

HEINONLINE

Citation:

Christofer S. Elmendorf; Abby K. Wood, Elite Political Ignorance: Law, Data, and the Representation of (Mis)Perceived Electorates, 52 U.C.D. L. Rev. 571 (2018)

Provided by:

USC Law Library

Content downloaded/printed from [HeinOnline](#)

Mon Jan 28 20:22:40 2019

-- Your use of this HeinOnline PDF indicates your acceptance of HeinOnline's Terms and Conditions of the license agreement available at <https://heinonline.org/HOL/License>

-- The search text of this PDF is generated from uncorrected OCR text.

-- To obtain permission to use this article beyond the scope of your HeinOnline license, please use:

[Copyright Information](#)



Use QR Code reader to send PDF to your smartphone or tablet device

UC DAVIS LAW REVIEW

VOL. 52, NO. 2



DECEMBER 2018

Elite Political Ignorance: Law, Data, and the Representation of (Mis)Perceived Electorates

Christopher S. Elmendorf[†] & Abby K. Wood^{**}

It is common to think of political elites — candidates, legislators, party officials, and campaign advisers — as specialists in learning the preferences of voters. But recent studies find that political elites believe public opinion within legislative districts to be more conservative than it actually is, and that extreme candidates are more electable than moderates (despite compelling evidence to the contrary). Campaign staffers overestimate their candidate's electoral prospects. Moreover, natural and researcher-designed experiments show that informing legislators about constituency preferences changes roll-call votes, as legislators recalibrate to better represent public opinion in their districts.

This Article introduces the problem of elite political ignorance to the legal-academic literature. We review political science findings on elite

[†] Copyright © 2018 Christopher S. Elmendorf & Abby K. Wood. For helpful conversations and feedback, we are indebted to Ash Bhagwat, Anupam Chander, Andrea Chandrasekher, Elliott Fullmer, Rick Hasen, Nick Stephanopoulos, David Schleicher, Brian Soucek, Franita Tolson, and Aaron Tang. The paper also benefited from presentation and discussion at the UC Davis summer faculty workshop and the 2017 Meeting of the American Political Science Association.

^{*} Martin Luther King, Jr. Professor of Law, University of California, Davis.

^{**} Associate Professor of Law, Political Science and Public Policy, USC Gould School of Law.

(mis)perceptions of voter preferences, and we explore the likely benefits and costs of reducing elite political ignorance. The immediate impacts would probably include better alignment between the roll-call votes of representatives and the policy preferences of their constituents; reduced political polarization; less racial discrimination by campaigns and representatives; and lower-cost enforcement of the Voting Rights Act. However, over time, a reduction in elite ignorance could also engender more severe and enduring partisan gerrymanders; greater political and demographic skew in the population of regular voters; more inequity in the provision of constituent services; and microtargeted campaigns that slowly erode democracy-sustaining norms and belief structures in the public.

We argue that most of the benefits of reduced political ignorance could be realized without incurring such costs if elites acquired better information about the distribution of voter preferences within districts, without learning the preferences of identifiable individuals. To this end, we propose that states (1) reduce the amount of political information in the official voter file, (2) adopt rules that make it somewhat more cumbersome for social media companies to develop and market political profiles of their users, and (3) enact campaign-finance voucher programs subject to an unusual disclosure rule, under which the state would conceal voucher-donor identities from the recipient and the general public, while revealing geocoded voucher-contribution histories.

TABLE OF CONTENTS

INTRODUCTION	573
I. EVIDENCE OF ELITE POLITICAL IGNORANCE	577
A. <i>Elite Perceptions of Constituency Preferences</i>	577
1. Ideological Bias Studies	578
2. Model-Based Approaches	580
3. Prospective Vote-Share Studies	581
4. Posited Empirical Regularities.....	582
B. <i>Lifting-the-Veil Experiments, Natural and Otherwise</i>	583
II. IS ELITE POLITICAL IGNORANCE VARIABLE OR FIXED?	587
A. <i>Social Media and the Technology of Campaigns</i>	588
B. <i>Public Policy</i>	590
1. Race, Party, and the Voter File.....	591
2. Campaign Finance Vouchers	592
III. DECLINING IGNORANCE AND THE LAW OF DEMOCRACY	594
A. <i>Salutary Consequences of Declining Ignorance</i>	595
1. Direct Effects on Alignment and Polarization.....	595

2. Reduced Racial Targeting by Legislators and Campaigns	596
3. Low-Cost VRA Enforcement	599
B. <i>Deleterious Consequences of Declining Ignorance</i>	601
1. Misaligning Gerrymanders	601
2. Demographic Bias in the Electorate	603
3. Microtargeted Messaging.....	606
4. Discrimination in Constituent Service.....	608
C. <i>Summary</i>	609
IV. OPTIMIZING WHAT ELITES CAN SEE	611
A. <i>Obscuring the Preferences of Individually Identifiable Voters</i>	612
B. <i>Revealing Constituency-Level Preferences</i>	615
1. Voucher Programs	617
a. <i>The Informational Payoff</i>	617
i. Inferring Ideology.....	618
ii. Predicting Policy Preferences	619
iii. Real-Time Feedback About Swing (and Other) Voters.....	621
b. <i>Dimensions of Program Design</i>	624
i. Eligible Donees: Candidates and Beyond	624
ii. Anonymity in Theory vs. Anonymity in Practice	626
2. The Constituency-Preference Lookup Website	628
V. THE POLITICS OF INFORMATIONAL REFORM	633
CONCLUSION.....	635

INTRODUCTION

The problem of voter ignorance has received sustained attention from generations of political scientists, policymakers, law professors, and judges.¹ The converse problem — political elites’ ignorance about the preferences of voters — has been largely ignored. Indeed, the very idea of elite political ignorance may seem oxymoronic. Don’t politicians, campaign consultants, and party leaders specialize in learning about voter preferences? Don’t elections cull the slow learners from the herd? No doubt this is true to some extent. Yet the available evidence suggests that political elites have found it hard to learn what they would like to know about citizens’ political preferences.

¹ See Christopher S. Elmendorf & David Schleicher, *Informing Consent: Voter Ignorance, Political Parties, and Election Law*, 2013 U. ILL. L. REV. 363, 370-84 (2012) (introducing the literature).

Political elites make systematic mistakes. Elites in recent years have greatly underestimated the liberalism of district-level opinion. Local party officials gauge extreme candidates to be more electable than moderates, despite compelling evidence to the contrary.² Campaign staffers overestimate their candidate's electoral prospects.³ And events that occasionally render constituency preferences more visible to elites shift legislators' roll-call votes, as legislators recalibrate to better represent public opinion in their districts.⁴

Elite political ignorance shapes the character of our politics. It affects whether candidates for elective office focus on persuading the median voter or mobilizing their base, and it determines who gets mobilized to vote — or targeted for suppression.⁵ Related to this, elite political ignorance bears on the racialization of politics.⁶ Race and ethnicity correlate with political preferences, and voters' race/ethnicity is rendered visible to politicians in many states by the official voter file, and to a lesser extent by Census data. This makes African Americans and Latinos targets for mobilization by Democrats; conversely, when Republicans are in control, these minorities are targets for suppression.⁷

Elite political ignorance is not, however, just some unyielding fact about the world, a given that cannot be changed. Recent technological developments have made voters' preferences somewhat more visible to politicians,⁸ and the application of ever more sophisticated machine-learning algorithms to merged voter, consumer, and social media databases may, before long, yield a vastly more detailed and accurate picture of voter preferences.⁹ Public policies also affect the visibility of voter preferences to political elites. Those preferences are easier to discern in states that elicit race and party affiliation on the voter registration form and make this information available to political elites through the voter file. And voter preferences would become *much* more visible to elites in any state that follows the City of Seattle's lead

² See *infra* Part I.A.

³ See *infra* Part I.A.

⁴ See *infra* Part I.B.

⁵ See *infra* Part II.

⁶ See *infra* Part II.B.

⁷ See, e.g., *Veasey v. Abbott*, 830 F.3d 216 (5th Cir. 2016) (en banc); *League of Women Voters of N.C. v. North Carolina*, 769 F.3d 224 (4th Cir. 2014) (reviewing Republican-enacted voting requirements that targeted minority voters).

⁸ See *infra* Part II.A.

⁹ Campaign consultants have already merged voter and consumer databases, and social media platform companies have the capacity to combine these data with their own, if they wish. See *infra* Part II.A.

and enacts a campaign-finance voucher program in which voucher assignments are publicly disclosed.¹⁰ This important byproduct of voucher programs has yet to be considered in the literature.

The abatement of elite political ignorance promises to deliver many benefits, but it is not an unalloyed good. On the upside, the direct effects are likely to include better alignment between the votes of representatives and the preferences of the median voter in their districts; less racial discrimination by campaigns and representatives; improved enforcement of the Voting Rights Act; and, potentially, a reduction in political polarization.¹¹ But other problems may be exacerbated. Partisan gerrymanders, if unchecked by courts or other institutions, are likely to become more enduring and affect greater representational injuries while they endure. Legislators will discriminate more in the provision of constituent services, withholding services from citizens who do not support them. Demographic skew in the electorate may worsen too, with poor people and political independents voting at progressively lower rates than other voting-eligible citizens. Perhaps most concerning, the character of political advertising may change in ways that undermine democracy-sustaining norms of tolerance, mutual respect, and solidarity. Broadcast-television advertisements that appeal to widely shared values may be supplanted by micro-targeted, social-media-conveyed appeals to the prejudices and predilections of individual recipients.

A central claim of this Article is that the benefits and costs of reducing elite ignorance are *not* invariably bound together. They come packaged only insofar as elites acquire (1) better *individual-level estimates* of the preferences of the voting-eligible population, that are (2) linked to *personal identifiers* such as name and address for each member of the population. Candidates and officeholders want this information, and data vendors are working hard to provide it. But a reduction in elite political ignorance need not take this form. In principle, policy-minded actors could intervene in ways that make it more difficult for politicians to discern the preferences of individual, identifiable voters, but also easier to ascertain “anonymized” voter preferences at the scale of the geographic units of representation, e.g., legislative districts.

¹⁰ See SEATTLE, WASH., MUN. CODE § 2.04.658 (2018); SEATTLE, WASH., INITIATIVE 122 §2.04.658 (2015), <https://www.seattle.gov/Documents/Departments/EthicsElections/DemocracyVoucher/I-122%20Text-%20Master.pdf>.

¹¹ See *infra* Part III.A.

We argue that this combination of *constituency-level transparency* and *voter-specific obscurity* would provide many of the benefits of reduced ignorance without exacerbating the problems mentioned above. To this end, we suggest that states (1) reduce the amount of information collected on voter-registration forms and released through the voter file; (2) consider restrictions on linkage of the voter file to consumer and other databases; and (3) supplement the private financing of political campaigns with a system of publicly funded, voter-distributed vouchers — with the proviso that only individual voucher-contribution histories (geocoded to legislative districts) and not the identity of the contributor be publicly disclosed.¹² Any effort to achieve voter-specific obscurity will also depend on cooperation from certain Internet platform companies, particularly the social media firms.¹³

As a second-best alternative to a suitably anonymized voucher program, we also suggest that private foundations and good-government groups establish a “constituency preference lookup” website, providing easy access to the best available estimates of public opinion at the scale of the geo-political units of representation.¹⁴

We proceed as follows. Part I reviews the nascent body of political science research on elite political ignorance. Part II argues that elite political ignorance is variable rather than fixed, a function of both technology and public policy. Part III examines the benefits and costs of reducing elite political ignorance, addressing a number of problems that concern law-of-democracy scholars but which have not yet been conceptualized as “elite political ignorance problems.” These include political polarization, misalignment between the ideology or policy positions of voters and those of elected officials, and barriers to minority representation. Part IV discusses legal and other measures that could be instituted to obscure the preferences of individually identifiable voters while providing elites with a much more accurate picture of the distribution of public opinion within geopolitical units of representation. Part V concludes.

¹² See *infra* Part II.

¹³ The companies from whom cooperation will be needed are those that both (1) serve a substantial share of the voting-eligible population, and (2) collect user-data that allows for accurate estimation of users’ political preferences. The leading social media (Facebook, Twitter) and search (Google) platforms are exemplars.

¹⁴ See *infra* Part IV.

I. EVIDENCE OF ELITE POLITICAL IGNORANCE

The political science research on elite political ignorance can be boiled down to two stylized facts. First, political elites often make *systematic and self-serving errors* about voter preferences within geopolitical units of representation, such as legislative districts, counties, and states. State legislators and local party officials — particularly Republicans — have in recent years overestimated the conservatism of their constituents and the electability of extreme candidates relative to moderates. Likewise, campaign staffers systematically overestimate the eventual vote margin of their candidate.

Second, political elites are responsive to new information about voter preferences. Scholars conducting field experiments have randomly assigned the provision of information about constituent preferences to legislators, and these treatments move roll-call votes. Legislators also respond to signals about constituency preference conveyed by initiative and referendum elections. In sum, the available evidence suggests that most legislators would like to better represent public opinion in their districts but do not quite know how to do it — because they do not know what it is.

These findings should be regarded as somewhat tentative. The body of work on elite political ignorance remains small. Path-breaking studies have been conducted in the past few years, but they examine only a small number of issue preferences, and they illuminate the state of elite perceptions at a moment in time. Generalizability is an open question, particularly in light of ongoing technological developments that may provide elites with much better information about their constituents. We discuss these developments in Part II.

A. *Elite Perceptions of Constituency Preferences*

Beginning with a seminal 1963 paper by Miller and Stokes,¹⁵ political scientists have tried to measure legislators' perceptions of their constituents' political preferences, and to assess how perception and reality stack up. The number of papers in this vein is small for an understandable reason. To measure issue preferences with a reasonable level of accuracy at the legislative-district level, researchers would have to survey a random sample of several hundred voting-eligible citizens in *each legislative district*, which, as Miller and Stokes playfully remarked, would cost as much as "several small nuclear

¹⁵ See Warren E. Miller & Donald E. Stokes, *Constituency Influence in Congress*, 57 AM. POL. SCI. REV. 45, 51 (1963).

reactors.”¹⁶ The literature that has developed since Miller and Stokes’s research uses four strategies to deal with this measurement problem. We review them in turn, together with associated findings.

1. Ideological Bias Studies

Researchers’ inability to measure constituency opinion precisely does not preclude the study of directional bias in elite perceptions. The mean response to a survey with very few respondents — even a survey with just a single respondent — is an unbiased though extremely noisy estimate of mean opinion in the population, provided that every member of the population had an equal probability of being surveyed.¹⁷ Building on this insight, David Broockman and Christopher Skovron posited that by averaging over many issues and constituency surveys, each with a small number of respondents, one could make strong inferences about whether, say, Democratic (Republican) elites tend to overestimate the liberalism (conservatism) of constituency opinion.¹⁸

Broockman and Skovron surveyed nearly 4000 incumbent state legislators and challengers between 2012 and 2014, eliciting the respondents’ estimates of constituency opinion on seven issues that the Cooperative Congressional Election Study (“CCES”) had included on a large-sample ($N \approx 56,000$) survey of American voters.¹⁹ Broockman and coauthors also queried over 1000 chairs of county-level Democratic and Republican party committees, eliciting perceptions of state-level and county-level opinion on issues from the 2012 CCES.²⁰ The issues included marriage equality, health care,

¹⁶ *Id.* at 46. They exaggerate, of course, but the survey would be very expensive, particularly given the need to pay respondents in order to obtain a decent response rate. See *infra* notes 178–84 and accompanying text.

¹⁷ See Charles M. Judd et al., RESEARCH METHODS IN SOCIAL RELATIONS 129-42 (6th ed. 1991).

¹⁸ See generally David E. Broockman & Christopher Skovron, *Bias in Perceptions of Public Opinion Among American Elites*, 112 AM. POL. SCI. REV. (forthcoming 2018) [hereinafter *Bias in Perceptions*]; David E. Broockman et al., *Having Their Cake and Eating It, Too: (Why) Local Party Leaders Prefer Nominating Extreme Candidates* (Working Paper, 2017), <https://pdfs.semanticscholar.org/8dba/3de042f3f522caff719c783dee78e750d410.pdf> [hereinafter *Having Their Cake*].

¹⁹ Broockman & Skovron, *Bias in Perceptions*, *supra* note 18, at 10. The CCES is not perfect for this purpose, as it is not a true probability sample of the national electorate, but the weighted CCES compares favorably with the available benchmarks. See generally Stephen Ansolabehere & Bryan F. Schaffner, *Does Survey Mode Still Matter? Findings from a 2010 Multi-Mode Comparison*, 22 POL. ANALYSIS 28 (2014).

²⁰ See Broockman et al., *Having Their Cake*, *supra* note 18, at 11.

welfare, gun control, immigration, religious accommodations, and abortion.²¹ These studies reveal a consistent pattern: political elites overestimate the conservatism of public opinion. State legislators and legislative candidates erred (on average) in the conservative direction by 7 to 36 percentage points, depending on the issue.²² That is, if the true proportion of citizens in a district who support a liberal policy is 55%, legislators and candidates on average believe that only 19% to 48% support the policy. This pattern holds across professionalized and unprofessionalized legislatures, incumbents and challengers, competitive and uncompetitive districts, and winning and losing candidates.²³ But Democratic politicians only moderately overestimated (and on one issue underestimated) constituency conservatism, whereas Republicans erred in the conservative direction by huge margins.²⁴

The picture of county party chairs is much the same. “Republican leaders appear to underestimate public support for the liberal policies on the CCES by about 10 percentage points and to overestimate public support for the conservative policies on the CCES by almost 40 percentage points.”²⁵ Democratic party officials erred in the conservative direction too, though by smaller amounts and less consistently across issues.²⁶ Party officials were about equally as bad at predicting county-level and state-level opinion.²⁷

Perhaps it is not surprising that Republican elites perceive constituency opinion to be more conservative than it actually is, but why do Democrats err in the same direction? Broockman and co-authors posit that this emerges from asymmetries in political organization among issue-oriented interest groups.²⁸ The conservative-bias findings might also reflect near-term political events, such as Tea Party activism and Republican success in 2010 mid-term elections. Regardless of the cause, the takeaway is that elite perceptions may

²¹ See Broockman & Skovron, *Bias in Perceptions*, *supra* note 18, at 11, 21; Broockman et al., *Having Their Cake*, *supra* note 18, at 23, tbl.1.

²² Broockman & Skevron, *Bias in Perceptions*, *supra* note 18, at 15-16, 20-22.

²³ *Id.* at 23, tbl.4.

²⁴ See *id.* at 24-27.

²⁵ Broockman et al., *Having Their Cake*, *supra* note 18, at 26.

²⁶ See *id.* at 28 tbl.2, 30 tbl.3.

²⁷ *Id.* at 10-11 (“Locally rooted, genuinely grassroots organizations that represent liberal constituencies have atrophied in the last few decades, while their conservative counterparts have focused on pressuring party elites and are experiencing a renaissance.”).

