of part of the sample, gun ownership stands out. Added as a tenth family, it ranks third in 2021–24 with 19% of the total (4,932 partisans asked), up from sixth with 3% in the 1970s (3,689 partisans, 1973–77). Union membership falls from third (18%) to seventh (3%). Nativity (asked from 1977) and military service rank seventh and ninth in 2021–24.

Table S9 — Characteristics asked of only part of the sample, each added as a tenth family on the partisans who were asked: Shapley share of the out-of-sample total and rank among the ten families.

Characteristic	Period	Survey years	Partisans	Share of the total	Rank of 10
Gun in the household	1970s	1973, 1974, 1976, 1977	3,689	3%	6
Gun in the household	2021–24	2021, 2022, 2024	4,932	19%	3
Union household	1970s	1973, 1975, 1976, 1978	3,689	18%	3
Union household	2021–24	2021, 2022, 2024	4,194	3%	7
Born in the United States	1970s	1977, 1978	2,202	−5%	10
Born in the United States	2021–24	2021, 2022, 2024	6,326	3%	7
Military veteran	1970s	1974, 1975, 1977, 1978	4,297	−1%	10
Military veteran	2021–24	2021, 2022, 2024	6,322	2%	9

Checks. The class gaps do not depend on interview mode. In 2022–24 the class-identity gap is −0.6 points among interviewer-administered respondents and −2.6 among web respondents, and −1.3 in both arms of the randomized first-contact design; the income gap is −0.3 and −0.1. Scoring in sample rather than out of sample raises the nine-family total slightly (Table S8) and leaves the ranking unchanged. The share of partisans classified as living in a small town or the countryside falls from 30% in the 1970s to 13% in 2021–24. Part of that is urbanization, and part reflects changes in the sampling frame and in how places are classified, so the place family is less comparable over time than the others.

Caveats. Prediction is not causation: a family's share says how much it adds to a forecast of party, not how much it causes party identification. Shares depend on how characteristics are grouped (religion has three members, race one) and on how common each is. The scan covers only what the GSS asked consistently. It has no occupation-based class measure here, and it cannot test Hispanic identity before 2000 or sexual orientation before 2008.

S4.8 The four divides (Figures 13 and 14)

Question. When did race, religion, education and place line up with party?

Measures. For each GSS year and period, the weighted share of partisans who are Republican in each of two groups, and the gap between the groups in percentage points: white against nonwhite; weekly churchgoers against those who never attend or attend less than once a year; partisans without a four-year degree against college graduates; and residents of small cities, towns and open country outside metropolitan areas against residents of central cities over 50,000. Suburbs are left out of the place comparison. The place variable (XNORCSIZ) is assigned from

the sample address, not reported by the respondent. A positive gap means the first group is more Republican.

Table S10 — Republican share gap between groups of partisans, GSS (percentage points).

Period	Race	Religion	Education	Place	Education, white partisans	Respondents per comparison
1970s	+25.4	+5.2	−11.1	+14.6	−10.1	4,618–9,071
1980s	+34.2	+6.4	−10.8	+7.8	−10.2	6,209–12,339
1990s	+35.2	+10.0	−8.4	+10.2	−5.1	5,535–11,096
2000s	+34.4	+18.2	−5.1	+13.0	−2.7	6,109–11,716
2010s	+33.4	+18.5	−0.0	+12.9	+3.3	4,609–9,214
2021–24	+33.6	+24.6	+14.4	+29.1	+19.1	3,287–7,979

The 2024 snapshot (Figure 14) uses the CES's own categories: PEW_CHURATD for religious attendance (six levels), EDUC for education (six levels) and URBANCITY for self-described city, suburb, town or rural area, weighted by COMMONWEIGHT. The Republican share of partisans falls from 74% among those attending more than weekly to 31% among those who never attend, from 55% among high-school graduates to 37% among postgraduates, and from 65% in rural areas to 35% in cities. The church and education gradients are steeper among white partisans; the place gradient is not.

Checks. The education and place gaps jump between 2018 and 2021, when the GSS moved largely online. Two checks suggest the jump is not mainly a change-of-mode artifact. In 2022–24, when both modes were used, the education gap is +16.8 points among interviewer-administered respondents and +17.0 among web respondents, and the place gap +27.7 and +24.9. (Mode was not randomly assigned, so the two groups differ in other ways.) And the CES, a different online survey, shows gaps of similar size. Excluding leaners leaves the pattern unchanged (S5).

S4.9 Do the divides stack within the same people? (Figure 17)

Question. Figures 13 and 14 show each divide separately. The essay's mechanism requires more: that the divides now line up *together*, so that a partisan's race, faith, schooling and home all point toward the same party. In this appendix "stacking" means convergence in the traits' associations with party: whether the traits increasingly point toward the same party. It does

not mean that the traits co-occur more often in the same people, which is measured separately below.

Measure. Each GSS partisan is scored by how many of four Republican-leaning traits they have: white (RACE = 1); attends religious services weekly or more (ATTEND $\geq$ 7); no four-year degree (DEGREE $\leq$ 2); lives in a small city, town or open country outside metropolitan areas (XNORCSIZ 7–10). The count runs from 0 to 4. Respondents missing any trait, age, sex or region are dropped: about 1–2% of partisans in most years and up to 7% in 2021.

Method. Three things are estimated for each of six periods.

1. The weighted Republican share at each count (Figure 17, left). If the traits do not stack, the share barely changes with the count; if they stack, it climbs steeply.

2. A logistic regression of Republican identity on the count, controlling for age, age squared, sex and living in the South, weighted by WTSSPS:

$$\log \frac{P(\text{Republican})}{1 - P(\text{Republican})} = \alpha + \beta \cdot \text{count} + \gamma_1 \text{age} + \gamma_2 \text{age}^2 + \gamma_3 \text{female} + \gamma_4 \text{South}$$

   The odds ratio per trait, exp(β), says by how much each additional trait multiplies the odds of being Republican, holding the controls fixed (Figure 17, right).

3. The unrestricted model, with the four traits entered separately and the same controls. The count assumes that the four traits carry equal weight; a Wald test of that restriction rejects it in every period, so the *average marginal effect* of each trait is reported too—the average, over the period's partisans, of the predicted probability of being Republican with the trait minus without it. These are adjusted predictive contrasts under the model, not causal effects.

4. *McFadden's pseudo-R²* of a model with the four traits alone: one minus the ratio of the model's log-likelihood to that of a model with no predictors. It measures the improvement in fit over an intercept-only model, not a share of variance explained.

5. Three checks on interpretation. Whether the slope changed: a model pooling the 1970s and 2021–24, with all coefficients allowed to differ by period. The *aligned count*: each trait coded in the direction of its own coefficient in that period, rather than in today's direction—illustrative, because the directions are estimated on the same sample. And co-occurrence: weighted correlations between pairs of traits.

Odds-ratio intervals use standard errors clustered by survey sampling unit (S3.5). Intervals for shares and pseudo-R² are the 2.5th and 97.5th percentiles of 500 bootstrap samples, each drawn by resampling respondents within the period (random seed fixed).

Table S11 — Republican share of partisans by number of Republican-leaning traits, with 95% bootstrap intervals.