²⁸ See Broockman & Skovron, *Bias in Perceptions*, *supra* note 18, at 30-32; Broockman et al., *Having Their Cake*, *supra* note 18, at 9-10.

diverge systematically from district-level opinion. Elite mistakes are not just noise around the truth.

2. Model-Based Approaches

Another way to assess the correspondence between elite perceptions and local public opinion is to fit statistical models of district-level opinion using data from national surveys. The now-standard approach, called multi-level regression with post-stratification (“MRP”), is to model voter opinion as a function of individual-level demographics, such as race and sex, and characteristics of the geographic unit in which the respondent resides.²⁹ Estimated opinion within a geographic unit is a weighted average of predicted opinion and observed opinion, with the weights reflecting the number of observations from that unit. Thus, for geographic units in which few people were surveyed, the predicted opinion is largely model-based, whereas for geographic units where many people were surveyed, those answers receive more weight. Opinion estimates for each stratum (demographic type within geographic units) are reweighted using demographic data from the Census to obtain an estimate of mean public opinion for the geographic unit.³⁰

Comparing MRP estimates of constituency-level opinion to political elites’ own estimates of what their constituents believe, Broockman and co-authors find that elite perceptions are positively correlated with constituency opinion, but the intercept is off the mark: legislators and candidates in both conservative and liberal areas perceive constituency opinion to be more conservative than it actually is.³¹ The MRP results thus corroborate the findings Broockman and his collaborators obtained by treating the mean CCES response within a geopolitical unit as a noisy but unbiased estimate of constituency opinion.

²⁹ MRP estimates have been validated using political outcomes that can be observed at fine geographic scales, such as vote shares in initiative, referendum, and candidate elections. However, we are aware of no MRP-validation studies in which predictions were released before the election results used for validation became available. Thus, it is possible that the success of MRP models in predicting district-level opinion is a result of post-hoc model adjustments made to achieve fit with particular validation datasets. See generally Christopher S. Elmendorf & Douglas M. Spencer, *Administering Section 2 of the Voting Rights Act After Shelby County*, 115 COLUM. L. REV. 2143, 2196-205 (2015) [hereinafter *Administering Section 2*].

³⁰ If not, the prediction error for other issues or candidates is likely to be higher.

³¹ See Broockman & Skovron, *Bias in Perceptions*, *supra* note 18, at 18 fig.3. Among county party chairs, Democrats come closer to the state MRP estimates than Republicans, but Democrats also tend to err in the conservative direction. See *id.* at 32 fig.7.

3. Prospective Vote-Share Studies

Vote shares are the one measure of constituency preference that researchers can observe at low cost at the district level.³² To measure the accuracy of elite perceptions of constituency preference, researchers can elicit elites' pre-election predictions of district-level outcomes, and then compare predictions with results.

In the first such study, Robert Erikson and co-authors mailed a brief survey to members of Florida's state house, seven days before the 1972 election.³³ Lawmakers were asked to predict the vote share in their district of the three referendum measures on the ballot. Erikson et al. found correlations between perceived and actual district opinion ranging from 0.08 to 0.51, and median prediction errors in the range of 6 to 12 percentage points. In the aggregate, legislators were just as likely to underestimate as to overestimate the conservatism of their district,³⁴ but Erickson et al. did not investigate whether legislators tended to err in the direction of their respective parties or ideologies.³⁵

Erickson et al.'s study has yet to be replicated in other states and years, or with elite surveys conducted further in advance of the election.³⁶ Recently, however, Ryan Enos and Eitan Hersh used the same strategy to assess the accuracy of campaign workers' perceptions of their candidate's likely margin of victory.³⁷ Collaborating with a

³² Election administrators typically report election results at the precinct level, which can be aggregated to the scale of legislative districts.

³³ Robert S. Erikson et al., *Knowing One's District: How Legislators Predict Referendum Voting*, 19 AM. J. POL. SCI. 231, 233-34 (1975).

³⁴ See *id.* at 238.

³⁵ Initiative and referendum elections probably represent a best-case scenario for accurate elite perceptions of constituency opinion, especially when perceptions are elicited just days before the election. Newspapers often report statewide polling numbers in the months leading up to the election, and if public opinion on a ballot measure strongly correlates with liberal/conservative ideology, a legislator who has a rough sense of how liberal her district is relative to other districts in the state should be able to make an educated guess from the statewide polls about public opinion in her district. (The three issues in Erikson et al., *supra* note 33, at 233-34, were high profile "social" issues — school busing, prayer in school, and opposition to de jure segregation.).

³⁶ A related study was carried out in Iowa, but lawmakers in the Iowa study were asked only to predict whether the referendum measures would pass or fail in their district, not the vote margin. Unsurprisingly, the researchers found that legislators were usually correct with respect to the measures that passed by a large margin statewide, and wrong much more often with respect to measures whose support was closer to 50-50. See Ronald D. Hedlund & H. Paul Friesema, *Representatives' Perceptions of Constituency Opinion*, 34 J. POL. 730, 741 (1972).

³⁷ See Ryan D. Enos & Eitan D. Hersh, *Campaign Perceptions of Electoral Closeness*:

Democratic data vendor, Enos and Hersh surveyed staffers from nearly 200 local, state, and national Democratic campaigns in 2012. Staffers were overconfident: in down-ballot races, 74% overestimated their candidate's eventual vote share, and nearly all of the respondents whose candidate lost overestimated his or her vote share.³⁸ In state races, the mean absolute error was about 10 percentage points; in federal races, about 6-7 points. Interestingly, the magnitude of these errors is very similar to what Erickson et al. found forty years previously in their study of state legislator perceptions of district-level opinion on ballot measures.

Enos and Hersh also asked Obama workers to estimate Obama's vote share in their state. Like staffers for down-ballot candidates, Obama workers tended to overestimate their candidate's vote share. Though the Obama staffers had more resources for figuring out public opinion, they "were on average actually slightly worse predictors than down-ballot campaign operatives."³⁹

4. Posited Empirical Regularities

The final strategy for assessing the quality of elite perceptions about constituency preferences is simply to posit an empirical regularity that *should* occur if elites are reasonably knowledgeable, and then to investigate whether that regularity *does* occur. For example, Kristina Miler asked congressional staffers an open-ended question about which constituents in the member's district cared about certain issues.⁴⁰ Using media reports and interviews with interest groups, she identified roughly half a dozen constituencies to whom an issue was important. She posited that if staffers know their member's district reasonably well, the probability of a staffer naming a given, interested constituency should be positively correlated with the size of that constituency in the member's district. She found, however, that while staffers' probability of naming a constituency was correlated with the constituency's campaign donations, it did not vary with the constituency's size.⁴¹

Uncertainty, Fear and Over-Confidence, 47 BRIT. J. POL. SCI. 501, 505 (2015) [hereinafter *Campaign Perceptions*].

³⁸ See *id.* at 507-09, 508 fig.1, 509 fig.2.

³⁹ *Id.* at 511 (emphasis added). The Obama staffers were, however, about twice as accurate as lay co-partisans, i.e., survey respondents in the same state who identified as a Democrat but were not working for a campaign.

⁴⁰ See Kristina C. Miler, *The View from the Hill: Legislative Perceptions of the District*, 32 LEGIS. STUD. Q. 597, 598 (2007).

⁴¹ See *id.* at 610-12.

The posited-empirical-regularity approach is also well illustrated by a recent paper about local party officials' perceptions of the electability of hypothetical candidates.⁴² The authors posited that moderate candidates should be regarded as more electable than extreme candidates, other things equal. Andrew Hall has shown that extreme congressional candidates who barely win a close primary election perform much worse in the general election than moderate congressional candidates who barely win a close primary.⁴³ If local party officials are well informed about public opinion, they should recognize as much, and (on average) deem moderate hypothetical candidates more electable than otherwise similar extreme candidates. But this is not what the authors found. Roughly 75% of Republican Party officials regarded extreme nominees as more competitive in the general election than otherwise similar moderate nominees.⁴⁴ This pattern obtained even in counties that are closely divided by party, and among party officials who expected general elections to be close.⁴⁵ By contrast, Democratic party officials in the full sample saw moderate and extremely liberal candidates as roughly equally competitive, and Democratic officials in closely divided counties saw moderation as a general-election advantage.⁴⁶ These results reinforce the issue-perception studies showing a pronounced conservative bias in Republican-elite perceptions of constituency preferences.⁴⁷

B. *Lifting-the-Veil Experiments, Natural and Otherwise*

The studies we have discussed so far all suggest that political elites make substantial and often systematic errors when trying to predict public opinion within small geographic units. But the studies do not reveal whether better information would change political elites' behavior. Perhaps elites are ignorant of public opinion on issues

⁴² See Broockman et al., *Having Their Cake*, *supra* note 18, at 18.

⁴³ Andrew B. Hall, *What Happens When Extremists Win Primaries?*, 109 AM. POL. SCI. REV. 18, 24 (2015).

⁴⁴ Broockman et al., *Having Their Cake*, *supra* note 18, at 19-20.

⁴⁵ See *id.* at 20.

⁴⁶ See *id.* at 19-20. The authors also found that in response to an open-ended question, "In an ideal world, what personal qualities would you like all of your party's political candidates to have?" Republican officials were twice as likely as Democrats to mention ideology, and mentioned conservatism six times more often than centrism. *Id.* at 5, 33-35.

⁴⁷ Ironically, Hall found that Republican extremists who barely win a close primary suffer more for their extremism in the general election than do Democratic extremists. See Hall, *supra* note 43, at 32, 34-35, 35 tbl.A.4.

because it just does not affect them very much. (Most voters know little about the policy positions of candidates for down-ballot offices, and voters' issue preferences are often shaped by political elites.)⁴⁸ To figure out whether elites' political ignorance arises from indifference to constituency opinion, or from the difficulty of acquiring information about it, researchers must find or introduce variation in the accessibility of such information. Several recent studies have done precisely this, finding that legislators are quite responsive to new information about district-level opinion.

In the most striking example, Daniel Butler and David Nickerson surveyed nearly 11,000 New Mexicans about a spending proposal for which a special legislative session had been called.⁴⁹ Legislators were then randomly assigned to treatment and control groups, and, on the morning that the special session began, legislators in the treatment group were mailed the results of the opinion poll within their district. Legislators in the treatment group were much more likely than those in the control group to vote in accordance with district opinion.⁵⁰ Among those whose baseline probability of voting for the spending bill was low, the treatment effect was in the range of 10 to 60 percentage points.⁵¹

Dan Bergan has obtained similar results in studies where legislators are randomly assigned to receive emails or phone calls from constituents about a pending bill.⁵² Bergan's studies were conducted in

⁴⁸ See generally GABRIEL S. LENZ, *FOLLOW THE LEADER: HOW VOTERS' RESPOND TO POLITICIANS' POLICIES AND PERFORMANCE* (2012) (discussing how we assume the policies of others and how they assess the performance of candidates).

⁴⁹ See Daniel M. Butler & David W. Nickerson, *Can Learning Constituency Opinion Affect How Legislators Vote? Results from a Field Experiment*, 6 Q.J. POL. SCI. 55, 55 (2011).

⁵⁰ In districts where support for spending was high, the treatment had little effect, perhaps owing to a "ceiling" effect (most legislators in the control districts also voted for the spending proposal); in districts where support for spending was low, the treatment increased the probability of voting in accordance with constituency preference by 10-30 percentage points. See Butler & Nickerson, *supra* note 49, at 67-71. A subsequent reanalysis of the data, accounting for possible "information spillovers" between legislators in the treatment and control groups, suggests that the treatment effect was actually twice this size. See Alexander Coppock, *Information Spillovers: Another Look at Experimental Estimates of Legislator Responsiveness*, 1 J. EXPERIMENTAL POL. SCI. 159, 168 (2014).

⁵¹ See Butler & Nickerson, *supra* note 49, at 67-71; Coppock, *supra* note 50, at 161, 168 fig.3. It bears noting that the issue studied by Butler and Nickerson was somewhat unusual, and that district-level opinion on the question was only moderately correlated with district liberalism. One might expect new information about constituency opinion to be especially influential in such circumstances.

⁵² See Daniel E. Bergan, *Does Grassroots Lobbying Work? A Field Experiment*

New Hampshire and Michigan, whose legislatures have different levels of professionalism.⁵³ The New Hampshire experiment concerned a ban on smoking in the workplace; the Michigan study addressed an anti-bullying bill.⁵⁴ New Hampshire legislators treated with constituent contacts became about 20 percentage points more likely to support the anti-smoking coalition on pivotal votes.⁵⁵ In Michigan, the treatment increased the probability of voting for the anti-bullying bill by about 11-12 percentage points.⁵⁶

Other researchers have studied the “natural experiment[s]” that occur when initiative and referendum elections reveal public opinion at the district level.⁵⁷ Initiative and referendum tallies offer a precise signal of district-level opinion on the measure at hand, and if support for the measure correlates with ideology, district-level results can also help representatives to place their district’s median voter on the left-right scale. Vladamir Kogan examined the voting patterns of Ohio state legislators before and after the defeat by referendum of a major Republican bill.⁵⁸ The bill was defeated statewide and in fifty-three of the fifty-nine Republican-held house districts.⁵⁹ Because the referendum occurred in the middle of a two-year legislative term, Kogan could compare the ideological positions (manifested through

Measuring the Effects of an E-mail Lobbying Campaign on Legislative Behavior, 37 AM. POL. RES. 327, 328 (2009) [hereinafter *Does Grassroots Lobbying Work?*]; see also Daniel E Bergan & Richard T. Cole, *Call Your Legislator: A Field Experimental Study of the Impact of a Constituency Mobilization Campaign on Legislative Voting*, 37 POL. BEHAV. 27, 28 (2015) [hereinafter *Call Your Legislator*]. It is possible that these effects were mediated by legislators’ updating their beliefs about the muscle of the interest group that recruited the citizen participants, rather than legislators’ beliefs about district-level public opinion. (Bergan did not measure legislator beliefs about constituency opinion.) Still, when read together with Butler & Nickerson, *supra* note 49, Bergan’s papers do suggest that new information about district-level opinion can shift state legislators’ votes.

⁵³ Bergan & Cole, *Call Your Legislator*, *supra* note 52, at 30.

⁵⁴ *Id.* at 32-33.

⁵⁵ See Bergan, *Does Grassroots Lobbying Work?*, *supra* note 52, at 340-43.

⁵⁶ Bergan & Cole, *Call Your Legislator*, *supra* note 52, at 34-36. That constituency contacts move legislators to such an extent is consistent with “conservative bias” findings (as discussed in Broockman et al., *Having Their Cake*, *supra* note 18), insofar conservative grass-roots groups are better organized and funded than their liberal counterparts. See *supra* Part I.A.1.

⁵⁷ Vladimir Kogan, *When Voters Pull the Trigger: Can Direct Democracy Restrain Legislative Excesses?*, 41 LEGIS. STUD. Q. 297, 302 (2016); see Joshua Huder et al., *Shirking the Initiative? The Effects of Statewide Ballot Measures on Congressional Roll Call Behavior*, 39 AM. POL. RES. 582, 583 (2011).

⁵⁸ Kogan, *supra* note 57, at 307.

⁵⁹ *Id.* at 305.

roll call votes) of the same legislators representing the same districts pre- and post- referendum.⁶⁰ He found that Democratic legislators were unaffected by the referendum, whereas Republican legislators shifted to the left.⁶¹ These results are broadly consistent with Broockman et al.'s findings about asymmetric misperception of district preferences: only Republicans substantially misperceived constituency preferences prior to the referendum, and only Republicans revised their beliefs and voting patterns in light of the referendum's signal of constituency preference.

Joshua Huder and co-authors studied the effect of state-level initiatives on congressional roll-call votes.⁶² They located three policy issues on which roll-call votes had occurred before and after a topically related initiative or referendum election (minimum wage, campaign finance, and same-sex marriage). Members of the House whom the referendum showed to be out of step with their district's median voter were much more likely than other members to switch their position between roll-call votes.⁶³ This pattern was not observed in the Senate, perhaps reflecting Senators' greater political insulation from public opinion, or the greater availability of information about state-level as opposed to congressional-district-level opinion.⁶⁴

A third paper in this vein examines California state legislators' voting patterns in the year before and after the recall of Governor Gray Davis.⁶⁵ Davis, who just a year earlier had been reelected by a five-point margin, lost the recall vote 54% to 46% — and he lost in more than a third of the state assembly districts held by Democrats.⁶⁶

⁶⁰ That is, no change in position could have been caused by a change in who represented a given district. Kogan carried out the analysis by treating the pre-referendum and post-referendum legislators as separate units of analysis (separate selves, as it were), scaling ideology from voting using a standard item-response models, and using interest groups (presumed not to change their ideology because not dependent on electoral support) to bridge the legislators' pre-referendum and post-referendum selves. *See id.* at 307-08.

⁶¹ *Id.* at 309-10.

⁶² Huder et al., *supra* note 57, at 588.

⁶³ *See id.* at 594-99. The authors did not analyze whether Republicans were more often out of step or more likely to switch their vote in response to the signal of constituency opinion.

⁶⁴ Because public opinion polls are often conducted at the state level, politicians who represent statewide constituencies should have an easier time learning about constituency preferences, in the absence of a related referendum vote, than politicians who represent small districts.

⁶⁵ *See* Thad Kousser et al., *Ideological Adaptation? The Survival Instinct of Threatened Legislators*, 69 J. POL. 828, 829 (2007).

⁶⁶ *Id.* at 830.

Presented with this new signal of constituency opinion, Democrats in the Assembly moved to the right, with the move being most pronounced in competitive seats.⁶⁷

To sum up, political elites overestimate the conservatism of voters, the electability of extreme candidates relative to moderates, and their own chances of winning. These errors are not just the byproduct of disinterest. When state legislators receive new signals of constituency preference — even weak signals like phone calls or emails from voters recruited by an interest group — their behavior changes. The legislators become more likely to vote in accordance with the signal.

II. IS ELITE POLITICAL IGNORANCE VARIABLE OR FIXED?

From a policy perspective, the problem of elite political ignorance would look quite different if elite ignorance were an essentially unchanging phenomenon, as opposed to one which varies as technologies evolve and public policies change. If it were basically fixed, a byproduct perhaps of inherent psychological tendencies toward over optimism or projection of one's own beliefs onto others,⁶⁸ then the “problem” of elite political ignorance would actually be a problem about how to make democracies work reasonably well in spite of it. But if elite ignorance varies in systematic ways, one would want to know what policies could either sharpen or muddy elite perceptions. And, of course, one would want to know whether reducing elite political ignorance is likely to improve or degrade the overall quality of representative democracy.

We argue in this Part that elite political ignorance is variable rather than fixed. It is variable not just in the adventitious sense of the natural experiments discussed in Part I.B — one-off events that happen to make constituency preferences more visible to elites — but in more systematic ways corresponding to technological developments and policy choices.

⁶⁷ *Id.* at 840.

⁶⁸ Cf. Nicholas O. Stephanopoulos, *Elections and Alignment*, 114 COLUM. L. REV. 283, 362 (2014) [hereinafter *Elections*] (noting that both voters and politicians tend to project their own views onto others).

A. *Social Media and the Technology of Campaigns*

The technology of politics is changing. Political campaigns are increasingly awash in data about voters' preferences.⁶⁹ Starting about a decade ago, political consultants began to merge state-administered databases of registered voters (the "voter file") with consumer databases. This allows campaigns to identify by name and address every citizen of a state who, let's say, voted in the last three Republican presidential primaries, subscribes to *Guns and Ammunition*, and buys his groceries at Wal-Mart. Neighborhood characteristics from the Census are also merged in.

From this augmented voter file, data analysts construct political profiles for each registered voter, predicting the voter's partisanship, turnout propensity, policy preferences, and even his or her likely response to different campaign messages. The profiles are then used to run micro-targeted campaigns, with tailored advertisements communicated to small subsets of voters through social media.

The current state of play was inadvertently disclosed in the summer of 2017, when it was discovered that Republican consultants had left the party's national voter file on an unsecured server.⁷⁰ Investigative reporters pounced. In addition to a trove of personal identifying information, the file included for each of 198 million voters the predicted probability of his or her supporting forty-six distinct policies, political candidates, and beliefs.⁷¹ One reporter looked himself up and described the associated predictions as "astonishingly accurate."⁷²

But one anecdote does not a study make, and more systematic efforts to assess the quality of augmented voter-file predictions are still in their infancy. Obama's 2012 reelection campaign is widely regarded as a pioneer in making sophisticated use of augmented voter files,⁷³ yet Enos and Hersh showed that Obama staffers erred in predicting

⁶⁹ See generally EITAN D. HERSH, *HACKING THE ELECTORATE: HOW CAMPAIGNS PERCEIVE VOTERS* (2015) [hereinafter *HACKING THE ELECTORATE*]; SASHA ISSENBERG, *THE VICTORY LAB: THE SECRET SCIENCE OF WINNING CAMPAIGNS* (2012); DANIEL KREISS, *PROTOTYPE POLITICS: TECHNOLOGY-INTENSIVE CAMPAIGNING AND THE DATA OF DEMOCRACY* (2016).

⁷⁰ See Aria Bendix, *GOP Firm Exposed U.S. Voters' Personal Data*, ATLANTIC (June 20, 2017), <https://www.theatlantic.com/news/archive/2017/06/gop-firm-exposed-us-voters-personal-information/530913/>.

⁷¹ Dan O'Sullivan, *The RNC Files: Inside the Largest U.S. Voter Data Leak*, UPGUARD (May 1, 2018), <https://www.upguard.com/breaches/the-rnc-files>.

⁷² *Id.*

⁷³ See KREISS, *supra* note 69, at 25-27, 115-67.

Obama's state-level vote share by about the same margin as staffers on down-ballot campaigns erred in predicting their candidate's vote share.⁷⁴

Hersh went under the hood of the leading Democratic data vendor, trying to figure out exactly what campaigns could and could not learn from the augmented voter file circa 2012.⁷⁵ His main takeaway is that consumer databases were not very useful for predicting political preferences and behavior.⁷⁶

Since then, however, campaigns have increasingly drawn upon another, potentially very powerful source of information about voter preferences: the Internet, especially social media platforms such as Facebook and Twitter.⁷⁷ Political scientists have demonstrated that the general political ideology of individual Twitter users can be inferred from the users they follow.⁷⁸ Facebook estimates user ideology from the pages the user has "liked."⁷⁹ Google probably has a similar capacity to predict users' political orientations from their interactions with Google's products, including search.

During the 2016 presidential election, these analytical capacities were used to target advertising to internet searchers and social media users. For example, the Trump campaign paid for Facebook advertisements shown only to users classified by Facebook as politically moderate.⁸⁰ Trump also targeted Clinton supporters through Facebook with "dark posts" — visible to no one but the

⁷⁴ See Enos & Hersh, *Campaign Perceptions*, *supra* note 37, at 511-12 figs.5 & 6.

⁷⁵ See HERSH, *HACKING THE ELECTORATE*, *supra* note 69, at 174.

⁷⁶ See *id.* at 172-76 ("When one accounts for simple demographics from public records, commercial variables explain very little about what distinguishes Democrats from Republicans.").

⁷⁷ See KREISS, *supra* note 69, at 144-50 (discussing the evolution in campaign tactics).

⁷⁸ See Paolo Barberá, Birds of the Same Feather Tweet Together: Bayesian Ideal Point Estimation Using Twitter Data, 23 *POL. ANALYSIS* 76, 77 (2015); Elanor Colleoni et al., *Echo Chamber or Public Sphere? Predicting Political Orientation and Measuring Political Homophily in Twitter Using Big Data*, 64 *J. COMM.* 317, 322-26 (2014).

⁷⁹ See Jeremy B. Merrill, *Liberal, Moderate or Conservative? See How Facebook Labels You*, *N.Y. TIMES* (Aug. 23, 2016), <https://www.nytimes.com/2016/08/24/us/politics/facebook-ads-politics.html> (explaining that Facebook ideology scores are based on user self-reports — if the user elects to provide this information — and inferred from "likes" if the user does not provide the information).

⁸⁰ *Id.* It appears that prior to 2016, campaign advertising on social media was delivered to users whom campaigns had targeted using the campaign's pre-existing information, rather than users targeted on the basis of the Internet-platform company's estimates of the users' political preferences. See KREISS, *supra* note 69, at 148-50, 177-78, 201-02 (discussing Facebook-based advertising).

recipient — meant to depress turnout.⁸¹ The Clinton campaign paid for Facebook ads shown only to users whose demographic profiles and histories of “likes” and “clicks” were similar to other users who had already “liked” the official Clinton campaign page.⁸²

How much campaigns learn about the preferences of voters — and how precisely campaigns tailor and target their advertising — therefore depends in part on what social media companies invest in learning about their users’ political preferences, and what they decide to market. Will these firms train their machine-learning algorithms to predict individuals’ preferences on discrete policies from patterns of social media use? How accurate will these predictions be? If the social media companies go down this path, will they market just the opportunity to target advertising on their platform to a subset of voters with certain beliefs, or will they let campaigns purchase estimates of aggregate public opinion within geopolitical constituencies, or perhaps even voter lists with social-media-inferred indicators of each voter’s ideology, values, and policy preferences?⁸³ The answers to these now-open questions clearly bear on whether the patterns of elite political ignorance documented in Part I persist into the future.

B. Public Policy

While the ultimate impact of social media on the accuracy of candidates’ and legislators’ perceptions of voter preferences is still a matter of speculation, it is pretty clear that state policies can and do affect those perceptions. We illustrate this point first with a policy to which legal academics have paid little attention: whether the state elicits voters’ race and political party affiliation on the voter registration form and makes this information available to campaigns. Then we turn to a much-discussed policy whose informational impacts have been overlooked: whether the state provides campaign finance vouchers to eligible voters, and if so, how voucher assignments are recorded and disclosed.

⁸¹ Sue Halpern, *How He Used Facebook to Win*, N.Y. REV. BOOKS (June 8, 2017), <http://www.nybooks.com/articles/2017/06/08/how-trump-used-facebook-to-win/>.

⁸² Jeremy B. Merrill, *Why Facebook Showed You That Ad for the Candidate You Hate*, N.Y. TIMES (Nov. 7, 2016), <https://www.nytimes.com/2016/11/08/us/politics/facebook-ads-campaign.html>.

⁸³ KREISS, *supra* note 69, at 177 (reporting that Facebook has “invested heavily in finding people who [are] registered voters”).

1. Race, Party, and the Voter File

Few studies have been published on the quality of commercial data vendors' predictions about voter preferences, and the predictions themselves are constantly being refined. But subject to those caveats, the available evidence suggests that the predictions are more accurate if the state's official voter file records the race and party affiliation of registered voters.⁸⁴

Hersh showed that in states that elicit and record party registration, the distribution of voters by "predicted partisanship" — that is, the data-vendor's prediction of the probability that the voter is a Democrat — is strongly bimodal, with most voters clustered near zero or one.⁸⁵ In states that do not record this information, the distribution is flat.⁸⁶ Yet both survey evidence and predictions from the data vendor's own models suggest that the true distribution of voters by partisanship is quite similar across both groups of states.⁸⁷ The different distributions of *predicted* partisanship simply reflect the difficulty of categorizing individual voters' party preference using publicly available information external to the official voter file, e.g., commercial data, census data, and precinct-level election returns.

Corroborating and extending Hersh's finding, Kyle Endres matched the Republican National Committee's augmented voter file for three states to the 2012 Cooperative Congressional Election Study ("CCES") dataset, identifying about 4000 individuals for whom the RNC had made policy-preference predictions and the CCES had recorded self-reported preferences on the same policy.⁸⁸ The accuracy of the augmented-voter-file predictions was mediocre in Virginia (45%-60%, not much better than flipping a coin), decent in Florida (68%-82%), and in-between in Colorado (43%-72%).⁸⁹ This reinforces Hersh's thesis about the effects of state decisions to elicit and record voters' race and party affiliation, because Florida's voter file includes race and party registration, Virginia's has neither race nor party, and Colorado's has party registration but not race.⁹⁰

⁸⁴ See HERSH, HACKING THE ELECTORATE, *supra* note 69, at 174 tbl.8.2.

⁸⁵ *Id.* at 94 fig.5.2.

⁸⁶ *Id.* at 92-104.

⁸⁷ *Id.* at 101-03.

⁸⁸ *Id.*

⁸⁹ *Id.*

⁹⁰ *Id.* at 130-31. Note that Hersh's focus was the accuracy of partisanship and race predictions, not policy or ideology predictions.

In a related project using merged CCES and voter-file data, Hersh tried to figure out whether campaigns could use the data in the augmented voter file to identify potential swing voters, such as cross-pressured partisans (voters who identify with one major party but agree with the other on several issues), cross-pressured independents, and independents who claim not to “lean” Democratic or Republican.⁹¹ Hersh concluded that for most such voter categories, the false positive rate would exceed 50%.⁹² Because false positives among voters classified as reliable partisans are less common (particularly in states that record party registration and race in the voter file), campaigns generally face stronger incentives to mobilize their base rather than appeal to swing voters.⁹³

2. Campaign Finance Vouchers

A key implication of Hersh’s work is this: If you want to make accurate predictions about voters’ political preferences, you need to observe their *political* choices, not just their choices as consumers. Yet apart from registering to vote in party’s primaries, our electoral system has long treated the political choices that most people make as private information. The ballot is secret. Financial donations to political campaigns are subject to disclosure only if they exceed a threshold that few people reach.⁹⁴ Other political choices, such as responses to door-to-door canvassers or on-line political messaging, may be observable to certain actors but are not public information.

There is, however, one widely mooted political reform that could induce a large swath of the electorate to make observable political choices: the enactment of a voucher-based regime of public financing for campaigns. Long championed by reformers as a means of equalizing political influence, voucher-based systems of campaign finance are beginning to gain traction at the local and state level. In 2015, the voters of Seattle adopted the first voucher program for municipal elections, and a year later South Dakotans enacted the first statewide regime. The Seattle program gives every registered voter four \$25 vouchers to distribute to qualifying candidates in each municipal

⁹¹ *Id.* at 164-65.

⁹² *Id.*

⁹³ *Id.*

⁹⁴ About 1% of Americans elect to give disclosable sums to candidates for federal office. *The Top 10 Things Every Voter Should Know About Money-In-Politics*, OPENSECRETS.ORG, www.opensecrets.org/resources/dollarocracy/04.php (last visited Oct. 6, 2018).

election; the South Dakota program provided \$100 to every registered voter to allocate among qualifying candidates in elections for state offices.⁹⁵ (Adopted by ballot initiative, South Dakota's program was repealed, pre-implementation, by the state legislature.)⁹⁶

Public and academic debate over voucher programs has paid no heed to their likely impact on political elites' knowledge about voter preferences.⁹⁷ The impact could be large. Voucher assignments (if disclosed) reveal political preferences. A voter who splits her voucher evenly between candidates A and B, while giving nothing to C, D, and E, reveals a preference for A and B over C, D, and E. If she splits it 75-25 between A and B while giving nothing to the others, she further indicates that she favors A over B. If another voter divides his voucher 60-40 between A and B, he too reveals that he prefers A to B, but his A > B preference is probably weaker than that of the previous voter since his split is closer to 50-50. Vouchers, unlike votes, reveal *preference intensity*.

And if voucher contributions can be linked over time to a given donor, analysts reviewing the history of voucher contributions will be able to see exactly how donations during one election cycle correlate with donations in every other election cycle. This is critical for candidates trying to assemble potential-winning coalitions of voters. It enables them to assess what positions might be adopted to bring swing voters (observable as "swing donors") on board, and whether moving

⁹⁵ SEATTLE, WASH., MUN. CODE, § 2.04.620 (2017); SEATTLE, WASH., INITIATIVE 122 §2.04.658 (2015), <https://www.seattle.gov/Documents/Departments/EthicsElections/DemocracyVoucher/I-122%20Text-%20Master.pdf>; Letter from Marty J. Jackley, Att'y Gen. of S.D., to Hon. Shantel Krebs, Sec'y of State of S.D., Attorney General's Statement and Revised Initiated Measure — Revisions to Campaign Finance and Lobbying Laws (Sept. 25, 2015), https://sdsos.gov/elections-voting/assets/2016_IM_CampFinLobbyingLaws.pdf.

⁹⁶ This is less an indicator of the program's lack of popularity (after all, the voucher regime was voted into law by a majority of the voters at the 2016 general election), than of the fact that the voucher regime created a new playing field and hence a lot of strategic uncertainty for incumbents.

⁹⁷ For example, the Seattle and South Dakota programs have very different disclosure requirements, see *infra* Part IV.B.1, but these were not debated in the "pro" and "con" statements in the ballot pamphlets accompanying the ballot measures to enact the programs. See *City of Seattle Restrictions of Campaign Finance and Elections, Initiative Measure No. 122* (November 2015), BALLOTPEDIA, [https://ballotpedia.org/City_of_Seattle_Restrictions_on_Campaign_Finance_and_Elections_Initiative_Measure_No._122_\(November_2015\)](https://ballotpedia.org/City_of_Seattle_Restrictions_on_Campaign_Finance_and_Elections_Initiative_Measure_No._122_(November_2015)) (last visited Oct. 20, 2018); *South Dakota Revision of State Campaign Finance and Lobbying Laws, Initiated Measure 22* (2016), BALLOTPEDIA, [https://ballotpedia.org/South_Dakota_Revision_of_State_Campaign_Finance_and_Lobbying_Laws_Initiated_Measure_22_\(2016\)](https://ballotpedia.org/South_Dakota_Revision_of_State_Campaign_Finance_and_Lobbying_Laws_Initiated_Measure_22_(2016)) (last visited Sept. 6, 2018).

in one direction might cause other members of the candidate's electoral coalition to defect or stay home.⁹⁸

From the elite-ignorance perspective, the most important component of a voucher regime is disclosure. If voucher contributions are fully disclosed, i.e., if both the assignor and the assignee is publicly named, then elites will be able to learn the preferences of individual, identifiable voters. If voucher contributions are not disclosed at all, then elites cannot learn anything about voter preferences from the voucher-assignment decisions. The Seattle and South Dakota programs exemplify these poles, with Seattle choosing maximum disclosure and South Dakota confidentiality.⁹⁹

There are also intermediate possibilities. For example, a state could make the identity of voucher-donors anonymous to campaigns, while publicly disclosing individual voucher contribution histories that are *geocoded to legislative districts but not linked to personal identifiers*.¹⁰⁰ This would allow legislators, campaign consultants, and interest groups to learn about the distribution of voter preferences within geopolitical constituencies, but not *which* voter expressed *which* set of preferences. We shall argue that this combination of voter-level obscurity and constituency-level transparency is normatively attractive, and in Part IV we discuss in some detail how it might be brought about.

For now, suffice it to say that because the decisions of policymakers and social media executives are likely to have large effects on the nature and extent of elite political ignorance, it is important to inquire about the benefits and costs of reducing such ignorance. This is our subject in the next Part.

III. DECLINING IGNORANCE AND THE LAW OF DEMOCRACY

Here, we assess how improvements in the ability of data vendors to predict voters' preferences and behavior would bear upon several problems that motivate much of the work of election law scholars. These include "misalignment" between the roll-call votes of legislators and the preferences of eligible voters; political polarization; race discrimination and minority representation; and gerrymandering of legislative districts for political advantage. We also touch on some problems that have received less attention in our field: discrimination

⁹⁸ See *infra* Part IV.

⁹⁹ See SEATTLE, WASH., MUN. CODE § 2.04.658 (2017).

¹⁰⁰ Personal identifiers include names, addresses, and any other information that would enable a campaign to figure out which voter made which voucher contribution.

in the provision of constituent service; deceptive micro-targeted advertising that occurs largely out of public view; and the impact of electoral campaigns on citizens' sense of social and political solidarity. We conclude that a reduction in elite ignorance about the preferences of individual, identifiable voters would yield a difficult-to-balance mix of costs and benefits. More hopefully, we argue that most of the benefits could be realized without incurring the costs if it were feasible to publicize the distribution of political opinion within geopolitical units of representation, while concealing the opinions of individual, identifiable voters.

A. *Salutary Consequences of Declining Ignorance*

The immediate effects of a reduction in elite political ignorance are likely to include better alignment between the policy preferences of voters and the roll-call votes of their representatives, and a lessening of political polarization. Politics may also become less racialized, as better voter-level preference information would weaken the incentive for candidates and office-holders to target racial groups for suppression or mobilization. And the Voting Rights Act should become easier to enforce, as plaintiffs would be able to make the threshold showing of racial polarization using pre-existing estimates from the augmented voter file, rather than costly, prepared-for-litigation estimates that depend on legally questionable assumptions.

1. Direct Effects on Alignment and Polarization

In recent years, legal scholars have become increasingly concerned about political polarization,¹⁰¹ and about “misalignment” in representation (persistent deviations between the votes of representatives and the ideology or policy preferences of their constituents).¹⁰² These problems are related in that, at the national level, polarization has occurred largely through Republican

¹⁰¹ See, e.g., SOLUTIONS TO POLITICAL POLARIZATION IN AMERICA (Nathaniel Persily ed., 2015); Samuel Issacharoff, *Outsourcing Politics: The Hostile Takeover of Our Hollowed-Out Political Parties*, 54 Hous. L. Rev. 845 (2017); Richard H. Pildes, *Why the Center Does Not Hold: The Causes of Hyperpolarized Democracy in America*, 99 CALIF. L. Rev. 273 (2011); David Schleicher, *Things Aren't Going That Well over There Either: Party Polarization and Election Law in Comparative Perspective*, 2015 U. Chi. Legal F. 433 (2015).