Traits	1970s: Republican share [95% interval]	1970s: respondents (share of partisans)	2021–24: Republican share [95% interval]	2021–24: respondents (share of partisans)
0	6% [0–15]	38 (0%)	14% [10–18]	425 (5%)
1	28% [25–31]	1,252 (13%)	28% [26–31]	2,882 (34%)
2	33% [31–34]	3,834 (44%)	53% [51–55]	3,061 (45%)
3	39% [37–40]	3,060 (34%)	72% [68–75]	988 (14%)
4	42% [38–45]	794 (8%)	87% [79–94]	132 (2%)

Table S12 — Stacking models by period. Odds ratio per trait with 95% design-based intervals; pseudo-R^2 with 95% bootstrap intervals; average marginal effects in percentage points.

Period	Partisans	Odds ratio per trait	Pseudo-R^2	White	Weekly church	No degree	Small town
1970s	8,978	1.26 [1.18–1.34]	0.033 [0.027–0.041]	+23.7	+2.3	−11.0	+7.1
1980s	12,239	1.24 [1.17–1.32]	0.051 [0.044–0.059]	+33.6	+5.6	−8.6	−1.7
1990s	10,833	1.37 [1.29–1.46]	0.055 [0.049–0.063]	+35.7	+9.3	−5.1	+0.4
2000s	11,590	1.63 [1.54–1.73]	0.078 [0.069–0.088]	+35.4	+16.2	−1.0	+1.7
2010s	9,170	1.73 [1.61–1.86]	0.079 [0.068–0.090]	+34.3	+15.0	+2.6	+0.6
2021–24	7,488	2.63 [2.39–2.90]	0.112 [0.099–0.131]	+34.4	+21.0	+15.2	+12.2

Results. In the 1970s the traits pulled in different directions: a partisan with all four was 14 points more likely to be Republican than one with a single trait. In 2021–24 the difference is 59 points. The odds ratio per trait roughly doubled—the ratio of the 2021–24 to the 1970s odds ratio is 2.09 (95% interval 1.86–2.35)—and the four traits' joint fit to party (pseudo-R^2) more than tripled. Coding each trait in its own period's direction raises the 1970s odds ratio from 1.26 to 1.52, so part of the early weakness is that the traits pointed different ways; the rise to 2.63 remains. Table S13 reports these checks. The pairwise correlations among the traits barely change, so what grew is the traits' alignment with party, not their co-occurrence in the same people. The marginal effects show why: race has had a large and stable effect since the 1980s, while weekly church attendance, lacking a degree and small-town residence, which in the 1970s were weak or (for education) pointed the other way, now all push in the same direction as race.

Is it just race? Among white partisans alone, using the other three traits, the odds ratio per trait was 1.05 [0.98–1.13] in the 1970s—no increase in the odds with the count—and 2.42 [2.16–2.70] in 2021–24 (S5). The stacking of religion, education and place is not an artifact of race.

Table S13 — Interpretation checks: effective sample size, aligned count, the equal-weights test, and selected trait correlations.

Period	Effective n	Aligned odds ratio	Equal weights, Wald χ^2 (3 df)	White–weekly church r	No degree–small town r	White–small town r
1970s	7,099	1.52	183 ($p < 0.001$)	−0.00	+0.09	+0.09
1980s	8,277	1.52	397 ($p < 0.001$)	+0.01	+0.10	+0.07
1990s	8,602	1.63	443 ($p < 0.001$)	−0.03	+0.11	+0.07
2000s	8,475	1.80	353 ($p < 0.001$)	−0.03	+0.13	+0.09
2010s	6,081	1.73	260 ($p < 0.001$)	−0.03	+0.11	+0.07
2021–24	3,699	2.63	63 ($p < 0.001$)	−0.06	+0.08	+0.11

Caveats. The four traits predict party only modestly even in 2021–24 (pseudo-R^2 about 0.11); demography is far from destiny. The GSS has no measure of partisan hostility, so these data show that identities increasingly line up with party, not that people whose identities are stacked are more hostile. That second step rests on other studies, chiefly Mason (2015, 2018). The traits are dichotomized; finer categories would describe each divide more fully but would make the count harder to interpret.

S4.10 Childhood traits and birth cohorts (Figure 18)

Question. Party loyalty can shape the traits used here. Partisans adjust their religious practice to fit their politics (Margolis 2018; Patrikios 2008), the growth of the nonreligious was partly a reaction against the religious right (Hout and Fischer 2002), and partisans shift even identities such as ethnicity and sexual orientation (Egan 2020). If so, part of the stacking in S4.9 measures party loyalty itself. Two checks address this. The first uses traits that adult partisanship cannot have shaped. The second asks whether the realignment came from new generations (replacement) or from the same generations changing (conversion).

Method 1: childhood traits. The count of S4.9 is rebuilt from four traits fixed by adolescence: white (RACE), raised in a fundamentalist denomination (FUND16 = 1), father without a four-year degree (PADEG 0–2), and grew up in open country, on a farm or in a town under 50,000 (RES16 1–3). The logit controls for age, age squared, sex and growing up in the South (REG16 = 3), with clustered intervals. FUND16 was not asked in 1972, so the 1970s period here is 1973–79. Father's degree is missing for about a fifth of respondents, mostly those who did not know it or did not live with their father; they are dropped. Table S14 also reports the out-of-sample pseudo-R^2 of seven childhood families: race, religion raised, father's education, place raised, region raised, gender and age.

Table S14 — Traits fixed in childhood, by period.

Period	Partisans	Odds ratio per childhood trait [95% interval]	Republican share with none of the four	With all four	Pseudo-R^2, seven childhood families (out of sample)
1970s	5,949	1.11 [1.02–1.21]	10%	39%	0.039
1980s	9,428	1.12 [1.04–1.20]	30%	47%	0.053
1990s	8,361	1.21 [1.14–1.29]	33%	55%	0.051
2000s	7,964	1.38 [1.30–1.47]	29%	61%	0.061
2010s	6,894	1.41 [1.32–1.51]	34%	65%	0.059
2021–24	5,662	1.83 [1.67–2.01]	14%	77%	0.082

Results. The childhood count stacks too. The odds ratio per trait rose from 1.11 to 1.83, and in 2021–24 the Republican share runs from 14% with none of the four traits to 77% with all four. The rise is smaller than for the adult count (1.26 to 2.63), which leaves room for influence in both directions.

Method 2: cohorts. Gaps are computed by birth cohort (before 1925, 1925–44, 1945–64, 1965–80, 1981 or later) and period, for cells with at least 250 partisans and 60 in each group (Figure 18, right, shows education). To summarize, a linear probability model pools 1972–79 and 2010–24:

$$\text{Rep}_i = a + b\,T_i + c\,L_i + d\,T_i L_i + \textstyle\sum_g \left(e_g C_{gi} + f_g T_i C_{gi}\right) + \varepsilon_i$$

where T is the trait, L marks the later period and C are five-year birth cohorts. With the cohort terms, d is the change in the gap *within* cohorts, identified from cohorts sampled in both periods;

without them, d is the total change. Their ratio is the share of the change that happened within cohorts. The model is weighted, with clustered standard errors.