¹⁰² See, e.g., Nicholas Stephanopoulos, *Aligning Campaign Finance Law*, 101 VA. L. Rev. 1425, 1435 (2015); Stephanopoulos, *Elections*, *supra* note 68, at 364; Nicholas O. Stephanopoulos, Eric McGhee & Steven Rogers, *The Realities of Electoral Reform*, 68 VAND. L. Rev. 761, 765 (2015).

representatives moving to the right, away from both the national median voter and (probably) district-specific median voters.¹⁰³

As we saw in Part I, Republican political elites greatly overestimate both the conservatism of their constituents and the electability of extreme Republicans relative to moderate Republicans. It follows that if everything else were held constant, a reduction in elite ignorance about voter preferences would probably reduce polarization and improve alignment. Republican power brokers would lend their support to moderate candidates in competitive-district primaries, and more moderate Republicans would be elected, bolstering centrist caucuses in the legislature. Meanwhile, legislators across the political spectrum would more accurately perceive where their respective median voters stand on important issues, rather than misplacing the median somewhere far off to the right. This should bring the votes of representatives into better alignment with the preferences of their constituents, at least on high-profile issues in competitive districts,¹⁰⁴ and on issues where the representative does not face heavy pressure from party leaders or interest groups.

As we explain below, however, the “if everything else were held constant” proviso is implausible. Better information about the preferences of everyone listed in the voter file would affect redistricting decisions, the composition of the electorate, and campaign strategy in ways that may well exacerbate polarization and misalignment.

2. Reduced Racial Targeting by Legislators and Campaigns

Democratic and Republican campaigns both use race as a proxy for voters’ reliability as a Democrat. Leveraging variation in the voter file, Hersh provides strong evidence that Democratic campaigns target black voters with their GOTV efforts, and that black voters respond.¹⁰⁵ The targeting occurs at the individual-voter level in states that record race in the voter file, and at the precinct level (where race is rendered visible by the Census) in states where the voter file lacks the race

¹⁰³ See MATT GROSSMANN & DAVID A. HOPKINS, *ASYMMETRIC POLITICS: IDEOLOGICAL REPUBLICANS AND GROUP INTEREST DEMOCRATS* 12 (2016); THOMAS E. MANN & NORMAN J. ORNSTEIN, *IT’S EVEN WORSE THAN IT LOOKS: HOW THE AMERICAN CONSTITUTIONAL SYSTEM COLLIDED WITH THE NEW POLITICS OF EXTREMISM* xi (rev. ed. 2016); Nolan McCarty, *What We Know and Do Not Know About Our Polarized Politics*, in *POLITICAL POLARIZATION IN AMERICAN POLITICS* 1, 3 (Daniel J. Hopkins & John Sides eds., 2015).

¹⁰⁴ On high-profile issues, legislators face some threat of electoral sanction for deviating from median-voter preferences.

¹⁰⁵ See *infra* notes 106–08 and accompanying text.

field.¹⁰⁶ Hersh also found that in states where race is included in the voter file, Obama campaign workers rated “race” as a more important consideration in voter-contact strategy.¹⁰⁷

But just as the ready availability of individual-level data on voter race encourages Democrats to mobilize minority voters, so too does it encourage Republicans to suppress the minority vote. In North Carolina and Texas, Republican-controlled legislatures recently adopted voter ID requirements and other voting restrictions carefully calibrated to bear more heavily on minority voters.¹⁰⁸ In Texas, North Carolina, Alabama, and Virginia, Republican redistricters intentionally packed minority voters into majority-minority districts, adopting implausible constructions of the Voting Rights Act to justify a redistricting strategy that was clearly designed to minimize the political strength of the minority community (for partisan ends).¹⁰⁹

¹⁰⁶ More specifically, Hersh shows that in Virginia (no race in the voter file), turnout was relatively high in homogenous black precincts and relatively low in racially mixed precincts, whereas in otherwise similar North Carolina (race in the voter file) the relationship between racial composition and turnout at the precinct level was much flatter. HERSH, HACKING THE ELECTORATE, *supra* note 69, at 129-32 fig.6.2. This corroborates anecdotal reports that Democratic operatives in Virginia target black voters using precinct-level data, rather than relying on data vendors’ noisy individual-level predictions of voter race. *See id.* at 125-26, 129-30. Merging CCES and Catalyst data, Hersh also shows that turnout in the 2004, 2006, and 2008 general elections was several percentage points lower among voters who did not fill out the race field on the registration form than among otherwise similar voters who did. *Id.* at 137-39. This suggests that voters are less likely to be mobilized in Southern states when campaigns cannot easily observe the voter’s race, although it remains possible that some unobserved difference between voters who do and do not answer the race question on the registration form explains the differential turnout rate. The differential turnout rate is a bit larger for black voters than white voters, suggesting that black voters are particularly likely to be mobilized on the basis of race. *Id.* at 131.

¹⁰⁷ *Id.* at 130-31 fig.6.1. Though data vendors provide predictions of registered voters’ race in states where this information is missing from the official voter file, Hersh showed that these predictions are quite noisy. *See id.* at 127 tbl.6.2 (matching Catalyst to CCES data and showing that predicted race for blacks and Latinos is ninety-two to ninety-five percent accurate in the states which record race, but only 68% to 73% correct in states that do not).

¹⁰⁸ *See* N.C. State Conference of NAACP v. McCrory, 831 F.3d 204, 214 (4th Cir. 2016) (“Although the new provisions target African Americans with almost surgical precision, they constitute inapt remedies for the problems assertedly justifying them and, in fact, impose cures for problems that did not exist. Thus the asserted justifications cannot and do not conceal the State’s true motivation.”); *see also* Richard L. Hasen, *Race or Party, Race as Party, or Party All the Time: Three Uneasy Approaches to Conjoined Polarization in Redistricting and Voting Cases*, 59 WM. & MARY L. REV. 1837, 1841 (2018).

¹⁰⁹ *See* Justin Levitt, *Quick and Dirty: The New Misreading of the Voting Rights Act*, 43 FLA. ST. U. L. REV. 573, 573 (2015). For cases challenging this practice, *see* Perez v.

The organization of politics on racial lines is legally problematic. The overriding objective of the federal Voting Rights Act (“VRA”) is to “hasten the waning of racism in American politics.”¹¹⁰ In equal protection cases, the Court has struck down electoral districts in whose design race “predominated.”¹¹¹ “Racial classifications with respect to voting carry particular dangers,” the Court forewarned.¹¹² They “may balkanize us into competing racial factions[,] threaten[ing] to carry us further from the goal of a political system in which race no longer matters — a goal that the Fourteenth and Fifteenth Amendments embody”¹¹³ Outside of the electoral process, it is well settled that the Equal Protection Clause presumptively disallows the government from using race as a proxy in furtherance of legitimate objectives.¹¹⁴

Given these principles, it is arguably unconstitutional for states even to record race in the voter file if campaigns have access to the file. In *Anderson v. Martin*, the Supreme Court invalidated Louisiana’s requirement that candidates’ race be designated on the ballot, reasoning that this “encourage[d] voters to discriminate upon the

Abbott, 253 F. Supp. 3d 864, 865 (W.D. Tex. 2017); Ala. Legislative Black Caucus v. Alabama, 231 F. Supp. 3d 1026, 1030 (M.D. Ala. 2017); Covington v. North Carolina, 316 F.R.D. 117, 126 (M.D.N.C. 2016); Harris v. McCrory, 159 F. Supp. 3d 600, 600 (M.D.N.C. 2016); Personhulballah v. Alcorn, 155 F. Supp. 3d 552, 553 (E.D. Va. 2016).

¹¹⁰ *Johnson v. De Grandy*, 512 U.S. 997, 1020 (1994). To this end, the Supreme Court has construed the VRA so as to encourage or at least enable states to comply by drawing “crossover” electoral districts in which minority-preferred candidates can be elected but depend on cross-racial political coalitions. *See id.* (stating that minority voters are not immune from the obligation to “pull, haul, and trade” with others, as may be necessary to form a majority coalition); *see also* *Bartlett v. Strickland*, 556 U.S. 1, 24 (2009) (advising that crossover districts — and, by implication, influence districts — “can be evidence . . . of equal political opportunity under the § 2 totality-of-the-circumstances analysis”).

¹¹¹ *See, e.g., Miller v. Johnson*, 515 U.S. 900 (1995); *Shaw v. Reno*, 509 U.S. 630 (1993).

¹¹² *Shaw*, 509 U.S. at 657.

¹¹³ *Id.*

¹¹⁴ *See, e.g., Johnson v. California*, 543 U.S. 499, 507 (2005) (applying strict scrutiny to segregation of new inmates by race during a two-month evaluation period, notwithstanding undisputed evidence of violent prison gangs organized along racial lines); *J.E.B. v. Alabama ex rel. T.B.*, 511 U.S. 127, 139 n.11 (1994) (holding that that gender-based classifications presumptively violate the Equal Protection Clause “even when some statistical support can be conjured up for the generalization”). Even if there is a firm statistical correlation between race and some harder-to-observe trait or behavior, race may not be used as a proxy unless the government has a compelling interest and no other practicable way to achieve it. *Id.*

grounds of race.”¹¹⁵ Similarly, states that reveal race through the voter file encourage campaigns to discriminate on this ground.¹¹⁶ Legislators may also use the file to discriminate when responding to requests for constituent services.¹¹⁷

But if one’s goal is to foster cross-race political coalitions, or to discourage campaigns from using race as a proxy for harder-to-observe political preferences, it may be better not to remove race from the voter file, but to adopt other reforms (such as non-anonymous campaign finance vouchers) that enable much more accurate estimation of the ideology and policy preferences of most people in the voter file. If campaigns could easily observe the race *and* the policy preferences, partisanship, or ideology of each registered voter, campaigns would have no need to use race as a proxy. Cross-racial campaigning would be encouraged, as Republican candidates would be able to identify and recruit the subpopulation of minority voters who identify with the Republican Party or subscribe to Republican positions on some issues, and Democratic candidates would have an easier time identifying and recruiting the subpopulation of whites who favor liberal positions.

3. Low-Cost VRA Enforcement

Granular data on the race *and* the policy/partisan preferences of everyone in the voter file would also greatly facilitate enforcement of the Voting Rights Act. In vote-dilution suits, plaintiffs are required to show that political preferences in the community are racially polarized.¹¹⁸ Expert witnesses tackle this problem today using precinct-level data on candidates’ vote shares, and data from the Census on the racial makeup of the voting age population in small geographic units.¹¹⁹ From these data, one can wring estimates of the

¹¹⁵ *Anderson v. Martin*, 375 U.S. 399, 402 (1964).

¹¹⁶ See *supra* notes 106–10 and accompanying text.

¹¹⁷ See *infra* Part III.B.4 (discussing use of the voter file to filter constituent inquiries).

¹¹⁸ In “vote denial” suits, about barriers to voting rather than the “voting strength” of racial groups, evidence of racial polarization is useful but not mandatory. See *League of Women Voters of North Carolina v. North Carolina*, 769 F.3d 224, 240 (4th Cir. 2014) (“[C]ourts have looked to certain ‘typical’ factors . . . [including] the extent to which voting in the elections of the pertinent State or political subdivision is racially polarized.”); Daniel P. Tokaji, *Applying Section 2 to New Vote Denial*, 50 HARV. C.R.-C.L. L. REV. 439, 481 (2015) (arguing that “racial polarization provides circumstantial evidence of discriminatory intent”).

¹¹⁹ For an explanation of this process, and further development of the argument sketched in this paragraph, see Christopher S. Elmendorf et al., *Racially Polarized*

proportion of voters in each racial group who supported each candidate, but only by making strong assumptions about political homogeneity within racial groups. Specifically, it is assumed that the proportion of voters of a racial group who voted for the candidate in question is independent of the racial makeup of the precinct. Minority (white) voters who live in largely-minority precincts are assumed to be politically identical, on average, to minority (white) voters who live in mostly-white precincts.

This within-race/across-space homogeneity assumption is both facially implausible and in deep tension with the Supreme Court's decision in *League of United Latin American Citizens v. Perry*, which castigated the trial court for indulging the "prohibited assumption" of political homogeneity between geographically and socioeconomically disparate Latino communities.¹²⁰

Now imagine that a world in which campaigns or their data vendors knew the race and had pretty good estimates of the policy and partisan preferences of nearly everyone in the voter file. In this world it would be incredibly easy for plaintiffs to make out a prima facie case of racial polarization — and without relying on "prohibited assumptions." It would not even be necessary to pay an expert witness to collect data, write code, and run statistical models. Instead, plaintiffs could get a data vendor to provide, under penalty of perjury, the same estimates of voter preferences that the vendor had recently provided to campaigns.¹²¹ Data vendors may be reluctant to disclose propriety estimates linked to each person in the voter file, but for litigation purposes it would suffice to provide the preference distributions by racial group within the geographic units of interest.¹²² The court does

Voting, 83 U. CHI. L. REV. 587, 670-71, 679 app. A (2016) [hereinafter *Racially Polarized Voting*].

¹²⁰ See *id.* at 670-73. Chief Justice Roberts in dissent came to the district court's defense, arguing that the lower court's decision was founded on "statistical evidence" rather than "assumptions." *League of United Latin American Citizens v. Perry*, 548 U.S. 399, 492-511 (2006) (Roberts, C.J., concurring in part, concurring in the judgment in part, and dissenting in part). Roberts seemed wholly unaware that the statistician's models actually relied on the "prohibited" within-race/across-space homogeneity assumption. See Elmendorf et al., *Racially Polarized Voting*, *supra* note 119, at 672.

¹²¹ Unlike expert witnesses hired by parties to a lawsuit, data vendors working for a campaign have no incentive to shade their estimates strategically.

¹²² As campaigns seek preference estimates for identifiable individuals, who may be targeted for mobilization or suppression, the disclosure of estimates of the *distribution* of opinion within racial groups and geographic units would not undermine the data vendors' business model.

not need to know *which* voter occupies a particular position in the distribution of political preferences of his or her racial group.¹²³

B. Deleterious Consequences of Declining Ignorance

Notwithstanding the immediate benefits, a reduction in elite political ignorance may have adverse long-run effects — insofar as elites can discern the preferences of individually identifiable voters. Gerrymanders would likely become more damaging and enduring; “improved” get-out-the-vote campaigns may exacerbate demographic and ideological biases in the electorate; and micro-targeted political advertising may subtly undermine democratic accountability and citizens’ sense of common purpose. As well, constituent services that representatives once provided to everyone in their district will be denied to residents who are unlikely to support the incumbent.

1. Misaligning Gerrymanders

Legislative-level misalignment occurs when the median representative in a legislative body casts roll call votes that are consistently more liberal or conservative than the preferences of the median eligible voter or citizen in the polity.¹²⁴ Empirical studies of the causes of legislative misalignment finger partisan gerrymanders as particularly damaging.¹²⁵ The problem is likely to get worse. Party leaders who acquire fine-grained data on the political preferences of

¹²³ Plaintiffs in a vote dilution case must also show that racial polarization is sufficient to “usually defeat” minority candidates of choice. *See* Elmendorf et al., *Racially Polarized Voting*, *supra* note 119, at 621. Data vendors may be able to provide estimates of the expected vote share of, say, a typical African American candidate in a district, but this part of the racial polarization showing could also be made using observed election outcomes rather than statistical estimates: if no serious minority candidate has bothered to run, or has run and won, in an area with a large minority population, racial polarization is more likely than not sufficient to “usually defeat” minority candidates of choice.

¹²⁴ *See* Stephanopoulos, *Elections*, *supra* note 68, at 310 (contrasting legislative and district-specific misalignment).

¹²⁵ Devin Caughey et al., *Partisan Gerrymandering and the Political Process: Effects on Roll-Call Voting and State Policies*, 16 ELECTION L.J. 1, 7 (2017) (estimating effects of partisan asymmetry in electoral district maps on ideological misalignment and the policy outputs of government); Nicholas Stephanopoulos, *The Causes and Consequences of Gerrymandering*, 59 WM. & MARY L. REV. 2115, 2149 (2018) (“[S]ingle-party control of redistricting fosters partisan unfairness more than any other variable, and . . . such unfairness translates directly into ideologically distorted representation.”).

everyone in the voter file will be able to create more enduring and harmful gerrymanders.

Economists have shown that the optimal partisan gerrymandering strategy depends on whether redistricters have precise or fuzzy information about the political preferences of individual voters.¹²⁶ If redistricters observe only an imprecise signal of the partisan reliability of each voter, the optimal strategy is to pack the opposing party's stronger supporters into homogenous districts, and to distribute other voters uniformly across the remaining districts.¹²⁷ This explains the "pack and crack" strategy that partisan redistricters have conventionally been thought to pursue.¹²⁸

But if redistricters observe the preferences of each voter without error, and if voters can be placed on a continuum from reliable Republican to reliable Democrat, then the politically optimal strategy is to create districts comprised of "matched slices" of the electorate — the most reliable Republicans paired with the most reliable Democrats, center-right Republicans paired with center-left Democrats, and so forth.¹²⁹ The core idea is to neutralize the opposing party's most reliable voters by combining them in a district with a slight majority of the redistricting party's most reliable voters. Matched-slice gerrymanders deliver more seats for the same number of votes.

As data vendors develop ever-better forecasts of the partisan reliability and turnout propensities of registered voters, redistricting plans that pack opposing-party voters will be superseded by matched-slice gerrymanders. The transformation could be dramatic. At the time of the post-2010 redistricting cycle, the augmented voter file was a political novelty. Campaigns were just starting to figure out how to use it, and it appears to have played little if any role in redistricting.¹³⁰ We expect the 2020 round of redistricting to unfold very differently. The augmented voter file has already become a standard resource for campaigns, and many legislators are using it to filter constituent-

¹²⁶ See *infra* notes 128–29 and accompanying text.

¹²⁷ Faruk Gul & Wolfgang Pesendorfer, *Strategic Redistricting*, 100 AM. ECON. REV. 1616, 1617 (2010) (generalizing a similar result obtained in Guillermo Owen & Bernard Grofman, *Optimal Partisan Gerrymandering*, 7 POL. GEOGRAPHY Q. 5 (1988)).

¹²⁸ See *id.* (characterizing formal result as "pack and crack"); cf. Vieth v. Jubelirer, 541 U.S. 267, 286 & n.7 (2004) (plurality opinion) (characterizing gerrymandering in terms of packing and cracking); Johnson v. De Grandy, 512 U.S. 997, 1015 (1994).

¹²⁹ John N. Friedman & Richard T. Holden, *Optimal Gerrymandering: Sometimes Pack, but Never Crack*, 98 AM. ECON. REV. 113, 125–26 (2008).

¹³⁰ Christopher S. Elmendorf, *From Educational to Representational Adequacy*, 59 WM. & MARY L. REV. 1601, 1647–53 (2018).

service requests as well.¹³¹ Its utility for redistricting will be obvious to any political actor with a modicum of sophistication, and redistricters are sure to figure out the matched-slice strategy.