Table S15 — Conversion or replacement? Gaps in Republican share (percentage points) in the 1970s and in 2010–24, for all partisans and for those born in 1925–57, and how much of the change happened within five-year birth cohorts.

Characteristic	All partisans	Born 1925–57	Total change	Change within cohorts [95% interval]	Share within cohorts
No four-year degree	−11.1 → +6.6	−9.6 → +3.4	+17.6	+10.4 [4.8, 15.9]	59%
Attends weekly or more	+3.0 → +15.4	+3.7 → +13.5	+12.5	+10.9 [5.9, 15.9]	87%
Fundamentalist denomination	−6.9 → +13.6	−5.1 → +13.4	+20.5	+17.5 [12.4, 22.6]	85%
Middle or upper class	+15.0 → +6.2	+15.4 → +5.9	−8.8	−8.6 [−13.2, −4.0]	98%

Results. Most of the realignment happened within generations: about three-fifths of the change in the education gap, and nearly all of the change in the religious and class gaps.

Caveats. The GSS is a series of cross-sections, so cohorts are generations, not the same people. Changes within a cohort mix the effects of aging with those of the period, and mortality changes who remains. For religion, conversion could still mean that people changed their churchgoing to fit their party. Childhood traits are reported from memory, and they correlate with adult traits, so the childhood count partly stands in for adult social position.

S4.11 How party positions on issues changed (Figures 10 and 16)

Question. Did the parties' positions rotate from mainly economic to economic *and* cultural?

Measures. Four GSS questions, shown as the share of Democrats and of Republicans giving the left or permissive answer (Table S3 gives wording and coding). Gaps are Democrats minus Republicans, pooled over the first period with data (from each question's first year to 1984) and over 2016–24.

Table S16 — Party gaps on four questions, GSS (percent of Democrats vs. Republicans agreeing; gap in points).

Statement	Variable	Early period	2016–24
Government should reduce income gaps	EQWLTH	1978–84: 55 vs 35 (+19)	2016–24: 73 vs 26 (+47)
Government should help pay medical bills	HELPSICK	1975–84: 56 vs 35 (+21)	2016–24: 72 vs 31 (+41)
Abortion should be legal for any reason	ABANY	1977–84: 36 vs 39 (−3)	2016–24: 70 vs 33 (+37)
Same-sex relations are not wrong at all	HOMOSEX	1974–84: 15 vs 11 (+4)	2016–24: 71 vs 41 (+29)

Indexes. The essay's summary that the cultural gap grew from a fifth to three-fifths of the economic gap uses two indexes. The economic index averages EQWLTH, HELPPOOR, HELPSICK and NATFARE; the cultural index averages ABANY (coded 1 for "no"), HOMOSEX and PREMARSX (both reversed so that higher is more traditional) and GRASS (coded 1 for "should not be legal"). Each item is converted to a z-score (subtracting its weighted mean and dividing by its weighted standard deviation over the pooled 1972–2024 sample), so that items on different scales count equally and the scale is fixed across years; a respondent needs at least two items on an index. For each of five periods, the Democratic and Republican means are expressed relative to the period's public mean. The cultural gap was 22% of the economic gap in 1974–84 and 61% in 2016–24. Equivalently, the angle of the line joining the two party means, arctan(cultural gap ÷ economic gap), rose from 12° to 31°. Figure 10 in the essay is a schematic of this rotation; it draws the line turning all the way to the diagonal for clarity, and its footnote gives the measured angle. Among all respondents, the correlation between the two indexes was 0.04 in 1974–84 and 0.28 in 2016–24 (the essay's "the public's two axes have begun to fuse").

Checks and caveats. From 2021 about half of respondents answered the abortion question in a grid format. Using the original item only, as the essay does, Democrats and Republicans were 70% and 33% in favor in 2016–24; combining both formats gives 72% and 33%. Because of the split-ballot design, many respondents answered only some index items, and each index averages what was asked. Single-year angles are noisy, which is why the essay pools periods.

S4.12 The 2024 map of policy views (Figure 19)

Question. How are partisans distributed across economic and cultural policy views, and how many voters hold combinations that neither party's majority shares?

Measures. Each CES respondent gets two scores: the share of right-of-center answers on eight economic items and on nine cultural items (Table S17). A respondent may skip up to two items on a scale. Scores run from 0 (left on every item) to 1 (right on every item). Quadrants are cut at 0.5; a score of exactly 0.5, possible on the eight-item scale, counts half on each side.

Table S17 — CES 2024 policy items. Each item asks whether the respondent supports or opposes the policy.

Scale	Variable	Policy	Right-of-center answer
Economic	CC24_341a	Extend the 2017 tax cuts	Support
Economic	CC24_341b	Raise the corporate tax rate to 28%	Oppose
Economic	CC24_341c	Raise taxes on incomes over $400,000	Oppose
Economic	CC24_341d	Spend $150 billion a year on infrastructure	Oppose
Economic	CC24_328c	Medicaid work requirements	Support
Economic	CC24_328d	Repeal the Affordable Care Act	Support
Economic	CC24_328e	Expand Medicaid	Oppose
Economic	CC24_323f	Forgive up to $20,000 of student debt (listed as CC24_328f in the guide)	Oppose
Cultural	CC24_324a	Always allow abortion as a matter of choice	Oppose
Cultural	CC24_324c	Make abortion illegal in all circumstances	Support
Cultural	CC24_324d	Expand access to abortion	Oppose
Cultural	CC24_323a	Legal status for long-resident undocumented workers	Oppose
Cultural	CC24_323c	Build a wall on the border with Mexico	Support
Cultural	CC24_323d	A path to citizenship for "Dreamers"	Oppose
Cultural	CC24_321a	Ban assault rifles	Oppose
Cultural	CC24_321b	Make concealed-carry permits easier to obtain	Support
Cultural	CC24_321d	Increase police by 10%, even at the cost of other services	Support

Results. 59,923 respondents have both scores. Table S18 gives the quadrant shares. The two scales are strongly correlated in 2024 ($r = 0.74$).

Table S18 — Share of each group in each quadrant, CES 2024 (baseline specification).

Group	Left on both	Right on both	Left on economics, right on culture	Right on economics, left on culture
All adults	53%	27%	11%	9%
Democrats	89%	2%	3%	6%
Independents	52%	21%	14%	13%
Republicans	15%	57%	18%	10%

Sensitivity. Table S19 repeats the quadrant shares with the line drawn at 0.4 and 0.6, with each policy domain left out in turn, and with each scale built as the average of its domains, so that the three abortion items, for example, count as one. The off-diagonal groups remain sizeable under every choice, but their size and composition change.

Table S19 — Quadrant shares under other specifications, CES 2024.

Specification	Democrats left on both	Republicans right on both	Adults left on economics, right on culture	Adults right on economics, left on culture	Republicans left on economics, right on culture
Cut at 0.4	82%	70%	13%	8%	17%
Cut at 0.5	89%	57%	11%	9%	18%
Cut at 0.6	94%	45%	8%	9%	15%
Without taxes and infrastructure	85%	55%	12%	11%	20%
Without health care	87%	58%	10%	11%	17%
Without student debt	89%	54%	12%	9%	20%
Without abortion	85%	58%	15%	8%	20%
Without immigration	88%	54%	11%	10%	16%
Without guns	88%	57%	12%	9%	18%
Without policing	89%	55%	10%	10%	16%
Domains weighted equally	84%	64%	11%	10%	15%

Caveats. The quadrant shares depend on which items are included and where the line is drawn; they should be read as orders of magnitude, and an equal-weight count of answers is not a

distance. The 0.5 line marks a majority of right-of-center answers on these items, not a validated ideological center. The map locates voters, not parties or candidates, so it shows that many voters are cross-pressured on these items, not that they lack representation; the essay's word "orphaned" was replaced for this reason. The "cultural" scale includes immigration, guns and policing, which are cultural in the sense that they divide the parties along the same lines as abortion, but some readers would classify them differently. The items are those the parties fight over in 2024, which is one reason the two scales are so strongly correlated.

S4.13 Openness, globalization, change and expertise (Figure 20; essay Section 4)

Question. Did the parties part on change itself—on immigration, trade, the pace of change, and trust in the experts who explain it—and which party moved? And how much of what the four social divides predict about party do attitudes toward change account for?

Measures. Four GSS questions asked over long spans, each shown as the share of Democrats and of Republicans (leaners included) giving one answer. LETIN1A asks whether "the number of immigrants to America nowadays should be increased a lot, increased a little, remain the same as it is, reduced a little, or reduced a lot"; coded 1 for reduced a little or a lot (11 surveys, 2004–24). IMPORTS asks for agreement with "America should limit the import of foreign products in order to protect its national economy"; coded 1 for agree or strongly agree (ISSP National Identity module: 1996, 2004, 2014, 2021, 2024). TOOFAST asks for agreement with "Science makes our way of life change too fast"; coded 1 for agree or strongly agree (9 surveys, 2006–22). CONSCI asks for confidence in "the people running" the scientific community; coded 1 for "a great deal" against "only some" and "hardly any" (33 surveys, 1973–2024). Four further items are reported here only, as checks: LETIN1 and IMMAMECO ("Immigrants are generally good for America's economy"; agree or strongly agree) from the ISSP module (1996, 2004, 2014, 2024), and the ranking of five qualities for a child, from which THNKSELF ("to think for one's self") ranked first and OBEY ("to obey") ranked first or second (1986–2024). "Don't know" and other nonresponse are excluded. Estimates use WTSSPS. Each item's early and late windows are pooled; 95% intervals come from a cluster bootstrap (500 resamples) of sampling units, defined as VSTRAT × VPSU within year, with respondents lacking a unit treated as their own cluster.

Table S20 — Party shares and gaps on eight questions, GSS (percent of Democrats vs. Republicans; gap = Democrats minus Republicans; changes in points; 95% intervals in brackets).

Statement	Variable	Early window	Late window (gap [interval])	Change, Democrats	Change, Republicans	n (early / late)
Fewer immigrants should be admitted	LETIN1	2004–08: 48 vs 61 (−12)	2021–24: 20 vs 64 (−44 [−47, −41])	−28 [−32, −25]	+4 [−0, +8]	3,359 / 6,850
America should limit imports to protect its economy	IMPORT	1996: 73 vs 66 (+8)	2021–24: 36 vs 68 (−32 [−37, −27])	−37 [−42, −32]	+3 [−4, +9]	1,074 / 2,514
Science makes our way of life change too fast	TOOFAST	2006–10: 48 vs 44 (+5)	2021–22: 38 vs 49 (−10 [−16, −5])	−10 [−15, −6]	+5 [−0, +9]	3,144 / 2,352
A great deal of confidence in the scientific community	CONSCI	1973–84: 43 vs 49 (−6)	2021–24: 57 vs 27 (+30 [+26, +34])	+14 [+11, +17]	−23 [−26, −19]	11,630 / 5,227
Fewer immigrants (ISSP module)	LETIN1	1996: 60 vs 67 (−7)	2024: 26 vs 74 (−48 [−55, −41])	−35 [−41, −28]	+7 [−1, +15]	958 / 1,075
Immigrants are generally good for America's economy	IMMAMER	1996: 33 vs 39 (−6)	2024: 74 vs 37 (+37 [+30, +44])	+41 [+35, +47]	−1 [−10, +6]	1,040 / 1,125
Thinking for oneself ranked first for a child	THNKSELF	1986–94: 52 vs 52 (+0)	2021–24: 49 vs 44 (+5 [+1, +9])	−3 [−6, +0]	−7 [−11, −4]	8,103 / 5,157
Obedience ranked first or second for a child	OBEY	1986–94: 34 vs 31 (+3)	2021–24: 12 vs 16 (−4 [−7, −2])	−22 [−25, −20]	−15 [−18, −12]	8,103 / 5,157

Results. On immigration, trade and the pace of change, the gap opened because Democrats moved; Republicans' change is small and its interval includes zero. On trade the order reversed: Democrats were 8 points more protectionist than Republicans in 1996 and 32 points less in 2021–24. On confidence in science, both parties moved, in opposite directions, and Republicans moved further: from 6 points more confident than Democrats in 1973–84 to 30 points less in 2021–24. Year by year, Republicans were more confident in most surveys through 1991 (by up to 14 points); the gap stayed within 2 points from 1993 to 2006, then favored Democrats by 7 to 8 points in 2008–14, 11 to 13 in 2016–18, and 25 to 31 in 2021–24. The child-rearing items do not show the same pattern: both parties moved away from obedience, and the gaps stay within 5 points. The essay therefore treats the refusal as selective.

Vaccines. VAXKIDS ("Vaccines are important for children") was asked once, in 2022 (n = 922 partisans). 70% of Democrats and 38% of Republicans strongly agreed (gap 33 points, interval 23 to 43); 94% and 81% agreed or strongly agreed (gap 13, interval 7 to 19).

How much do attitudes toward change account for? Among partisans in 2021–24, weighted linear probability models of Republican identification (against Democratic) use the four Republican-leaning traits of S4.9—white, attends services weekly, no four-year degree, small town or countryside—with age, sex and the South as controls. Each model is fitted with and without a set of attitudes. The share a set *accounts for* is one minus the ratio of a trait's coefficient with the attitudes to its coefficient without them, for the trait count and for each trait. Linear probability models are used because, unlike logits, their coefficients can be compared across nested models without rescaling. Confidence in science enters as two indicators ("a great deal," "hardly any"; "only some" is the reference). Intervals come from a cluster bootstrap (300 resamples). Table S21 gives the results; R^2 columns compare the four traits alone, the attitudes alone, and both with controls.

Table S21 — Share of each trait's association with Republican identification accounted for by attitudes toward change, partisans 2021–24 (95% intervals in brackets).