In addition to making partisan gerrymanders more durable and more biased against the out-of-power party, the adoption of the matched-slice strategy will probably undermine the quality of dyadic, district-level representation. Both empirical and theoretical studies have shown that within-district political heterogeneity tends to reduce alignment between the district's median voter and the positions taken by the district's representative.¹³² Matched-slice gerrymandering is a recipe for within-district heterogeneity. Partisan gerrymanders will be doubly destructive: biasing representation in the legislature as a whole (awarding more seats to the faction that controls redistricting than it would earn under a fair map), and untethering individual lawmakers from public opinion in their districts.

2. Demographic Bias in the Electorate

The electorate is *demographically biased* insofar as politically identifiable segments of the citizen or voting-eligible population are under- or overrepresented in population of regular voters. As elites acquire better information about voter preferences, demographic bias in the electorate is likely to worsen. In particular, the swing voters and political independents who may exercise a moderating influence on candidates and officeholders are likely to make up a smaller share of regular voters, and strong partisans — particularly conservative strong partisans — are likely to become increasingly overrepresented. Much like matched-slice gerrymanders, worsening demographic bias in the electorate could offset the salutary direct effects of declining ignorance on legislative alignment and polarization.

Legislators who have good information about the preferences of individual, identifiable voters may enact voting rules that make it selectively more difficult for opposing-party voters to get to the polls. But even if courts strike these down,¹³³ ordinary get-out-the-vote

¹³¹ See HERSH, *HACKING THE ELECTORATE*, *supra* note 69, at 200-05.

¹³² See Jowei Chen & Jonathan Rodden, *Unintentional Gerrymandering: Political Geography and Electoral Bias in Legislatures*, 8 Q.J. POL. SCI. 239, 265-66 (2013); NOLAN MCCARTY ET AL., *GEOGRAPHY AND POLARIZATION* 13-17 (2013), http://web.stanford.edu/~jrodden/wp/geo_polar_apsa2013_V4.pdf (Annual Meeting of the American Political Science Association); see also Stephanopoulos, *Elections*, *supra* note 68, at 289, 344, 346, 349 (discussing studies).

¹³³ The equal protection clause has since the 1960s been understood to protect a fundamental right to vote on equal terms with others. See, e.g., *Kramer v. Union Free*

campaigns in a low-elite-ignorance world are likely to exacerbate demographic bias.

Who turns out to vote depends on who is mobilized.¹³⁴ Campaigns invest large sums in the ground game, trying to induce eligible voters whom the campaign has pegged as likely supporters to go to the polls.¹³⁵ These get-out-the-vote (“GOTV”) efforts increasingly rely upon carefully designed field experiments, which provide campaigns with reliable insights into the relative efficacy of different mobilization strategies.¹³⁶

As elites acquire better information about voter preferences, campaigns will target their GOTV resources more accurately, with the result that fewer unreliable or “swing” voters are inadvertently mobilized. Other demographic biases in the electorate may be exacerbated too. Poor people, recent immigrants, and certain minority groups tend to have weaker partisan attachments than middle-class whites,¹³⁷ and voters with weaker partisan attachments are generally less reliable and thus less likely to be targeted for mobilization.¹³⁸

Moreover, field experiments are showing that GOTV treatments (phone calls, door visits, mailers, etc.) usually have a larger effect on voters whose baseline propensity to vote is fairly high.¹³⁹ Well-run ground campaigns can bring lots of “occasional voters” to the polls, but rarely convert non-voters into occasional voters.¹⁴⁰ Occasional

Sch. Dist. No. 15, 395 U.S. 621 (1969).

¹³⁴ See generally Bertrall L. Ross II, *Addressing Inequality in the Age of Citizens United*, 93 N.Y.U. L. REV. 1120, 1162-80 (2018) (reviewing literature).

¹³⁵ See, e.g., *How Much of My Budget Should Go to Political Mailers?*, CAMPAIGN WORKSHOP BLOG (Mar. 21, 2016), <https://www.thecampaignworkshop.com/budgeting-for-political-mailers> (reporting “industry standard” of allocating “a minimum of 70% of [the campaign] budget to direct voter contact”).

¹³⁶ See generally ALAN S. GERBER & DONALD P. GREEN, *GET OUT THE VOTE: HOW TO INCREASE VOTER TURNOUT* (3d ed. 2015).

¹³⁷ See ZOLTAN L. HAJNAL & TAEKU LEE, *WHY AMERICANS DON'T JOIN THE PARTY: RACE, IMMIGRATION, AND THE FAILURE (OF POLITICAL PARTIES) TO ENGAGE THE ELECTORATE* 15, 20, 79-80, 83 (2010).

¹³⁸ See Ross II, *supra* note 134, at 45-47 (documenting gaps in rates of voter contact by income).

¹³⁹ See Ryan D. Enos, Anthony Fowler & Lynn Vavreck, *Increasing Inequality: The Effect of GOTV Mobilization on the Composition of the Electorate*, 76 J. POL. 273, 274 (2013) [hereinafter *Effect of GOTV*] (reviewing literature).

¹⁴⁰ *Id.*; see also Ryan D. Enos & Anthony Fowler, *Aggregate Effects of Large-Scale Campaigns on Voter Turnout*, 6 POL. SCI. RES. & METHODS 733, 733-52 (2018) (finding based on state-border discontinuity analysis, within media markets, that presidential campaigns' voter mobilization efforts increase turnout in competitive states by 7-8 percentage points above what it would otherwise be).

voters differ from their low-propensity-to-vote counterparts on a number of dimensions, such that mobilization treatments equally applied to all eligible voters make the electorate “wealthier, more educated, more religious, and more conservative” than it would otherwise be.¹⁴¹ This skewing effect is most pronounced in low-salience elections, such as mid-term elections and elections for state and local government¹⁴² — the very elections in which low-propensity voters have long been most severely underrepresented.¹⁴³

Finally, as campaigns acquire better information about the political preferences of registered voters, they may devote more resources to turning out core supporters, at the expense of trying to win over swing voters. Hersh’s research nicely illustrates this phenomenon. He shows that circa 2012, state decisions about what information to collect on the voter registration form greatly affected whether campaigns developed accurate or blurry pictures of the partisanship of most voters,¹⁴⁴ which in turn affected campaign strategy. The picture was blurry in states like Wisconsin which do not invite voters to register with a political party, and which do not record the voter’s participation in Democratic or Republican primary elections.¹⁴⁵ The picture was crisp in states that track both of these indicators of party affiliation.¹⁴⁶ In states where “predicted partisanship” was blurry, campaigns perceived potential swing voters to comprise a much greater share of the electorate, and campaigns put more resources into persuasion efforts targeting swing voters.¹⁴⁷ Using the same classification techniques as the 2012 Obama campaign, Hersh showed that only 5% to 20% of a state’s voters were persuasion targets in the party registration/party primary states, whereas as many as 40%-70%

¹⁴¹ Enos et al., *Effect of GOTV*, *supra* note 139, at 280.

¹⁴² *Id.* at 286.

¹⁴³ See generally SARAH F. ANZIA, TIMING AND TURNOUT: HOW OFF-CYCLE ELECTIONS FAVOR ORGANIZED GROUPS 16-17 (2014); Zoltan Hajnal & Jessica Trounstein, *Where Turnout Matters: The Consequences of Uneven Turnout in City Politics*, 67 J. POL. 525 (2005).

¹⁴⁴ HERSH, HACKING THE ELECTORATE, *supra* note 69, at 95-100.

¹⁴⁵ *Id.* at 100-07.

¹⁴⁶ Hersh showed that the difference is almost entirely due to between-state variation in the voter-file fields, rather than between-state variation in voters’ partisan preferences. See *id.* at 100-03 (comparing distributions of predicted partisanship in Catalyst data with distributions of predicted partisanship in CCES survey data, and demonstrating that distribution of predicted partisanship using Catalyst’s algorithm is very similar across states if one excludes party registration and partisan-primary participation from the algorithm).

¹⁴⁷ See *id.* at 105-13.

of voters in states without either form of party data were persuasion targets.¹⁴⁸ Hersh also found that Obama's campaign workers regarded field-based persuasion as a more important campaign strategy in the no-party-registration states.¹⁴⁹

On the other hand, as campaigns acquire better information about voter preferences, they should also be able to identify potential swing voters more effectively, and better grasp how to win over those voters. (Hersh argues that most voters perceived by campaigns as potential swing voters circa 2012 were actually incorrectly classified strong partisans.)¹⁵⁰ Correct classification of potential swing voters may encourage more persuasion-oriented campaigning.¹⁵¹ The net effect of better information about voter preferences on the balance between persuasion-oriented and turnout-oriented campaigning is thus uncertain. What is not in doubt is that campaign messaging in an information-rich world would be *micro-targeted*, with individual voters receiving personalized appeals that reflect the campaign's understanding of each voter's preferences, prejudices, and predilections. Micro-targeting raises a further set of concerns.

3. Microtargeted Messaging

As campaigns deploy micro-targeted appeals, they may affect not only which segments of the voting-eligible population go to the polls, but also the political preferences and beliefs of voters themselves. Democracy-sustaining norms of mutual respect and accommodation may be at risk, to say nothing of shared understandings about facts.

A campaign that can perceive only the gross outlines of public opinion has little choice but to make broadly acceptable appeals, and to broadcast similar messages to voters everywhere. The resulting politics is likely to be solidaristic and consensual, if a bit dull. As campaigns perceive voter preferences in greater detail, their messaging incentives change, particularly as new technologies, such as web-based

¹⁴⁸ *Id.* at 107-09.

¹⁴⁹ *Id.* at 110 fig.5.10.

¹⁵⁰ *Id.* at 164-65.

¹⁵¹ In a recent meta-analysis and extension of the experimental literature on persuasion-oriented campaign messages, Kalla & Brockman observe that the positive treatment effects (in the general election) occurred only where the campaign was able to identify voters whose position on an important and "easy" issue (abortion) was contrary to the incumbent's position, or where the campaign conducted experiments to identify sub-populations of potentially responsive voters. See Joshua L. Kalla & David E. Broockman, *The Minimal Persuasive Effects of Campaign Contact in General Elections: Evidence from 49 Field Experiments*, 112 AM. POL. SCI. REV. 148, 150 (2018).

advertising, lower the cost of customizing messages for specific audiences.¹⁵² Candidates and their allies will reap rewards for appealing to the prejudices and predilections of each individual, pushing whatever buttons may be necessary to get that citizen on the bandwagon and to the polls — or, in the case of voters who lean the other way, pushing “discouragement” buttons and inducing the voter to stay home. Online advertising is so inexpensive that campaigns can run thousands of variations of an advertisement every day, using A/B testing to discover the messages that maximize clicks.¹⁵³

Monitoring of campaign communications by opposing candidates, the media, and independent fact-checkers will not be easy in a world where campaign speech has refracted into millions of variegated, individualized appeals, often from sources with no apparent or readily discoverable relationship to the candidates themselves. Persily observes, “As difficult as it may be to track down the source of funds for a televised ad purchased by some group akin to ‘Americans for America,’ a website video could come from any source anywhere in the world.”¹⁵⁴ All of this is exacerbated by a gaping hole in disclosure regulations for many kinds of online advertising.¹⁵⁵ Facebook’s recent creation of an online archive of paid political advertisements is a baby step toward the kind of transparency that will be required for microtargeted users to understand who is behind the political messages they view on the platform. It reveals who paid to promote the ad, but identification of the speaker, beyond the group’s name, remains an unsolved problem.¹⁵⁶

¹⁵² Facebook and Google already allow advertisers to calibrate advertisements to individual users. See Nathaniel Persily, *The Campaign Revolution Will Not Be Televised*, AM. INTEREST (Oct. 10, 2015) <https://www.the-american-interest.com/2015/10/10/the-campaign-revolution-will-not-be-televised/>.

¹⁵³ Carole Cadwalladr, *Google, Democracy and the Truth About Internet Search*, GUARDIAN (Dec. 4, 2016, 5:00 AM), <https://www.theguardian.com/technology/2016/dec/04/google-democracy-truth-internet-search-facebook>.

¹⁵⁴ Persily, *supra* note 152.

¹⁵⁵ Many political advertisers have long acted under the assumption that online political ads are subject to the “small items” exemption, 11 C.F.R. § 110.11(f)(1)(i)-(ii) (2018), because a disclaimer cannot fit on the face of a small ad. Ads that are placed for free as videos or images on a free website, like YouTube, are entirely exempt from disclaimers as long as the ad is not placed “for a fee on another person’s website.” 11 C.F.R. § 110.11(a) (2018); 11 C.F.R. § 110.26 (2018). The FEC has re-opened a rulemaking concerning disclaimers in online ads, but given the political realities of that commission, a regulatory fix is not in the near future. Press Release, Fed. Election Comm’n, FEC Holds Hearing on Internet Communication Disclaimers (June 28, 2018), <https://www.fec.gov/updates/fec-holds-hearing-internet-communication-disclaimers/>.

¹⁵⁶ See Abby K. Wood, Ann M. Ravel & Irina Dykhne, *Fool Me Once: Regulating*

It is of course difficult to gauge how the transformation of campaigning will affect our politics. But it seems reasonable to fear that as broad, public appeals to the common good and national identity are supplanted by microtargeted appeals to the idiosyncratic beliefs, preferences, and prejudices of individual voters, citizens will come to think of politics as less a common project than an occasion for expressing and affirming their narrow identities and interests.¹⁵⁷ Campaigns are likely to have centrifugal rather than centripetal effects on belief structures in the electorate. Voters with out-of-the-mainstream and even abhorrent beliefs (such as overt racism) may find their beliefs legitimated and reinforced by micro-targeted messaging. And it will be hard for the public writ large to hold candidates accountable for their messaging,¹⁵⁸ and the government accountable for its performance.¹⁵⁹

4. Discrimination in Constituent Service

*An individual or a group of individuals who votes for a losing candidate is usually deemed to be adequately represented by the winning candidate and to have as much opportunity to influence that candidate as other voters in the district. We cannot presume in such a situation, without actual proof to the contrary, that the candidate elected will entirely ignore the interests of those voters.*¹⁶⁰

This passage from Justice White's plurality opinion in *Davis v. Bandemer* expresses a longstanding proposition of the Supreme Court's vote dilution jurisprudence. Claims for partisan vote dilution have been rejected because, in the absence of deep racial conflict, voters affiliated with one major party in districts won by the other party are thought to exert some influence over their representatives.¹⁶¹

"Fake News" and Other Online Advertising, 91 S. CAL. L. REV. (forthcoming 2018) (manuscript at 1250), https://ssrn.com/abstract_id=3137311 (explaining why Facebook's archive is a positive step but still inadequate to combat political disinformation and enable transparency of political speech).

¹⁵⁷ See, e.g., Persily, *supra* note 152 (expressing concern about "echo-chamber effects").

¹⁵⁸ This is difficult because disclosure is not required for many forms of online advertising, and the messages are multifarious and difficult to monitor.

¹⁵⁹ This is difficult because of the erosion of a common set of beliefs about facts.

¹⁶⁰ *Davis v. Bandemer*, 478 U.S. 109, 132 (1986) (plurality opinion).

¹⁶¹ Compare *White v. Regester*, 412 U.S. 755, 769-70 (1973) (vindicating racial vote dilution claims under circumstances where minority voter had essentially no influence, minority turnout rates were depressed, and minority candidates were

However, if representatives are given detailed, accurate information about the political preferences and turnout propensities of registered voters in their districts, it is only rational for them to “entirely ignore” the issue preferences, and the desire for pork and constituent service, of voters in their district who strongly identify with the other party. These votes are unwinnable. Recognizing as much, members of Congress are already using the augmented voter file to filter constituent inquiries and demands.¹⁶²

In a world of matched-slice gerrymanders, only the small percentage of representatives whose districts comprise “weak partisan” slices will have incentives to cater to minority-party and independent constituents.¹⁶³ These representatives cannot afford to ignore voters in their district who lean the other way, because, by hypothesis, such weak-partisan voters might be induced to “swing” and vote against their usual party preference. By contrast, representatives of districts comprised of strong-partisan slices will have absolutely nothing to fear from opposing-party voters in their district. These voters will be entirely ignored, even in the non-ideological domain of constituent service.

C. Summary

There is no easy answer to the question of whether a marked reduction in elite ignorance about the preferences of individual voters would be good or bad for American democracy. The net effects on legislative misalignment and polarization are uncertain. Even subsidiary questions are hard to answer, such as: “Would campaigns devote more or less effort to persuading swing voters?” Maybe less, as *perceived* swing voters come to comprise a smaller share of the voting public (because elites would misperceive fewer strong partisans as swing voters, and because elites would have more success selectively

attacked with racial campaign appeals), with *Bandemer*, 478 U.S. at 131-37 (rejecting partisan vote dilution claim because plaintiffs had not shown lack of influence comparable to that suffered by minorities in cases such as *White*). More recently, plaintiffs bringing partisan vote dilution claims have had some success in the lower courts, which may reflect a new sense that voters receive little substantive representation except through co-partisan lawmakers. See, e.g., *Common Cause v. Rucho*, 318 F. Supp. 3d 777 (M.D.N.C. 2018); *Whitford v. Gill*, 218 F. Supp. 3d 837, 930 (W.D. Wis. 2016), *vacated on standing*, 138 S. Ct. 1916 (2018).

¹⁶² See HERSH, HACKING THE ELECTORATE, *supra* note 69, at 200-05.

¹⁶³ See Alexander G. Theodoridis, *Me, Myself, and (I), (D), or (R), Partisanship and Political Cognition Through the Lens of Implicit Identity*, 79 J. POL. 1253, 1260 (2017) (documenting strength of partisanship through implicit and explicit measures).

mobilizing strong partisans). Maybe more, because elites would have a better grasp on who the swing voters are and what they want, and therefore would miss the mark less often when trying to appeal to them.¹⁶⁴

Other impacts are easier to foretell but hard to weigh against each other. Would the benefits of less racial targeting and simplified VRA enforcement outweigh the costs of more severe partisan gerrymanders and more partisan discrimination by legislators in the provision of constituent services?

And then there are the imponderables: On the margins, how much will micro-targeted campaigning really affect how voters think of themselves and one another? Microtargeting may be part of the problem, but larger cultural and economic forces surely contribute as well to the fragmentation of beliefs and solidarity within the polity.¹⁶⁵

¹⁶⁴ In fact, as party elites develop a better sense of the distribution of preferences in local electorates, they may adjust platforms and candidate-recruitment strategies in ways that actually increase the number of “potential swing voters” in the voting-eligible population.