Attitudes added	n	Trait count	White	Weekly churchgoer	No degree	Small town	R^2, traits only	R^2, attitudes only	R^2, both with controls
Immigration and science	3,907	31% [26, 36]	12% [6, 18]	30% [19, 44]	55% [44, 75]	47% [29, 87]	0.14 [0.11, 0.17]	0.23 [0.20, 0.27]	0.32 [0.29, 0.36]
Immigration and imports	2,363	35% [28, 42]	22% [15, 30]	29% [16, 41]	60% [43, 84]	43% [23, 67]	0.14 [0.10, 0.17]	0.25 [0.20, 0.29]	0.32 [0.28, 0.36]
Immigration, science, abortion and same-sex relations	1,058	46% [35, 58]	15% [1, 29]	86% [64, 137]	67% [42, 105]	53% [21, 87]	0.16 [0.11, 0.21]	0.37 [0.31, 0.45]	0.45 [0.41, 0.53]

Two attitudes, on immigration and on science, explain more of the variation in party than the four traits (R^2 0.23 against 0.14) and account for 55% of the education gap and 47% of the place gap, but only 12% of the racial gap. Adding abortion and same-sex relations, asked of a smaller subsample, accounts for most of the churchgoing gap; shares above 100% in the upper bounds mean that, with the attitudes held fixed, the trait's own association can vanish or reverse. *In-*

terpretation. This is a descriptive decomposition, not mediation in a causal sense: party loyalty shapes attitudes as well as the reverse (partisans take cues on immigration and science from their leaders), so the shares are an upper bound on what the attitudes could explain. The items are asked on split ballots, so each set uses the partisans who answered all of its items.

Population shares. Section 4's description of how the country changed uses the same survey for all adults, not only partisans, pooled over 1972–79 and 2021–24: nonwhite 11.5% and 26.8%; no religion (RELIG = 4) 7.4% and 27.6%; four-year degree 12.7% and 30.8%; weekly churchgoers 30.0% and 18.0%. The share living in small towns and the countryside is not reported, because XNORCSIZ follows the GSS sampling frame, which changed several times, and its trend is not comparable over time; the essay uses county economic output from Brookings for place instead.

Checks and caveats. *Mode.* In 2021–24 the gaps differ by interview mode: −37 points on LETIN1A among interviewer-administered respondents and −49 among web respondents; −27 and −34 on IMPORTS; −20 and −7 on TOOFAST; +23 and +34 on CONSCI. Every gap has the same sign in both modes. The TOOFAST gap rests on 567 interviewer-administered respondents and is the least secure of the four. *Timing.* The jump in the science gap coincides with the pandemic, when party leaders took opposing positions on public-health advice, so it is consistent with elite cues as well as with the worldview reading the essay proposes. *Measurement.* These are attitudes, not personality measures; the GSS has no personality battery, so the psychological literature cited in Section 3 of the essay is quoted, not tested. *Code.* `code/change.py` writes `results/change.json`; `figures.py` draws Figure 20 from it.

S4.14 The cross-national comparison (Figures 8 and 21)

Question. Do the forces that every rich democracy experienced—the internet, inequality, trade, immigration—predict which countries' publics grew more hostile?

Method. For each country, the trend in affective polarization is the least-squares slope of the authors' index on survey year, multiplied by ten (thermometer points per decade); these reproduce the authors' published trends (United States +5.6, Germany −3.7). The authors supply each country's trend in nine candidate drivers. Across countries, each driver's trend is correlated with the polarization trend (Pearson's r). With so few countries, three additional statistics matter:

- a 95% interval for each correlation, from Fisher's z transformation: $z = \operatorname{arctanh}(r)$, interval $\tanh(z \pm 1.96/\sqrt{(n-3)})$;
- a Holm adjustment of the p-values for testing nine drivers at once, which controls the chance of any false positive among the nine (Holm 1979);
- the range of the correlation when each country in turn is left out, to show whether one country drives the result.

Table S22 — Cross-national correlations between driver trends and the trend in affective polarization.

Driver	n	r	95% interval	p	Holm p	Leave-one-out range	Spearman r
Elite polarization	10	+0.73	[+0.19, +0.93]	0.016	0.15	+0.50 to +0.83	+0.78
Nonwhite share	11	+0.59	[−0.02, +0.88]	0.057	0.46	+0.46 to +0.66	+0.61
Private 24-hour TV news channels	11	+0.35	[−0.32, +0.78]	0.295	1.00	+0.14 to +0.60	+0.38
Partisan-ideological sorting	12	+0.32	[−0.32, +0.75]	0.317	1.00	+0.13 to +0.48	+0.13
Foreign-born share	12	+0.00	[−0.57, +0.57]	0.998	1.00	−0.30 to +0.13	−0.10
Trade share of GDP	12	−0.07	[−0.62, +0.52]	0.818	1.00	−0.24 to +0.25	+0.01
Share getting news online	11	−0.19	[−0.71, +0.46]	0.573	1.00	−0.36 to −0.05	−0.26
Internet use	12	−0.48	[−0.83, +0.12]	0.110	0.66	−0.61 to −0.13	−0.29
Inequality (Gini)	12	−0.52	[−0.84, +0.08]	0.082	0.58	−0.64 to −0.40	−0.45

Results. Elite polarization—the trend in experts' ratings of how polarized each country's party elites are, from Rehm and Reilly (2010)—has the strongest association with rising hostility (r = +0.73). It is the only interval that excludes zero, but after the Holm adjustment p = 0.15; it is available for only 10 countries (not Japan or Switzerland); and leaving out the United States lowers it to +0.50. The elite measure is sparse: three to five expert ratings per country, all between 1982 and 2003, while the hostility trends run to as late as 2020. Fitting each country's hostility trend only to surveys inside its elite-measurement window gives r = +0.65 (10 countries, p = 0.044), or +0.69 (9 countries) when at least three surveys are required. The positive association survives, but its size and precision are modest. Internet growth and inequality show no positive association: their correlations are negative, with intervals that include zero, which is not evidence that they reduce hostility. The United States had the slowest growth in internet use of the twelve and the fastest growth in hostility.

Caveats. Ten to twelve observations cannot separate correlated drivers or establish the direction of influence: elites may polarize because their voters do. Driver trends are measured over each country's available years, which differ from country to country. The country trends are themselves estimates; their uncertainty (country intervals use the t distribution with n − 2 degrees of freedom) is not carried into the cross-country correlations. These correlations describe patterns across countries; they are not causal estimates.

S4.15 Newly elected House members (essay Section 8)

Question. The essay proposes that safe seats and low-turnout primaries select more factional nominees. One descriptive implication can be checked in the roll-call record: do first-term members vote further from the center than continuing members of their party?

Method. A member is *newly elected* in the first Congress in which their identifier appears in the House. *Extremity* is the first-dimension score signed toward the member's own party (the score for Republicans, minus the score for Democrats), so higher always means further from the center. For every Congress from 1951 to 2023, the mean extremity of first-term and continuing members is compared within each party, and the comparisons are averaged by era. The comparison is made twice: with career DW-NOMINATE scores (Table S23), and with Nokken–Poole scores, which are estimated separately for each Congress and so describe each member's voting in that Congress alone (Table S24; Nokken and Poole 2004). The 119th Congress (2025–26) is excluded because its record is incomplete.

Table S23 — Extremity of first-term and continuing House members, career DW-NOMINATE scores (first dimension, signed toward own party).