¹⁶⁵ As technology drove down the cost of publishing and distributing content, it was inevitable that the mainstream media would be supplemented or supplanted by niche enterprises and social media varying in style, ideology, and subject area. Citizens’ daily diet of social-media content may have a much bigger impact on their sense of political identity than anything they might hear from candidates running for office — though social media during campaign season certainly contains plenty of micro-targeted appeals. What citizens do hear from or about campaigns may be unhooked from what those campaigns or even niche media organizations are saying. Recall that during the 2016 presidential campaign, much of the demonstrably fake news was created not by the candidates, or even niche media organizations, but by freelancers who wanted to make a buck and had no interest in helping either candidate. See Andrew Higgins et al., *Inside a Fake News Sausage Factory: ‘This Is All About Income,’* N.Y. TIMES (Nov. 25, 2016), <https://www.nytimes.com/2016/11/25/world/europe/fake-news-donald-trump-hillary-clinton-georgia.html>; Abby Ohlheiser, *This Is How Facebook’s Fake-News Writers Make Money*, WASH. POST (Nov. 18, 2016), https://www.washingtonpost.com/news/the-intersect/wp/2016/11/18/this-is-how-the-internets-fake-news-writers-make-money/?utm_term=.b9f4b1a930d1; Samanth Subramanian, *Inside the Macedonian Fake-News Complex*, WIRED (Feb. 15, 2017), <https://www.wired.com/2017/02/veles-macedonia-fake-news/>; see also Richard L. Hasen, *Cheap Speech and What It Has Done (to American Democracy)*, 16 FIRST AMEND. L. REV. 200, 211 (2017) [hereinafter *Cheap Speech*] (discussing impacts of low-cost internet and social-media-based communications on American democracy); Wood, Ravel & Dykhne, *supra* note 156 (manuscript at 5) (detailing the intersection of campaign finance regulatory gaps and the “fake news” phenomenon).

This Part has assumed so far that a reduction in elite political ignorance would take the form of better individual-level estimates of the preferences of each person in the voter file. But what if elites could see the *distribution* of voter preferences within geopolitical constituencies, without learning *which* individual voter has *which* set of preferences? In this counterfactual world, many of the benefits of reduced ignorance would be realized but without all the costs. Elites would be able to discover where the median voter in a district stands on particular issues; to identify new ways of packaging positions so as to build potential-majority coalitions; and to make better judgments about which potential candidates are most electable. Yet blinded to the preferences of identifiable individuals, legislators would not be able to filter constituent-service requests by the likelihood that the requester will vote for the incumbent; redistricters would not be able to craft exquisite matched-slice gerrymanders; GOTV operatives would not be able to selectively mobilize core partisans while leaving “unreliable” voters behind; and campaign strategists would not be able to micro-target advertising to the prejudices and predilections of individual recipients.

To be sure, not all of the potential benefits of reduced elite ignorance would be realized in the imagined world of constituency-level transparency and voter-level obscurity. Racial targeting would probably remain pervasive, since race is easily observable and elites would lack better proxies for the preferences of specific, identifiable voters. The VRA-enforcement payoff would not be realized either, unless there were a mechanism for providing courts with information about the distribution of political preferences within racial groups and geographic areas without revealing the identity of individual voters. Still, the combination of voter-level obscurity and constituency-level transparency seems promising enough that it is worth asking whether the trajectory of our politics can be nudged in that direction.

IV. OPTIMIZING WHAT ELITES CAN SEE

From our discussion in Part II of the variability of elite political ignorance, the essential contours of a strategy for revealing constituency-level political preferences while occluding the preferences of identifiable individuals should be apparent. The official voter file must be stripped of information that is highly probative of political preferences before the file is released to campaigns, data vendors, or legislators. Social media firms must be encouraged or required to not disclose their users’ personal identifying information, and to limit opportunities for microtargeted political advertising.

Conversely, the states should adopt reforms — such as a suitably calibrated system of campaign finance vouchers — that would tend to make the distribution of political preferences within geopolitical constituencies more legible, without revealing *en masse* the political preferences of identifiable individuals. A foundation or nonprofit organization might also be able to improve elite perceptions of median voter preferences by creating a “constituency preference lookup” website, which would present in user-friendly form the best available estimates of public opinion within legislative districts. This Part details the road ahead.

A. *Obscuring the Preferences of Individually Identifiable Voters*

An important lesson of the work surveyed in Parts I and II is that the accuracy of elite perceptions of individual voters’ preferences depends on public policy. In states that elicit race and party affiliation on the voter registration form, elites have a clear picture of the race and the partisanship of each person in the voter file, and data vendors serving campaigns produce more accurate estimates of the voter’s policy preferences.¹⁶⁶

It follows that reformers aiming to deprive political elites of voter-specific preference information could begin by stripping the voter-registration form and official voter file of as much preference-correlated information as is possible. Do not record the voter’s race, gender, or party affiliation. Do not record the political party whose primary elections the voter chooses to participate in. Alternatively, record these pieces of information in a separate database for administrative use only; do not link them publicly to the voter file.¹⁶⁷

Then there is the issue of social media. How much campaigns learn about the preferences of individual, identifiable citizens — and how precisely campaigns tailor and target their advertising — depends not just on the state policies concerning the voter file, but on social media companies’ policies about user data and targeted advertising.¹⁶⁸ It is not clear that law can do a lot about this. Though the First Amendment allows for some disclosure-oriented regulation of political

¹⁶⁶ See *supra* Part II.A.

¹⁶⁷ For example, the state might conduct audits to make sure that no voter is electing to participate in both the Democratic and the Republican primary in a given year, or, in closed primary states, the primary of a political party with which the voter did not registered. The state might also make voter race information available to a court under seal in a voting rights case, but not to political parties or others seeking access to the voter file for campaign purposes.

¹⁶⁸ See *supra* Part II.A.

communication on social media, the government surely cannot ban targeted political advertising or efforts by social media companies to use their own data to understand their users' political preferences.¹⁶⁹

However, policymakers may be able to somewhat constrain the micro-targeting juggernaut by establishing default rules and disclosure requirements, ensuring that only users who elect to receive micro-targeted political appeals are reachable.¹⁷⁰ Rather than acquiring the "right to micro-target" through their boilerplate user agreements, Google, Facebook, and their ilk could be required to send users a separate opt-in-to-targeted-political-advertising invitation. Users who do not respond affirmatively would be placed on the targeted-political-advertising equivalent of a "do not call" list.

Law may be able to further limit micro-targeting by restricting uses of the official voter file. The social media participants whom campaigns want to target are not simply users who support or who could be persuaded to support the candidate. The target audience is a subset of this population: those who are eligible to vote, and either likely to turn out or responsive to turnout-oriented messaging. The state voter file therefore remains important, as it provides the turnout history of every registered voter and thus the data needed to estimate turnout propensities.

Asserting ownership of its voter-file data, a state might ban licensees from "linking" the voter file to estimates of voters' political preferences generated from commercially acquired data. Political parties and civic groups could continue to use the voter file to figure out who has voted, and thus to focus their education and mobilization efforts, but no one would be permitted to supplement the voter file with the political-preference estimates that are needed for selective voter mobilization and persuasion-oriented outreach. That said, a ban on linkage may be difficult to enforce and would probably have only a marginal impact on the phenomenon of micro-targeted messaging. In a world where social media companies provide micro-targeting services to campaigns, the only impact of de-informatizing the voter file and banning linkage would be to prevent micro-targeted advertising to voters based on their turnout histories, and perhaps to

¹⁶⁹ See *Sorrell v. IMS Health Inc.*, 564 U.S. 552, 568-69 (2011) (distinguishing restrictions on use of publicly generated data from laws that limit "access to information in private hands"); Hasen, *supra* note 165; Wood, Ravel & Dykhne, *supra* note 156.

¹⁷⁰ See Omri Ben-Shahar & John A.E. Pottow, *On the Stickiness of Default Rules*, 33 FLA. ST. U. L. REV. 651, 670-81 (2005) (describing how default rules can be remarkably sticky); Wood, Ravel & Dykhne, *supra* note 156 (manuscript at 48).

slightly muddy the social media companies' estimates of their users' political preferences (because the companies would not be able to draw upon the voter file's party registration and race data when estimating their users' political preferences).

We acknowledge too that the First Amendment could end up thwarting state efforts to create an "opt in" regime for targeted political advertising, or to restrict linkage of the voter file to commercially acquired estimates of voter preferences. Though the courts have upheld do-not-call lists and similar opt-out rules concerning unsolicited mail,¹⁷¹ the speech in our example is political, not commercial, and the opt-in framework would burden speech more than the opt-out rules previously upheld in related contexts. The consent requirements we propose would be viewpoint neutral, but they would disfavor a kind of speech (micro-targeted political advertising),¹⁷² and they advance only a limited privacy interest.¹⁷³ As for data-linkage restrictions, the First Amendment clearly permits many privacy-oriented protections,¹⁷⁴ but courts seem wary of use restrictions that would "run" with data released into the public domain.¹⁷⁵ The permissibility of data-linkage limits on the voter file may well depend on the state adopting a generally restrictive posture

¹⁷¹ See, e.g., *Rowan v. Post Office Dep't*, 397 U.S. 728, 735-738 (1970) ("pandering" mailings); *Mainstream Mktg. Servs., Inc. v. FTC*, 358 F.3d 1228, 1246 (10th Cir. 2004).

¹⁷² In *Sorrell*, 564 U.S. 552, the Supreme Court invalidated a consent-to-use-of-personal-data requirement that disfavored particular speakers and types of speech. At issue was a physician-consent requirement for pharmaceutical companies to use prescription records in targeted advertising. Consent was not required for many other users and uses of the records.

¹⁷³ The voter's privacy interest in not receiving targeted political communications is probably weaker than his or her interest in not receiving the sexually oriented materials at issue in *Rowan* or being inundated with the marketing phone calls at issue in *Mainstream Marketing Services*. (Voters would have a considerably stronger interest in not having estimates of their political preferences disclosed to third parties or the general public. However, a nondisclosure-of-voter-preferences-without-consent regime would not prevent the social media platform companies from providing targeted advertising services, so long as they refrain from disclosing the associated preference estimates, with individual identifiers, to the advertiser). See *Rowan*, 397 U.S. at 736; *Mainstream Mktg. Servs., Inc.*, 358 F.3d at 1232-33.

¹⁷⁴ See *Sorrell*, 564 U.S. at 572-73 (discussing the Health Insurance Portability and Accountability Act of 1996, Pub. L. No. 104-191, 110 Stat. 1936 (1996)).

¹⁷⁵ See, e.g., *L.A. Police Dep't v. United Reporting Publ'g Corp.*, 528 U.S. 32, 42-44 (1999) (Ginsburg, J., concurring) (distinguishing a hypothetical case where government data has reached the public domain).

toward use of the voter file, i.e., providing the file only for bona-fide voter education or research purposes, and not to the general public.¹⁷⁶

In sum, without gainsaying the role for law, it does seem likely that “in the Brave New World of online campaigning . . . the principal regulator of political communication will not be a government agency but rather the internet portals themselves.”¹⁷⁷

B. Revealing Constituency-Level Preferences

While efforts to limit elite understanding of identifiable voters’ political preferences would depend heavily on social media companies such as Facebook, the states and good-government organizations can do a lot on their own to make anonymized, *constituency-level* information about voter preferences more readily available to political elites. We suggest two interventions: a regime of campaign-finance vouchers calibrated to reveal de-identified voter preferences within geopolitical units; and a privately run “constituency preference lookup” website, which would provide in an easy-to-use format the best available estimates of the proportion of voting-eligible citizens in a district who support various policies.

Before discussing these interventions, it is worth explaining briefly why a more obvious alternative — commissioning high-quality public opinion polls within each constituency — is impractical.

Polls are expensive to do well.¹⁷⁸ The main problem is non-response by people who were invited to take the poll. Response rates have cratered over the past few decades.¹⁷⁹ Various reweighting methods are used to adjust for non-response, but these involve considerable guesswork, particularly if the person conducting the survey does not observe many characteristics of non-responders.¹⁸⁰ Reweighting

¹⁷⁶ Thanks to Brian Soucek and Aaron Tang for suggesting this.

¹⁷⁷ Persily, *supra* note 152.

¹⁷⁸ See MATTHEW DEBELL ET AL., ANES TECHNICAL REPORT NO. NES006978: METHODOLOGY AND FINDINGS OF THE ANES 2016 RECRUITMENT PRETEST STUDY 48-50 (2017), https://www.electionstudies.org/wp-content/uploads/2016/02/anes_specialstudy_2016_recruitment_methodology.pdf (presenting results indicating that a gold-standard online survey, sampling from postal addresses, could be conducted at a cost of \$146 per response); Simon Jackman, *Election Studies in the 21st Century*, AM. ASS’N PUB. OPINION RES. (2015) http://www.aapor.org/AAPOR_Main/media/AnnualMeetingProceedings/2015/C1-1-Jackman.pdf (describing through powerpoint slides the gold-standard American National Election Survey, with in-person interviews, which costs more than \$2000 per completed response).

¹⁷⁹ But see DEBELL ET AL., *supra* note 178, at 24-27 (showing that the 2016 ANES pilot study referenced above obtained a response rate of about 40%).

¹⁸⁰ Robert M. Groves, *Nonresponse Rates and Nonresponse Bias in Household Surveys*,

becomes progressively more important as response rates fall. To obtain results that do not depend on the guesswork of reweighting, the analyst needs a very high response rate, or a way to induce decisions to participate in the survey that are uncorrelated with the attribute the researcher wants to measure.¹⁸¹ For this large incentive payments may be necessary — perhaps on the order of \$100 per respondent.¹⁸² These costs would escalate rapidly as they are multiplied across hundreds of respondents per constituency, and hundreds or thousands of constituencies per state.¹⁸³ To be sure, some polls with low response rates perform very well, but a degree of skepticism is warranted until the poll has been benchmarked against a range of observable political outcomes, i.e., election results for various offices, years, and issues.¹⁸⁴

A further limitation of the polling solution is that while a sequence of well-executed polls would provide good information about the proportion of voters in each constituency who support the candidates or policies in question, the polls would not illuminate the *joint distribution* of opinion unless the very same respondents are surveyed each time. To illustrate, if the first poll asks about A, B, and C, and the second poll asks about D, E, and F, the polls will reveal nothing about how opinion on the first set of issues correlates with opinion on the second. Yet for candidates to figure out how to assemble potential-winning coalitions, they need exactly this sort of “what goes with what” information about constituency-level preferences.

70 PUB. OPINION Q. 646, 653 (2006) (“In practice, the assumptions underlying the adjustment procedures [for nonresponse] are generally untestable.”); see THOMAS LUMLEY, *COMPLEX SURVEYS: A GUIDE TO ANALYSIS USING R* 43-44 (Mick P. Couper et al. eds., 2010).

¹⁸¹ See Groves, *supra* note 180, at 649-50 (explaining that nonresponse bias arises only to the extent that the decision to participate in the survey is correlated with the thing the researcher wants to measure).

¹⁸² See Michael Blohm & Achim Koch, *Respondent Incentives in a National Face-to-Face Survey: Effects on Outcome Rates, Sample Composition and Fieldwork Efforts*, 7 METHODS, DATA, ANALYSES 89, 94-98 (2013) (reviewing the literature on incentive payments and survey response rates); see also DEBELL ET AL., *supra* note 178, at 24-27, 48 (reporting response rate for pilot ANES-type study with varying incentive payments, and obtaining favorable results with recruitment mode costing \$146 per completed survey response).

¹⁸³ Costs will be multiplied by thousands if the goal is to estimate opinion within units of local government, not just state legislative and congressional districts.

¹⁸⁴ Cf. Michael J. Barber et al., *Online Polls and Registration-Based Sampling: A New Method for Pre-Election Polling*, 22 POL. ANALYSIS 321, 325-32 (2014) (using election outcomes to benchmark predictions from polls conducted by sampling from voter rolls in proportion to estimated turnout propensity, with response rates in the range of 5% to 10%).

Finally, if the government instructed an agency to conduct constituency-level opinion polls on major issues, the agency would probably face intense pressure to subtly manipulate its polls for the benefit of then-dominant political actors. Issue selection, question wording, and data-weighting could all be jiggered so as to make a policy seem more popular than it actually is. A private polling organization may not face the same pressures, but no private organization has the funds or ambition to conduct high-quality opinion polls in thousands or tens of thousands of geo-political constituencies, on an ongoing basis. So, let us consider some alternatives.

1. Voucher Programs

In Part II, we observed that citizens' use of campaign vouchers (if disclosed) would reveal something about their political preferences, and that a voucher program could in principle be designed to conceal the identity of voucher donors while revealing de-identified "histories" of voucher assignments within geopolitical units. Legislators and candidates would be able to see, for example, that a resident of a known legislative district had given \$X to a certain candidate in year 1, \$Y to another candidate in year 2, and so forth. But because records would be de-identified before public release, political elites would not observe who this individual is.

We recognize that the very idea of using campaign-finance voucher programs to correct elite misperceptions of voter preferences may seem fanciful, to say nothing of disclosure regimes that allow elites to observe the distribution of voucher assignments but not the identity of individual contributors. This subpart grounds our proposal. Section (a) seeks to make the informational payoff more concrete, illustrating what could be learned by applying established statistical models and machine learning tools to anonymized, geocoded voucher data. Section (b) discusses program design, focusing on two dimensions that are all-important insofar as the program responds to elite political ignorance, but which have received little attention in the literature to date. These are the range of eligible donees, and the rules governing confidentiality.

a. The Informational Payoff

Based on existing research, there is good reason to believe that a suitably designed voucher program would enable analysts to infer both the general political ideology and the issue preferences of citizens who

participate in the program. Voucher programs could also provide real-time feedback to candidates about their performance with particular constituencies.

i. Inferring Ideology

That general political ideology could be inferred from voucher data is suggested by Adam Bonica's development of "CFscore" ideology estimates from private donation data.¹⁸⁵ Using a simple parametric model which assumes that donors contribute to the most ideologically proximate candidate, Bonica leveraged records of contributions to federal candidates to estimate the ideology of almost every donor and candidate since 1980.¹⁸⁶ His method places candidates and voters on the same scale, making the scores easy to interpret for anyone who has a rough sense of the ideology of well-known political figures. Of course, the properties of CFscores inferred from voucher donations by the great mass of eligible voters may be somewhat different than the properties of CFscores inferred from donations by the less than 1% of Americans who have given disclosable sums of their own money to a candidate for federal office.¹⁸⁷ This tiny share of the population may well be more ideological and more politically knowledgeable than most participants in a voucher regime.¹⁸⁸ But Bonica's CFscores certainly warrant a cautious optimism that under a voucher regime, candidates would have an easier time figuring out the ideological complexion of their district.

¹⁸⁵ Adam Bonica, *Mapping the Ideological Marketplace*, 58 AM. J. POL. SCI. 367, 367 (2014).

¹⁸⁶ *Id.* at 372.

¹⁸⁷ *Donor Demographics*, OPENSECRETS.ORG, <https://www.opensecrets.org/overview/donordemographics.php> (last visited Sept. 6, 2018) (showing that 0.41% of the U.S. population gave \$200 or more to federal candidates).

¹⁸⁸ See Michael Barber, *Donation Motivations: Testing Theories of Access and Ideology*, 69 POL. RES. Q. 148, 153 (2016) (explaining the importance of ideology for individual donors who give disclosable sums of their own money); Michael J. Barber, Brandice Canes-Wrone & Sharece Thrower, *Ideologically Sophisticated Donors: Which Candidates Do Individual Contributors Finance?*, 61 AM. J. POL. SCI. 271, 277-80 (2017) (giving estimates of the effect of policy agreement on intra-party donations); Michael J. Barber, *Representing the Preferences of Donors, Partisans, and Voters in the US Senate*, 80 PUB. OPINION Q. 225, 240 fig.7 (2016) (showing donors to be more generally extreme than voters); see also David E. Broockman, *Approaches to Studying Policy Representation*, 41 LEGIS. STUD. Q. 181, 181-86 (2016) (arguing that scaled-ideal-point measure of extremity, used by Barber and others, may capture ideological consistency more than extremity within policy domains).

ii. Predicting Policy Preferences

Could voucher data be used to predict not simply the general political ideology of voters, but their preferences on specific issues? We think so, provided that the state agency administering the voucher program is willing to link the voucher data to polling data for bona-fide research purposes. The best evidence for our claim is Bonica's work using campaign contributions to predict challenger candidates' future DW-Nominate scores (a measure of ideology inferred from roll-call votes).¹⁸⁹

Using data on the subset of challenger candidates who later served in Congress, Bonica trained two machine-learning algorithms to predict future DW-Nominate scores from donations received by the candidates when they were running as challengers. Amazingly, the donation-based, cross-validated predictions of challenger candidates' lifetime DW-Nominate scores were comparably accurate to predictions of lifetime DW-Nominate scores based on the legislators' actual roll-call votes during their first term in office.¹⁹⁰ The correlation between donation-predicted and observed DW-Nominate scores was also high in absolute terms,¹⁹¹ and substantially higher than the correlation between DW-Nominate scores and every other widely used measure of candidate ideology.¹⁹² Finally, Bonica demonstrated that the same algorithms can be trained to predict future interest-group ratings of legislators in specific issue domains, yielding similarly accurate predictions with respect to challenger candidates.¹⁹³

Of course, this only establishes that *candidates'* future roll-call votes can be accurately predicted with donation data, not that *voters'* policy

¹⁸⁹ See Adam Bonica, *Inferring Roll Call Scores from Campaign Contributions Using Supervised Machine Learning*, 62 AM. J. POL. SCI. (forthcoming 2018) (manuscript at 3), https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2732913.

¹⁹⁰ *Id.* (manuscript at 12-16 tbl.1 & fig.2).

¹⁹¹ $R=0.77-0.87$, within party. *Id.* (manuscript at 1-12).

¹⁹² This point is nicely illustrated by fig.2 per, which shows tight clustering of predicted and actual DW-Nominate scores around the best-fit line in tiles 1 and 2 (the machine learning algorithms), and weaker clustering for all other "predictors" except first-term DW-Nominate scores. A feature analysis revealed that the algorithm relied heavily on PACs that donated almost exclusively to candidates of one party, such as the Council for Citizens against Government Waste (which supports very conservative Republicans) and the Blue Dog Democrats and New Democratic Coalition (which support moderate Democrats). Donations from these groups enabled the algorithms to cleanly distinguish challenger candidates who would later break with their party in a centrist direction from challengers who would break with their party in the extreme direction. See *id.* (manuscript at 1-12 fig.2).

¹⁹³ *Id.* (manuscript at 12-16).

preferences can be similarly predicted. But if voters distribute campaign vouchers so as to effectuate their policy preferences, it should be possible to infer those preferences in a very similar manner. The analyst would first survey a random sample of the national or state electorate about their policy preferences. These stated preferences are analogous to the observed roll-call votes of challenger candidates who later serve in office. Second, with permission from the state agency that administers the voucher program, the analyst would link survey respondents to records of their voucher-contribution histories and use machine-learning algorithms to predict stated policy preferences from the subjects' donation histories.¹⁹⁴ Finally, the analyst would apply the tuned algorithm to predict the policy preferences of every other voter who has distributed campaign vouchers.

These predictions would give candidates new insights about how to assemble winning coalitions. Candidates would be able to roughly categorize voucher contributors as potential swing voters (say, everyone in their district who assigned vouchers to a Democratic candidate *and* to a Republican candidate over the past three election cycles), and to obtain estimates of those voters' policy preferences and priorities. By comparing the preferences of "swing contributors" to those of the partisan base, candidates will develop ideas about how to expand their coalitions without losing core supporters.

It bears emphasis that the polls used for predicting policy preferences from donation histories could have a much smaller sample than would be necessary for the hypothetical constituency-level polls that we previously discussed and dismissed. A large, representative sample of respondents in each district is unnecessary because the constituency-level "sample mean" (the proportion of respondents who support a policy) is not the estimator. Rather, the point of the poll is to allow the analyst to figure out how, in the entire electorate, policy attitudes tend to vary with the covariates observed in the voucher data, i.e., geocoded contribution histories. Ordinary opinion polls with a

¹⁹⁴ Dimension-reducing transformations of these histories could also be fed into the machine. For example, if one aims to predict voters' preferences on abortion-related policies, one might include in the set of predictors a dollar-weighted average of abortion interest-group ratings of the candidates to whom the voter distributed vouchers. (In the case of non-incumbent candidates, these would be machine-predicted ratings.) Dollar-weighted CFscores would probably have some predictive value too. The whole point of the machine-learning approach is that one does not have to know *ex ante* exactly what is predictive. The algorithm figures this out, exploring the suggested predictors and weighting those that improve cross-validated predictive accuracy.

roughly random sample from the national or state electorate would suffice. Also, unless the relationship between voucher contribution histories and policy preferences varies significantly across different subsets of the electorate, non-response bias is not a concern, and the results of the predictive exercise will not depend very much on contestable decisions about survey weights.¹⁹⁵

iii. Real-Time Feedback About Swing (and Other) Voters

Voucher data also has considerable potential to provide campaigns with nearly real-time feedback on their performance with swing voters, or any other category of voters defined in terms of contribution histories. Analysts should be able to predict the *expected total contribution* to a given candidate, during a given time period, from a given class of voters. By comparing expected to actual contributions among target groups, the candidate will be able to gauge whether she is over or under-performing relative to a typical candidate of her party, or indeed relative to what is expected given her own track record and that of her opponent.

The task of generating time- and candidate-specific donation predictions from the accumulated history of donation records is the sort of task at which “deep learning” neural-network algorithms excel.¹⁹⁶ The defining features of the problem are:

- 1) Massive numbers of outcome observations (contributions). In a large state, there could be tens of millions of voucher-assignment decisions per election, distributed across hundreds or thousands of geo-political units.
- 2) An equally vast array of potentially predictive and observable covariates, including the entire history of voucher-assignment decisions for each anonymized contributor (each contribution being time-dated, geocoded to one or more constituencies, and associated with a specific group of eligible donees), and the entire history of voucher receipts by each candidate in the election.

The essential difference between the new deep-learning algorithms and previously developed machine-learning tools is that the new

¹⁹⁵ This can be gauged by sensitivity testing, i.e., exploring how the predictions change as survey weights are varied.

¹⁹⁶ See generally Yann LeCun, Yoshua Bengio & Geoffrey Hinton, *Deep Learning*, 521 NATURE 436 (2015) (giving a summary of deep learning advances written by top scholars in the field).

algorithms can find relevant structure in massive datasets of enormous complexity, with minimal pre-processing by the analyst to highlight theoretically pertinent features of the data. Deep-learning algorithms are now widely used for previously intractable problems such as automated language translation and image recognition.¹⁹⁷

Deep learning of language is particularly instructive. It has become possible for computers to “learn” a language without an expert hard-coding any rules of grammar or logic.¹⁹⁸ Documents are decomposed into word vectors representing the exact location of each word in the document. For example, the word “brown” in the document, “the girl petted the brown dog,” is represented as {0,0,0,0,1,0}. The “1” in position 5 indicates that “brown” is the fifth word in the document. The input word vectors are then mapped to subsequent layers in the neural network, which, trained on millions of documents, incrementally learns a range of probabilistic associations for each word that resemble semantic content. The algorithm may be trained to output the most likely next word in a sequence of words, the most likely intended word from a sequence of characters that do not spell that word exactly, or a more general intention and a representation of that intention in another language.

Predicting whether a candidate is likely to receive a voucher contribution from a given contributor, conditional on that contributor’s observed history of voucher assignments, is akin to predicting which word is likely to come next in a written document conditional on the preceding words in the text. Like a written document, a voter’s voucher-contribution history could be

¹⁹⁷ See *id.* at 439-41.

¹⁹⁸ Prior to the development of deep neural networks, efforts to model language without externally imposed rules relied on the relative frequency of so-called “N-grams,” unique sequences of N words in a corpus of texts. Computers were trained to decompose large bodies of texts, such as the universe of documents digitized by Google, into sequences of, say, five words, and then to calculate the relative frequency of each unique 5-gram in the corpus. One could then predict the likelihood of particular word, say, “dog,” following a sequence of four other words, say, “she petted the brown,” based on the relative frequency of the 5-gram “she petted the brown dog” compared to all other 5-grams beginning “she petting the brown.” In reality, of course, the probability of the word “dog” following this sequence is higher if the previous sentence is about a girl meeting a dog, rather than a cat. But it proved computationally infeasible to work with N-grams of more than a few words, and the machines had no way to infer meaning from strings of words. A linguist could encode features of the language into computer programs, but the programs had no way of learning that content on their own. See *id.* at 440-42; see, e.g., *Ngram Viewer*, GOOGLE BOOKS, <https://books.google.com/ngrams> (last visited Oct. 16, 2018) (giving an example of an N-gram in book views for Albert Einstein, Sherlock Holmes, and Frankenstein).

decomposed into “donation vectors” analogous to word vectors. A voter’s voucher-donation to “Cruz” in the fifth of six elections could be represented as {0,0,0,0,1,0}. Or the input might be enriched to account for the amount and the timing of the voucher-assignment to Cruz, and for the other candidates who were eligible to receive the voter’s voucher contribution.¹⁹⁹

Let us say the data analysis is being conducted for the Republican candidate in a state legislative race who has never run for office before. Initially, the algorithm might be trained to output probabilities of giving to a generic Republican candidate in a state legislative race. As voters in the district begin to make voucher contributions in the present race, the algorithm would be retrained on the new data to make more refined predictions. At any point during the campaign, the candidate could single out a group of voters based on their contribution histories, obtain predictions for the number and size of contributions expected to be received from voters in that group over a given period of time, and then examine how actual donations compare to predictions — that is, whether the campaign is over-performing or under-performing with the target group. Candidates would thereby obtain essentially real-time feedback on their efforts to build potential-majority electoral coalitions — but without learning which of the voters in the district actually support the candidate.

This kind of fine-grained feedback is infeasible to obtain through public opinion polls. The media organizations that conduct opinion polls typically focus on high-profile statewide and national races, not legislative elections.²⁰⁰ The focus on top-of-the-ticket races means that respondents are, at best, representative of the statewide electorate, not the electorate within specific legislative districts. And while the samples may allow for reasonably accurate inferences about statewide support for a candidate, there are not enough respondents in narrowly defined subgroups (e.g., “swing voters”) to estimate the candidate’s level of support in that subgroup with any precision.

¹⁹⁹ Candidates, unlike words, must satisfy certain qualification requirements in order to be chosen by the “author” as the next “word” in the string.

²⁰⁰ Cf. Harry Enten, *Here’s the Best Tool We Have for Understanding How the Midterms Are Shaping Up*, FIVETHIRTYEIGHT (June 5, 2017, 1:00 PM), <https://fivethirtyeight.com/features/heres-the-best-tool-we-have-for-understanding-how-the-midterms-are-shaping-up/> (explaining that “generic ballot” matchups polled by media organizations are useful for estimating overall shifts in public opinion toward one party or another, but not for district-level information about public opinion in specific races).

b. Dimensions of Program Design

In voucher programs designed to equalize political influence, the critical design decisions concern inducements for candidates to forgo large private donations or to accept spending limits.²⁰¹ By contrast, in voucher programs designed for informational purposes, the critical decisions concern the range of eligible donees and the rules about disclosure. Donee-eligibility restrictions, which may be desirable from a political-equality perspective, are likely to be counterproductive from an informational perspective.

i. Eligible Donees: Candidates and Beyond

In general, voucher programs will generate more information about citizens' political preferences if the range of eligible donees is large. The case for lax donee-eligibility rules has three components.

First, what a contribution reveals about the contributor's preferences depends on who was passed over. If only A and B are eligible to receive vouchers and the contributor chooses A, we know that the contributor prefers A to B but we learn nothing about her preferences as between A on the one hand and C, D, and E on the other. If C, D, and E were also eligible, the contributor's donation of her voucher to A is much more informative.

Second, if the donee-eligibility rules allow contributions not only to candidates but also to political intermediaries, the signal of political preferences in voucher-assignment decisions is less likely to be contaminated by strategic considerations. In plurality-winner, first-past-the-post elections, vouchers, like votes, would probably be distributed among candidates strategically. Imagine an election contested by a Democratic candidate (D), a Republican candidate (R), and Green Party candidate (G). An ardent environmentalist voting in this election has the preference ordering $G > D > R$. But if D and R are running neck and neck while far outpacing G in the polls, our environmentalist might cast her vote — and donate her vouchers — to D, even though she would rather see G elected, because D has a better chance of defeating the voter's most-disfavored candidate, R. Strategic behavior thus loosens the fit between voucher-implied preferences and true preferences.

²⁰¹ The working assumption is that large private contributions result in outsize influence to rich people. Note that the Seattle and South Dakota programs allow vouchers to be redeemed only by candidates who agree to forgo large private contributions. See SEATTLE, WASH., MUN. CODE § 2.04.630(d)-(f) (2017); Letter from Marty J. Jackley, *supra* note 95.

However, if political intermediaries were eligible to receive vouchers, our voter could outsource such often-difficult questions of strategy to interest groups who share her particular ardor. She might, for example, assign all her vouchers to the Sierra Club, letting the Sierra Club make strategic call between Greens and Dems from one election to the next. No doubt there would be some strategic voucher-assignment by voters in this world too.²⁰² Our point is simply that the *option* of donating to an intermediary relaxes the strategic bind otherwise faced by voucher-donors in first-past-the-post elections, and thus, on the margin, should make the pattern of donations more informative about voters' political preferences.

Finally, the wider the net of eligible donees, the more voters are likely to participate in the voucher system. Eligible donees have an incentive to knock on doors and solicit voucher contributions. More eligible donees means more actors working to mobilize participation. More eligible donees also means more voters who can find a potential donee whom they strongly support. A voter indifferent between the two candidates in a race would probably abstain from voucher-donating if those candidates were the only eligible recipients. But if the voter could give his voucher to a candidate in another race, or to an intermediary organization, she'd have reason to participate. The more voters who participate, the more elites will be able to learn about the electorate's preferences.²⁰³

That said, if purpose of the voucher program is to provide real-time feedback to candidates about their performance with critical constituencies, such as swing voters, vouchers should be office-specific, assignable only to ballot-qualified candidates in specific elections in which the would-be contributor is eligible to vote. Registered voters might receive \$10 to allocate among candidates running for the state house from the voter's district, \$15 to allocate among candidates for state senate from the voter's district, \$20 to allocate among candidates for governor, \$15 for candidates for the U.S. House of Representatives, and so forth. The idea is to align the choice set and strategic considerations in the office-specific "voucher game" with the choices and strategic considerations that the citizen faces when voting in each race. The closer the alignment, the more

²⁰² Some environmentalists might decide to back an electable candidate rather than their most-preferred interest group. Others might choose intermediaries on the basis of perceived efficacy rather than maximal ideological or policy agreement.

²⁰³ Abstention is less informative than participation because it *might* reflect indifference, or it may be due to lack of knowledge about the program, sloth, or something else.

probative voucher distributions will be of the donor's propensity to vote for each candidate, given the other candidates in the race.

Thus, to maximize the informational payoff from a voucher program, it would make sense to give each registered voter both a *general voucher* (assignable to and redeemable by any candidate or political intermediary), and a set of *office-specific vouchers*. Candidates would use general-voucher donation histories to identify the preference profiles of the voters in their district, and thus to develop strategies for expanding their electoral coalition. Meanwhile, office-specific voucher distributions during the campaign would provide feedback on the candidate's performance with targeted subgroups — subgroups who may be identified on the basis of their previous general voucher and/or office-specific voucher histories.

ii. Anonymity in Theory vs. Anonymity in Practice

In the discussion thus far, we have assumed that it is feasible to create a regime in which voucher contributions are publicly linked over time to geocoded, anonymized donors, without revealing to political elites who the donor is. Achieving this combination of transparency and opacity is simple in theory but may be tricky in practice. Though a full treatment of data-security issues would be well beyond the scope of this paper, we can at least highlight the considerations with which policymakers would have to wrestle.

Initially, one should distinguish between two sets of interests: the societal interest in hindering the development of micro-targeted politics, and the individual voter's reliance interest in not being publicly identified with voucher contributions she was told would remain anonymous. These interests often overlap, but not always.

To protect the societal interest in preventing campaigns from obtaining de-anonymized voucher contribution histories for most of the electorate, data security systems are paramount. Hackers who think their preferred candidate would benefit more from micro-targeting than his or her opponent may try to break into state systems and release de-anonymized voucher contribution histories. Once this information escapes into the public domain, it cannot be made private again.

Also important from the societal perspective are measures that make it difficult for consultants and campaigns to assemble personally-identifiable voucher contribution histories through voluntary exchanges. The recording and sale of voucher-contribution information could be banned, much like many states disallow voters

from photographing their completed ballot.²⁰⁴ The voucher program should be structured so that voters deliver their vouchers to the state agency that administers the program, which in turn would distribute the corresponding amount of money to the assignee — a candidate or political intermediary — without revealing the identity of the assignor.²⁰⁵ The beneficiary must remain blind to the identity of the voter who assigned the voucher to them, for if the beneficiary knew the identity of the assignor, the beneficiary could construct or collaborate in the construction of “personally identifiable” voucher-contribution histories. This would undermine the societal interest in forestalling micro-targeted campaigns.

The designer of a voucher program that purports to conceal the identity of individual voucher-donors should also take measures to guard against reverse engineering of donors’ identities. If voucher-contribution histories are largely unique (meaning that no pair of voucher-contributors gave exactly the same shares of all of their previous vouchers to exactly the same recipients, on the same dates), the voucher-contributor’s reliance interest in confidentiality may be threatened any time a single voucher contributor or a very small number of voucher contributors relocates between a pair of geopolitical constituencies. Relocation of voucher contributors across constituencies could occur when contributors move their primary residence, or when legislative districts are redrawn. If personal identifiers for movers can be obtained from the voter file or postal records, nosey neighbors would be able to discover a mover’s voucher contribution history by looking for exact matches between histories that were observed at time *T-1* in the person’s former constituency, and at time *T* in the current constituency. This kind of disclosure would not bear on societal interests in any material way. Campaigns’ micro-targeting of a few voters is not going to affect polarization, solidarity, or democratic accountability in the society writ large. Yet the public disclosure of just a few voters’ contribution histories may actually be more damaging to their reliance interests than a large-scale breach in which everyone’s contribution history is similarly revealed.