Era	Party	First term	Continuing	Difference	Congresses in which first-term members are more extreme	First-term members per Congress
1951–1969	Democrats	0.312	0.279	+0.033	8 of 10	37
1951–1969	Republicans	0.269	0.262	+0.006	7 of 10	33
1971–1979	Democrats	0.299	0.316	−0.017	2 of 5	47
1971–1979	Republicans	0.286	0.264	+0.022	3 of 5	30
1981–1993	Democrats	0.314	0.311	+0.003	4 of 7	35
1981–1993	Republicans	0.373	0.329	+0.044	7 of 7	33
1995–2009	Democrats	0.324	0.379	−0.055	1 of 8	28
1995–2009	Republicans	0.451	0.412	+0.039	8 of 8	34
2011–2023	Democrats	0.358	0.391	−0.033	0 of 7	32
2011–2023	Republicans	0.503	0.487	+0.017	5 of 7	48

Table S24 — The same comparison with Nokken–Poole scores estimated for each Congress separately.

Era	Party	First term	Continuing	Difference	Congresses in which first-term members are more extreme
1951–1969	Democrats	0.317	0.285	+0.032	7 of 10
1951–1969	Republicans	0.286	0.268	+0.018	7 of 10
1971–1979	Democrats	0.311	0.313	−0.002	2 of 5
1971–1979	Republicans	0.281	0.261	+0.020	3 of 5
1981–1993	Democrats	0.297	0.322	−0.025	1 of 7
1981–1993	Republicans	0.360	0.332	+0.029	6 of 7
1995–2009	Democrats	0.320	0.385	−0.066	1 of 8
1995–2009	Republicans	0.453	0.421	+0.033	7 of 8
2011–2023	Democrats	0.367	0.399	−0.033	1 of 7
2011–2023	Republicans	0.503	0.490	+0.013	5 of 7

Results. With either score, first-term Republicans have voted to the right of continuing Republicans in most Congresses since 1981 (18 of 22 with Nokken–Poole scores), and first-term Democrats closer to the center than continuing Democrats (19 of 22). The pattern is one-sided, mirroring the asymmetry in S4.2. It is a descriptive difference between first-term and continuing members, not an estimate of a primary-selection effect. S4.16 repeats the comparison with the district held fixed.

Caveats. Retirements, redistricting, party switches and general-election results can all produce this pattern without any change in primaries. Roll-call scores do not capture combative style, which is what the essay's discussion of "fighters" is mainly about. The comparison does not condition on how competitive each district was or on primary competition, which the data here do not include, and it reports no sampling uncertainty, so it does not test the link between safe seats and nominees.

S4.16 Same seat, new member (Figure 24)

Question. The comparison in S4.15 sets first-term members against everyone else in their party, so it mixes who gets nominated with which districts change hands. Holding the district fixed: when a seat passes from one member to a newcomer of the same party, does the newcomer vote further from the center?

Method. A *succession* is a House seat (state and district number) served by exactly one member in each of two consecutive Congresses, where the second member is in their first House Congress and belongs to the same party as the first. Seats filled at special elections, which have two members in one Congress, drop out. So do successions into the first Congress after each census (1953, 1963, 1973, 1983, 1993, 2003, 2013 and 2023), when district numbers refer to new territory. For a succession into Congress c, with $s = +1$ for Republicans and -1 for Democrats, the shift is

$$\text{shift} = s\left(x_{\text{new},c} - x_{\text{old},c-1}\right) - \overline{s\left(x_{i,c} - x_{i,c-1}\right)}_{\,i \in \text{ continuing members of the party}}$$

where x is the Nokken–Poole first-dimension score. The second term removes the average movement of the party's continuing members between the two Congresses, which reflects changes in the agenda as well as in members. A positive shift means the seat moved further from the center than the party's continuing members did. Intervals use the t distribution across successions.

Table S25 — Same seat, new member: how much further from the center House newcomers vote than the same-party member they replaced (Nokken–Poole first dimension, adjusted for the drift of continuing members). Positive means further from the center.

Era	Party	Seats	Shift	95% interval	Unadjusted	Outward
1949–1969	Democrats	129	+0.018	−0.014 to 0.050	+0.016	54%
1949–1969	Democrats, South	69	−0.005	−0.050 to 0.040	−0.009	55%
1949–1969	Democrats, outside the South	60	+0.044	−0.001 to 0.090	+0.045	53%
1949–1969	Republicans	110	−0.042	−0.078 to −0.005	−0.040	43%
1971–1979	Democrats	103	−0.029	−0.063 to 0.005	−0.029	43%
1971–1979	Democrats, South	33	−0.041	−0.125 to 0.043	−0.040	48%
1971–1979	Democrats, outside the South	70	−0.023	−0.056 to 0.010	−0.024	40%
1971–1979	Republicans	46	+0.016	−0.040 to 0.072	+0.014	50%
1981–1993	Democrats	62	−0.043	−0.085 to −0.002	−0.032	34%
1981–1993	Democrats, South	22	−0.007	−0.083 to 0.069	+0.003	50%
1981–1993	Democrats, outside the South	40	−0.063	−0.113 to −0.014	−0.052	25%
1981–1993	Republicans	67	+0.035	−0.005 to 0.076	+0.041	58%
1995–2009	Democrats	73	−0.007	−0.036 to 0.023	−0.003	53%
1995–2009	Democrats, South	25	−0.028	−0.086 to 0.029	−0.022	48%

Era	Party	Seats	Shift	95% interval	Unadjusted	Outward
1995–2009	Democrats, outside the South	48	+0.004	−0.030 to 0.039	+0.008	56%
1995–2009	Republicans	111	+0.044	0.011 to 0.076	+0.043	64%
2011–2023	Democrats	59	+0.011	−0.033 to 0.054	+0.014	49%
2011–2023	Democrats, South	8	+0.065	−0.080 to 0.211	+0.069	75%
2011–2023	Democrats, outside the South	51	+0.002	−0.044 to 0.049	+0.005	45%
2011–2023	Republicans	129	+0.047	0.013 to 0.081	+0.043	67%

Results. Before 1970, Republican newcomers sat closer to the center than the members they replaced (−0.042). Since 1981, across 307 successions, they have sat further right (+0.043, 95% interval +0.023 to +0.064), in 64% of seats. Democratic newcomers show no outward shift since 1981 (−0.013, interval −0.035 to +0.008, 194 successions), in the South or elsewhere.

As a rough account, each succession moves its party's House mean by its unadjusted shift divided by the number of party members, and successive shifts in the same seat add up. On that count, same-seat successions since 1981 add about 0.060 to the House Republicans' rightward move of 0.228 between the 96th Congress (1979–80) and the 118th (2023–24), about a quarter. For Democrats they add nothing (−0.006 of an outward move of 0.096).

Checks. Since 1981 the Republican shift is +0.042 without the adjustment for continuing members, +0.046 with career DW-NOMINATE scores, and +0.035 when successions into the first Congress after each census are kept (391 successions). The Democratic shift stays within 0.013 of zero in each variant.

Caveats. The design holds the district's boundaries fixed but not its voters, who can change between elections. Mid-decade redistricting, such as Texas's in 2003, is not removed. Scores from adjacent Congresses are only approximately comparable, which the adjustment for continuing members addresses in part. The comparison does not say *why* newcomers differ: primary electorates, activists and donors, national recruitment and changes in the district's voters could each produce it. District election returns, which would allow safe and competitive seats to be compared, were not obtained: the MIT Election Data and Science Lab's House returns (Harvard Dataverse, doi:10.7910/DVN/IG0UN2) require a registration form before download. The accounting ignores when members leave, so it should be read as an order of magnitude.