²⁰⁴ See Parker Molloy, *18 States Ban Ballot Selfies, and the Reason Actually Makes Some Sense*, UPWORTHY (Oct. 26, 2016), <https://www.upworthy.com/18-states-ban-ballot-selfies-and-the-reason-actually-makes-some-sense>.

²⁰⁵ See BRUCE ACKERMAN & IAN AYRES, *VOTING WITH DOLLARS: A NEW PARADIGM FOR CAMPAIGN FINANCE* 95-96 (2004) (“Just as taxpayers make checks payable to the Internal Revenue Service, donors will write theirs to the Political Contribution Blind Trust without specifying their beneficiary more precisely. The name of the favored candidate or organization will appear only on a separate form.”).

To protect relocated voters' reliance interest in the confidentiality of voucher use, the state agency that runs the voucher program could "erase" their voucher contribution histories, treating new residents of a district as if they were part of the district's population of newly registered voters, eligible to contribute for the first time. If residential moves resulted in just one or an extremely small number of voters being removed from a district to which voucher contribution histories are linked, the agency could randomly choose, say, five other voters in that district and erase their histories. Additionally, the state might prohibit the splitting of precincts in districting, thereby ensuring that any redistricting-induced relocation of voters occurs in groups that are large enough to prevent specific voucher-contribution histories from being linked to specific, identifiable persons.²⁰⁶

2. The Constituency-Preference Lookup Website

A carefully designed voucher program would generate an enormous amount of new information about voter preferences within geopolitical constituencies. But even absent any new information, a foundation or good-government reform organization could undertake to package existing information about constituency preferences in ways that make it easily accessible to candidates, legislators, journals, and activists. We propose a "constituency-preference lookup website," which would allow any member of the public to run searches by topic area and district, retrieving estimates of the proportion of voting-eligible citizens in the district who support topically related policies.

As we explained in Part I.A.2, political scientists and statisticians have developed various model-based approaches for estimating public opinion within coarse demographic-geographic categories. The category-specific estimates are then reweighted using census data to

²⁰⁶ Of course, precinct reassignments in redistricting will end up giving campaigns precinct-level information about voter preferences that they can use for targeting. But this is not going to induce widespread micro-targeting because campaigns would remain in the dark about which voter in the precinct has which contribution history and redistricting only reveals precinct-level preferences if just a single precinct is moved between a pair of districts. Either the redistricter moves a lot of precincts between pairs of districts and learns little about precinct-level preferences, or the redistricter moves just a few precincts and learns a lot about those precincts but not much about the electorate (because the precincts comprise such a small share of the electorate).

produce estimates of district-level public opinion on the question at hand.²⁰⁷

This strategy is now widely used in studies about the effects of electoral institutions on the alignment between local public opinion, the votes of representatives, and the policy outputs of government.²⁰⁸ Most of the major national opinion surveys have been put through the wringer, yielding estimates of public opinion at smaller geographic scales.²⁰⁹

Because numerous papers have already been published using these techniques, it would take only a modest investment of resources for a nonprofit organization to create a constituency preference lookup website that functions as an aggregator, repackaging in user-friendly form the underlying estimates that were produced for peer-reviewed publications.²¹⁰ Candidates, journalists, interest groups, or anyone else who wanted to figure out public opinion within a small geographic unit could go to the website, enter the name of the unit, and receive a list of all public-opinion questions for which estimates are available.

²⁰⁷ See Elmendorf & Spencer, *supra* note 29, *Administering Section 2*, at 2196-205, for an explanation of how the estimation process works. In brief:

- Choose a policy of interest, and find a national public opinion survey that asked about the policy.
- Characterize the voting-age population within the geo-political units of interest in terms of the demographic attributes whose joint distribution the Census Bureau releases at small geographic scales. These are sex, race, education, and age, with education and age aggregated into bands. The population in each district is represented as a table of *race x sex x education x age* cells.
- Make predictions about public opinion on the question at hand for each *race x sex x education x age x district* cell. Usually this is done by fitting a multi-level statistical model. The dependent variable indicates whether the respondent supports the policy of interest. Support for the policy is assumed to vary with the respondent's race, sex, age, and education, and with characteristics of the geographic unit(s) in which the respondent resides. The fitted model gives predictions of the probability that a voting-age person in each demographic-geographic cell supports the policy.
- Within each geographic unit, sum the predicted probabilities over all the cells, weighting the prediction for each cell by that cell's share of the unit's voting-age population. This sum is an estimate of the proportion of voting-age citizens in the geographic unit who support the policy.

²⁰⁸ See *id.* at 2200-01.

²⁰⁹ See *id.*

²¹⁰ We are indebted to Nick Stephanopoulos for suggesting this idea in an early conversation about this project.

Click a question, and the website would show you the estimate, the date of the underlying opinion poll, and the source.²¹¹

If the website were easy to use, a quick lookup of constituency preference might become virtually automatic for legislators prior to casting potentially controversial roll call votes. Challenger candidates could use the website to identify issues on which the incumbent is out of step with district opinion. And as use of the website becomes second nature, candidates, legislators, and local party officials should develop more accurate perceptions of district-level opinion. Ideological bias may diminish.

That said, the simple “aggregator of studies” model for the lookup website has significant limitations: the website’s estimates will tend to be a few years out of date; the estimates, even if not dated, are unlikely to be the best possible; and the estimates will generally lack credible, quantified measures of how close they are, on average, to the truth. The first two limitations can be overcome without great difficulty; the third is more vexing but not insurmountable.

Timeliness. Political elites no doubt want to discover what the public thinks today about issues that are pending or soon to come before the legislature, not what the public thought several years ago about major bills then being debated. The time delays inherent in the peer-review process mean that a constituency lookup website that functions as an aggregator of peer-reviewed studies will always be a few years out of date. To overcome this limitation, the website’s sponsor could produce its own estimates of public opinion as soon as new opinion polls are released, using (if it wished) the same models or predictive algorithms deployed in peer-reviewed papers.

Accuracy. Political elites are probably less keen to learn about the range of available constituency-preference estimates than to discover the *best possible* estimate. The sponsor of the lookup website might try to identify the best extant estimates by convening an expert advisory panel to review the literature and make recommendations, but this is probably not the best route forward. Opponents of the project — such as conservatives who benefit from the current pattern of elite misperceptions — are sure to attack the advisory panel and its recommendations as “biased” or even “fake.” Moreover, the political scientists who have done the pioneering work on estimating public opinion within small geo-political units are not themselves specialists in predictive analytics.

²¹¹ Ideally, the estimates would include a margin of error too. However, for reasons we explain below, credible measures of prediction error may be hard to come by.

The best possible estimate is more likely to be obtained by drawing upon the collective wisdom of computer scientists and statisticians who specialize in machine learning.²¹² Although machine-learning tools are gradually penetrating the social sciences, the frontier-level work is being done in other disciplines and, increasingly, by the private sector. The simplest, most credible, and most politically neutral way for the sponsor of the lookup website to avail itself of this dispersed expertise is to cloud-source estimates for the demographic-geographic cells through a predictive-analytics competition. This is a way to recruit dispersed expertise across many disciplines and is already being used by biomedical and other researchers.²¹³ And, critically, it is a way to allay concern about politicization or bias on the part of the website's administrators, since the "winning" estimates would be chosen on objective, transparent, and widely accepted grounds.²¹⁴

Quantifying Uncertainty. A candidate might find it interesting to learn that, say, 60% of the voting-age citizens in her district are estimated to support a single-payer, government-run health care system. But a prudent candidate would also want to know the margin of error. The 60% figure has a pretty different meaning in a world where the estimates are usually off by, say, 2.5 percentage points, as opposed to 25 percentage points.

The margin of error customarily reported with opinion polls is the "standard error," an estimate of the standard deviation of the statistic of interest. (Typically this statistic is the sample mean, i.e., the proportion of respondents who support a policy or candidate.) The standard error measures uncertainty due to sampling. It quantifies how much the statistic is likely to bounce around if the survey were iterated again and again, each time drawing a sample of the same size from the target population. Standard errors are inversely related to the

²¹² See Clive Thompson, *Uber Would Like to Buy Your Robotics Department*, N.Y. TIMES MAG. (Sept. 11, 2015), <https://www.nytimes.com/2015/09/13/magazine/uber-would-like-to-buy-your-robotics-department.html> (describing the "talent war" between universities "and deep-pocketed firms from Silicon Valley" for artificial intelligence researchers). Much of the top talent in this field no longer works in academic institutions, having been bid away by the likes of Facebook, Google, Amazon, and Uber. See *id.*

²¹³ See Jörg Bentzien, Ragu Bharadwaj & David C. Thompson, *Crowdsourcing in Pharma: A Strategic Framework*, 20 DRUG DISCOVERY TODAY 874, 875-77 (2015). See generally Jennifer Carpenter, *May the Best Analyst Win*, 331 SCI. 698 (2011).

²¹⁴ See Carpenter, *supra* note 213, at 700 (explaining that the winner is chosen based on an out-of-sample prediction error using a loss function that the sponsor of the competition specifies in advanced).

sample size. Flip a fair coin four times and you might well get 100% heads or 0% heads, even though the expected share of heads is 50%. Flip a coin four hundred times and you will get close to two hundred heads and two hundred tails.

The standard error is a reasonable way to quantify uncertainty if one is simply reporting the proportion of respondents who answered “yes” to a survey question. But if one is using the data to predict opinion in small geo-political units, it is not enough to quantify uncertainty due to sampling. The standard error tells nothing about the quality of the model or predictive algorithm itself. A lousy model fitted with a huge dataset will yield estimates that are “precise” in the sense that they would not bounce around very much if the large-N survey were repeated again and again, but the estimates may be very far from the truth. The user of the constituency-lookup website wants to know how close the estimates are to the truth, not just how stable they would be under repeated sampling.

So what should the constituency-preference website report as the margin of error for its constituency-level opinion estimates? There is no great answer to this question, but there are some reasonable steps for the sponsor to take. If the sponsor has tens of millions of dollars to invest in validation studies, the sponsor could conduct gold-standard surveys of public opinion *within each geographic unit*, probably with a couple hundred of respondents in each unit. The difference between mean observed opinion in each unit, per the gold-standard validation surveys, and estimated opinion for that unit per the website’s predictive algorithm applied to a typical national-survey dataset, would represent an approximate upper bound on out-of-sample prediction error.²¹⁵

A less expensive alternative is to episodically evaluate constituency-level predictions using the results of initiative, referendum, and candidate elections that post-date the predictions.²¹⁶ This would probably give a very good sense of how the algorithms perform for predicting vote choice in elections for statewide and national candidates, but since there is a lot of polling in these elections and hence a lot of “input” data to use for making predictions, the performance of the algorithms on such questions may overstate their

²¹⁵ Because the gold standard survey would measure constituency-level opinion with some error, even perfect predictions would differ somewhat from the validation-survey measure of “truth.”

²¹⁶ This would depend on participants in the competition revealing their algorithm so that the sponsor could apply it to data from subsequent opinion polls asking about the referendum election issue.

performance on policy and values questions that are not frequently polled.

Above all, transparency is important. The website's sponsor should acknowledge the margin-of-error problem forthrightly, invest in a program of research to redress it, and be clear about how the predictive algorithm was chosen.

The biggest question about our lookup website proposal is not how to generate or explain the estimates, but whether the estimates would continue to be politically relevant in a world where campaigns are acquiring decent voter-specific opinion estimates from data vendors. If a legislator believes that specific people listed in the voter file will make or break her re-election campaign, and she thinks she can identify their policy preferences, there is no reason for her to pay any attention to the proportion of voters in her district who support policy X or policy Y. She just needs to know what the electorally decisive voters think about these policies.

To put this point a bit differently, the constituency-preference lookup website would probably have a big effect on legislator behavior in the world that is reflected in extant studies of the effects of informational treatments on roll call votes.²¹⁷ But it might have little-to-no effect in a possible future world in which Internet platform companies create policy-preference and vote-choice predictions for each of their users, merge these estimates with the voter file, and market the predictions to campaigns. Like our voucher proposal, the impact of the website depends on what the Internet-media firms undertake to discover, reveal, or conceal about voter preferences.

V. THE POLITICS OF INFORMATIONAL REFORM

The notion of providing elites with detailed constituency-level information while concealing the preferences of identifiable individuals might be thought a political nonstarter.²¹⁸ Why would politicians, who want to know the preferences of identifiable voters, ever support an anonymized voucher program? Why would Internet platform companies voluntarily forgo the revenue streams they could generate by marketing individually identifiable information about voter preferences? We do not have a settled answer to these questions, but we think the politics are more favorable than the questions imply.

²¹⁷ See *supra* Part I.B.

²¹⁸ Thanks to David Schleicher and Rick Hasen for raising this question.

The ability to micro-target is probably worth more to challengers than to incumbents. Incumbents have advantages like name recognition that are valuable independent of targeting, whereas challengers need to figure out how to peel supporters from the incumbent's electoral coalition. Thus, legislators collectively may want to limit campaigns' access to individually identifiable information about voter preferences, especially if voters also value privacy and would reward such policies.

Second, an anonymized voucher program may draw support on different grounds from a broad range of interests. Progressives would probably favor the program for conventional political-equality reasons and as a way to counteract conservative bias in elite perceptions of constituency opinion. Racial and ethnic minorities may support the program to facilitate VRA enforcement, provided that courts can access preference estimates disaggregated by racial group. And conservatives may warm to vouchers as a way of checking the political power that left-leaning Silicon Valley firms could otherwise exercise through monopolistic control of voter-preference information.²¹⁹ By putting accurate information about voter preferences into the public domain, voucher programs could reduce politicians' dependence on the Internet platform companies. To be sure, a voucher program would more effectively check these firms' political power if it revealed individually identifiable preferences.²²⁰ But because conservative activists often favor anonymous political speech, they may prefer an anonymized voucher program even if that makes the regime somewhat less effective as an antidote the political power of Facebook and Google.

Finally, it is not clear that marketing individually identifiable information about voter preferences, or providing an unregulated platform for micro-targeted political advertising, would benefit the Internet platform companies. Privacy watchdogs including interest groups and European regulators would raise the alarm.²²¹ Users who

²¹⁹ See D. Daniel Sokol & Jingyuan (Mary) Ma, *Understanding Online Markets and Antitrust Analysis*, 15 NW. J. TECH. & INTEL. PROP. 43, 46-50 (2017) (analyzing monopoly risks in connection with online platforms); James Pethokoukis, *Why Does Silicon Valley Seem to Love Democrats and Dismiss the GOP? A Q&A with Journalist Greg Ferenstein*, AEI IDEAS (May 26, 2016, 11:30 AM), <https://www.aei.org/publication/what-does-silicon-valley-seem-to-love-democrats-and-dismiss-the-gop-a-qa-with-journalist-greg-ferenstein/> (discussing political beliefs of technology-industry leaders and workers).

²²⁰ This would enable campaigns to micro-target using voucher data alone.

²²¹ See Nitash Tiku, *Get Ready for the Next Big Privacy Backlash Against Facebook*, WIRED (May 21, 2017, 7:00 AM), <https://www.wired.com/2017/05/welcome-next->

value privacy would push back. That Facebook is sensitive to these pressures is evidenced by the company's current research and advertising policies, which aim to protect individually identifiable information from disclosure.²²² Facebook's recent efforts to stem the spread of fake news perhaps also suggest that fairly aggressive self-regulation of political advertising could serve the company's bottom line.²²³

CONCLUSION

Democracy operates through perceptions. To hold elected officials accountable, voters must see what those officials have done and what opposing candidates offer. To build and serve electoral majorities, politicians must discern citizens' preferences. Legal scholars have tacitly assumed that the latter problem is not a problem at all, and certainly not a *legal* problem. This Article has challenged that assumption.

The evidence suggests that politicians make systematic and often self-serving mistakes about the distribution of voter preferences within geopolitical constituencies. This is not simply a byproduct of disinterest; interventions that occasionally render constituency-level preferences more visible change roll-call votes. Moreover, many of the "democracy problems" that concern legal scholars are, at least in part, consequences of elite political ignorance. These include misalignment between the votes of representatives and the policy preferences of their constituents, political polarization, and racial targeting by campaigns and representatives.

phase-facebook-backlash/ (situating reaction to internal memo about advertising to vulnerable youths in context of other privacy backlashes).

²²² See Molly Jackman & Lauri Kanerva, *Evolving the IRB: Building Robust Review for Industry Research*, 72 WASH. & LEE L. REV. ONLINE 442, 450-56 (2016) (detailing Facebook's research policies, which include review by a special privacy committee, and safeguards against the release of individually identifiable information); *Data Policy*, FACEBOOK (Apr. 19, 2018) <https://www.facebook.com/policy.php> (lasted visited Sept. 6, 2018) ("We provide advertisers with reports about the kinds of people seeing their ads and how their ads are performing, but we don't share information that personally identifies you (information such as your name or email address that by itself can be used to contact you or identifies who you are) unless you give us permission.").

²²³ See Elle Hunt, "Disputed by Multiple Fact-Checkers": Facebook Rolls Out New Alert to Combat Fake News, *GUARDIAN* (Mar. 22, 2017), <https://www.theguardian.com/technology/2017/mar/22/facebook-fact-checking-tool-fake-news> (describing new Facebook-generated warning messages); Mark Scott, *Facebook Aims to Tackle Fake News Ahead of U.K. Election*, *N.Y. TIMES* (May 8, 2017), <https://www.nytimes.com/2017/05/08/technology/uk-election-facebook-fake-news.html>.

Law affects the form and extent of elite political ignorance. Political scientists have shown that the accuracy of elite perceptions depends on state decisions about what information to collect on voter registration forms and release through the voter file. Looking to the future, campaign-finance voucher programs have enormous potential to improve elite perceptions of voter preferences, though the payoff will depend on how the programs are structured.

All of this comes subject to two important caveats. First, the reduction of elite political ignorance is not an unalloyed good. To achieve the benefits of reduced elite ignorance without incurring (most of) the costs, what is needed are reforms that reveal the distribution of voter preferences within the geographic units of representation while concealing the preferences of identifiable individuals. To this end, we encourage states to pare back the information collected on voter registration forms; to restrict linkage of the state voter file to other databases; and to enact an “anonymized” campaign-finance voucher program in which the state would release geocoded records of individual voucher-contribution histories while withholding the identity of the contributor.

The other important caveat is social media. Facebook and Twitter, for example, can learn about the political preferences of their users from patterns of “likes,” “following,” etc. Though states may be able to establish opt-in rules and associated disclosure requirements for the political use of social media data, any effort to keep campaigns from learning about the political preferences of individually identifiable (or individually marketable) voters will depend as much on self-regulation by social media companies as it does on law.