S4.17 Evidence quoted from other studies

The following figures are reported as their authors state them and were not re-estimated. Each hand-entered value records its source and a verbatim quotation or table reference.

- **Antipathy and marriage (Figure 2).** Pew's "very unfavorable" series and its trait items (for example, calling the other party's members more immoral than other Americans) refer to partisans *excluding* leaners. The questions about a child marrying across party lines differ in wording ("displeased" in 1960, "unhappy" in 2010, "upset" in 2020) and survey mode, so Figure 2 shows them side by side only as a rough comparison.
- **Social media experiments (Figure 9).** *Selection:* randomized experiments that changed what US users saw on social media, or took them off it, and reported effects on affective polarization, published or posted by October 2026. *Studies:* Allcott et al. (2020; Facebook deactivation, four weeks, 2018); Allcott et al. (2024; Facebook and Instagram deactivation, six weeks, 2020); Guess et al. (2023; chronological feeds and removing reshares, about three months, 2020); Nyhan et al. (2023; fewer like-minded sources, about three months, 2020); Piccardi et al. (2025; reranking posts that express partisan animosity and antidemocratic attitudes on X, ten days, 2024); and Stray et al. (2026, a preprint; five alternative rankers on Facebook, Reddit and X, six months, 2024). Effects in the upper panel are in standard deviations of each study's outcome. For Allcott et al. (2020) the 95% interval is computed from the reported standard error; the chronological-feed intervals of Guess et al. (2023) are read from the paper's figure. The Allcott et al. (2024) Facebook estimate (-0.031 SD) has $p = 0.049$, with a reported upper bound of -0.000, but a multiplicity-adjusted $Q = 0.189$; the chart marks it rather than treating it as zero. Stray et al. report -0.03 SD with $p < 0.05$ but no interval. The lower panel compares, in feeling-thermometer points, Piccardi et al.'s effect (more than 2 points) and Stray et al.'s narrowing of the thermometer gap (1.5 points) with the 28.9-point rise in the ANES gap from 1978 to 2020; unlike the earlier reference band, these are the same units. A search of this kind is not exhaustive, and none of these experiments measures effects over years.
- **Electoral machinery (Figure 23).** A split-ticket district is one whose voters chose a presidential candidate of one party and a House member of the other in the same election; counts are from Brookings's *Vital Statistics on Congress* (Table 2-16), with incomplete coverage before 1952. Swing seats are districts with a Cook Partisan Voting Index between D+5 and R+5; the Cook Political Report's attribution of the seats lost between 1997 and 2023 (45 to voters sorting themselves, 32 to redistricting) covers a different window from the 1999–2025 count in the chart. Cook's 2025 count uses unrounded index values and may not compare exactly with earlier years. Unite America's estimates of seats decided in primaries are an advocacy organization's classification. Newsroom employment is from Pew and newspaper counts from Northwestern's Medill Local News Initiative.

- **Perception gap (Figure 28).** More in Common's 2019 estimates of the share of the other party holding extreme views, against the actual share, and the gap by news attention.
- **Effects cited in the text.** For Funke, Schularick and Trebesch (2016), the 30% is a relative increase in far-right vote share in the five years after a systemic financial crisis. For Darr, Hitt and Dunaway (2018), the effect is a 1.9-point fall in the gap between the Democratic presidential and Senate vote shares in counties that lost a newspaper. For Canes-Wrone and Kistner (2022), only the abstract's qualitative finding is used, because period-specific estimates could not be verified.

S5. Robustness checks

Table S26 lists the checks; `code/robustness.py` computes all of them, and `results/robustness.json` holds the results.

Table S26 — Summary of robustness checks.

Check	Essay's choice	Alternative	Result
Leaners in the thermometer gap	Excluded	Included	Out-party cooling explains 98.3% vs. 98.7% of the rise
Timing: smoothing	Three-survey mean	None; five-survey mean	All series but one at least 66% complete by 2011 under every choice (Table S5)
Timing: start points	1964–65 (trust), 1967 (Congress)	1958; 1947	Shares by 2011 change by at most a point
Four divides: leaners	Included	Party identifiers only	Education −14 → +15; place +14 → +33 (essay: −11 → +14; +15 → +29)
Four divides: interview mode, 2022–24	All modes	Interviewer-administered vs. web	Education +17 vs. +17; place +28 vs. +25
Stacking specification	All partisans, four traits, weighted, controls	White partisans only; identifiers only; unweighted; church nearly every week	Odds ratio per trait rises from 1.0–1.3 in the 1970s to 2.4–3.0 in 2021–24 in every variant (Table S27)
Trust: question format and mode	Original item (interviewer-administered only in 2022–24)	Web formats; in person only; randomized first contact	Web formats range from 9% to 39%; in person only 34.1% (2018) → 23.7% (2024); original item 24.5% vs. 25.0% by first-contact mode (2024). Direction robust; recent level approximate

Check	Essay's choice	Alternative	Result
Weights	WTSSPS	WTSSNRPS (from 2004)	Stacking odds ratio, 2021–24: 2.633 vs. 2.631; education and place gaps 14.4 and 29.1 vs. 14.6 and 28.5; party–ideology r in 2024 0.630 vs. 0.631
Stacking: uncertainty	Respondent bootstrap	Clustered by sampling unit	2021–24 odds ratio interval 2.43–2.87 vs. 2.39–2.90
Stacking: trait direction	Today's direction	Each period's own direction	1970s odds ratio 1.26 → 1.52; 2021–24 unchanged at 2.63
Map: cut point and domains	0.5; all items	0.4, 0.6; each domain left out; domains weighted equally	Adults left on economics and right on culture 8–15%; Democrats left on both 82–94% (Table S19)
Newcomers: score	Career DW-NOMINATE	Per-Congress Nokken–Poole	Same one-sided pattern (Tables S23, S24)
Same seat: specification	Nokken–Poole, adjusted for continuing members, census years dropped	Unadjusted; career DW-NOMINATE; census years kept	Republicans since 1981 +0.043 → +0.042, +0.046, +0.035; Democrats within 0.013 of zero (S4.16)
Cleavage scan: scoring	Out of sample (5 folds by cluster)	In sample	Nine-family total, 2021–24: 0.178 vs. 0.184; same ranking (Table S8)
Class gaps: interview mode, 2022–24	All modes	Interviewer-administered vs. web; randomized first contact	Class identity −0.6 vs. −2.6, and −1.3 in both first-contact arms; income −0.3 vs. −0.1
Cross-national: matched windows	Each series' own years	Hostility trend fitted to the elite-measurement window	Elite r +0.73 → +0.65 (10 countries); +0.69 with at least three surveys
Abortion question format	Original item	Grid version added	Gap 37 vs. 39 points, 2016–24
Cross-national: one country	All countries	Leave each out	Elite r from +0.50 to +0.83
Cross-national: rank order	Pearson	Spearman	Same sign for every driver except the two near zero (trade, foreign-born share); elite +0.78

Check	Essay's choice	Alternative	Result
Cross-national: multiple tests	Unadjusted p	Holm adjustment	Elite p = 0.016 → 0.15

Table S27 — Odds ratio per Republican-leaning trait under other specifications (95% intervals from robust standard errors).

Specification	1970s	2000s	2021–24
Baseline	1.26 [1.19–1.34]	1.63 [1.55–1.71]	2.63 [2.40–2.89]
White partisans only (three traits)	1.05 [0.98–1.13]	1.31 [1.23–1.39]	2.42 [2.16–2.70]
Identifiers only (no leaners)	1.28 [1.19–1.37]	1.68 [1.58–1.78]	2.95 [2.64–3.29]
Unweighted	1.27 [1.21–1.34]	1.65 [1.58–1.72]	2.55 [2.39–2.73]
Church nearly every week or more	1.27 [1.20–1.35]	1.64 [1.56–1.72]	2.72 [2.49–2.98]

S6. Limitations

1. **Description, not identification.** Except where the essay quotes experiments and natural experiments, the evidence is descriptive. It can show that a candidate cause came too late or fits the cross-national pattern badly; it cannot show that the remaining explanation is the cause.
2. **Timing is a chronology.** That most of a trend preceded majority use of social media argues against social media as its origin; it does not measure how much of the later rise social media caused, rule out effects through early adopters and politicians, or identify an alternative cause (S4.5). 2a. **The experimental record is short-run.** The feed experiments last days to months; the newer ones find small but detectable effects of feed content on partisan feeling, and none measures effects over years (S4.17).
3. **Surveys change.** The GSS moved largely online in 2021 and tied question formats to interview mode; the ANES moved online; surveys differ in sampling, mode and wording.

The essay compares trends within each series, not levels across them. The education and place gaps look similar across modes, and the direction of the trust decline holds within in-person interviews, but these are descriptive checks: they do not show that measurement is invariant, and the latest trust level is approximate (S4.4).

4. **Self-placement is a rough gauge of policy views** (S4.3), and the CES quadrants depend on the items chosen (S4.12).
5. **Stacking is measured; its link to hostility is not.** The GSS has no measure of partisan hostility (S4.9). 5a. **The change account is an interpretation.** The party gaps on immigration, trade, the pace of change and science are measured, and so is how much of the social divides two or three such attitudes account for (an upper bound, since party also shapes attitudes). That openness to change is the core of the divide, that amplifiers organize it into two camps, that radical wings on each side turn it into hostility, and that institutional reforms would have only modest effects are the essay's argument, not results. The characterization of the two wings rests on their programs and on quoted surveys (More in Common's *Hidden Tribes*; Gibson and Sutherland on self-censorship), not on analyses here. The GSS has no personality measures; attitudes toward change account for little of the racial divide; party leaders' cues fit the science gap as well as worldviews do; and across countries only demographic change, not technological change, goes with rising hostility, and not significantly (S4.13, S4.14).
6. **Twelve countries are few.** The cross-national association between elite polarization and mass hostility is the strongest observed but does not survive correction for multiple comparisons, leans on the United States, and cannot establish direction (S4.14).
7. **Nominee selection is untested.** The newcomer comparisons are descriptive. Holding the district fixed shows that Republican newcomers vote further right than their predecessors, but roll-call scores miss style, and no district election data link the shift to safe seats or primaries (S4.15, S4.16). 7a. **The causal chain is proposed.** No analysis here estimates the essay's chain from stacked identities to hostility, factional nominees and distrust, its mediators, or its contribution relative to alternatives. Separate associations consistent with each link do not jointly identify the mechanism; Figures 22 and 27 mark these links as proposed. 7b. **Representation is not measured.** The policy map locates voters, not parties; it shows cross-pressured combinations, not the absence of representation (S4.12). 7c. **The cleavage scan predicts; it does not explain.** A family's share of predictive power is not its causal effect, depends on how characteristics are grouped and how common they are, and was computed for a list drawn up after an exploratory look at the data (S4.7). The checks against reverse causation use cross-sections and recalled childhood traits (S4.10).
8. **Uncertainty is understated in places.** Survey shares are shown without margins, and bootstrap intervals that resample respondents ignore the GSS's clustered design (S3.5).

9. **Quoted findings are not re-estimated.** Results attributed to other studies are reported as their authors state them; the spot checks behind the essay do not amount to a replication (S4.17).
10. **The 2024 ANES values are quoted,** because the microdata require registration (S2).

S7. Reproducing the analysis

Every computed number in the essay can be regenerated from the raw data with the scripts in `code/`. Table S28 shows which script produces which results.

Table S28 — Scripts, inputs and outputs.

Script	Input	Output	Used in
`voteview.py`	Voteview member file	`results/voteview.json`	Figs. 3, 15; S4.2, S4.15
`gss.py`	GSS cumulative file	`results/gss.json`	Figs. 4, 5, 7, 16; S4.3, S4.4, S4.11
`divides.py`	GSS; CES	`results/divides.json`	Figs. 13, 14; S4.8
`stacking.py`	GSS	`results/stacking.json`	Figs. 17, 18; S4.9
`cleavages.py`	GSS	`results/cleavages.json`	Figs. 11, 12, 18; S4.7, S4.10
`successions.py`	Voteview member file	`results/successions.json`	Fig. 24; S4.16
`ces.py`	CES	`results/ces.json`	Figs. 7, 19; S4.6, S4.12
`change.py`	GSS	`results/change.json`	Fig. 20; S4.13
`crosscountry.py`	Boxell, Gentzkow & Shapiro package	`results/crosscountry.json`	Figs. 1, 8, 21; S4.1, S4.14
`trust.py`	Gallup topline	`results/trust.json`	Figs. 5, 26; S4.4
`timing.py`	The JSON above; Pew series	`results/timing.json`	Fig. 6, Table B.1; S4.5
`robustness.py`	GSS; the JSON above	`results/robustness.json`	S5
`figures.py`	All results; hand-entered files	`images/*.png`, `images/data/*.csv`	All figures

Steps.

1. Install Python 3.12 or later and the packages in `code/requirements.txt` (pandas, NumPy, SciPy, statsmodels, matplotlib).
2. Unzip `GSS_stata.zip` in its data folder, and download the 2024 CES CSV (about 175 MB) from Harvard Dataverse (doi:10.7910/DVN/X11EP6) into `data/raw/ces2024/`. The other inputs are included.

3. Run `code/run_all.sh`, which runs the scripts in the order of Table S28 and takes about half an hour, most of it for the bootstrap in `cleavages.py`. The scripts read `../data` by default, or the path in the `POLAR_DATA` environment variable.
4. Run `make` in `essay/` to build the PDF, Word and HTML versions of the essay and this appendix (requires pandoc and Tectonic).

Determinism. The bootstrap uses a fixed random seed, so every run gives identical numbers. Every chart's plotted values are written to `images/data/` as CSV.

Software. Analyses were run with Python 3.14, pandas 3.0, NumPy 2.4, SciPy 1.17, statsmodels 0.15 and matplotlib 3.10; documents were built with pandoc 3.8 and Tectonic 0.16.

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The essay's Sources list gives full references for the other studies quoted in S4.17.