

**IN THE UNITED STATES DISTRICT COURT  
FOR THE MIDDLE DISTRICT  
OF LOUISIANA**

DR. DOROTHY NAIRNE, et al.,

*Plaintiffs,*

v.

NANCY LANDRY, in her official capacity  
as Secretary of State of Louisiana

*Defendant.*

Case No. 3:22-cv-00178

SDD-SDJ

10 June 2025

**EXPERT REPORT OF DR. D. STEPHEN VOSS**

I. INTRODUCTION

- A. I am a political scientist who earned his Ph.D. in Government from Harvard University in 2000, with a **focus on political methodology** (i.e., quantitative analysis) during my qualifying exams.
- B. My dissertation explored elections and voting behavior in the U.S. South.<sup>1</sup> My most-cited publication, developed around the same time, focused on **race and voting behavior in Louisiana**,<sup>2</sup> as did my most downloaded paper on ResearchGate.<sup>3</sup> I have published scholarly work in that area occasionally since then, including this year.<sup>4</sup>
- C. My academic focus on Louisiana grew out of my background: I am a **Louisiana native**, born in New Orleans. I grew up in Jefferson Parish, attended high school in Natchitoches, and earned **two degrees from LSU** in Baton Rouge. Before departing for graduate school, I spent my last three years as a Louisiana resident interning in the Louisiana statehouse, twice as a political reporter for Gannett News (primarily serving Shreveport and Monroe), and once as a State Senate aide (for a Democrat based in northwest Louisiana). My time as a **political journalist in Louisiana** mostly focused on the legislative sessions, but also included covering local government & legislative elections.

- D. After grad school, I was hired for a **Methods position** at the University of Kentucky's Department of Political Science, where I currently serve as a **senior professor** of associate rank. I fill two departmental **administrative posts**: Internship Director and Publicity Coordinator. I am one of the three social scientists on our College's Educational Policy Committee, and one of my College's two representatives on the Faculty Senate.
- E. I have served as **president of the Kentucky Political Science Association** and I co-founded that association's journal. In the past, I twice served as a **section head for the Southern Political Science Association** when it met in New Orleans, as well as a member of their award committee for the best book on Southern Politics.
- F. My primary Ph.D. advisor was Gary King, originator of commonly used methods and software for conducting **ecological inference**. I was on the ground floor when King wrote the 1997 book that introduced his method, as illustrated by the use of my Louisiana data in his book's opening analysis,<sup>5</sup> and I authored a chapter in King's follow-up edited volume.<sup>6</sup> I employed King's EI software throughout my previously cited dissertation, and I have published work using EI in invited,<sup>7</sup> peer-reviewed,<sup>8</sup> and trade articles.<sup>9</sup> Another of my dissertation advisors was Bradley Palmquist, also a specialist in ecological inference with whom I wrote a pair of conference papers teaching others how to apply the methodology.
- G. I am interviewed frequently by state, national, and international news organizations as a **non-partisan commentator**. I currently have recurring roles as analyst for Spectrum One News & WVLK. I've also served as advisor for student groups across the political spectrum – including, currently, the College Democrats & College Republicans.
- H. Although I do not pursue consulting work, I have served as a **consultant and expert witness** in a handful of redistricting and voting-rights cases, starting with an Indianapolis case early in my career and most recently a Florida case, both requiring ecological inference. I was a consultant and expert witness in *Callais v. Landry*, a redistricting case concerning Louisiana's congressional districts. I've also been admitted as a quantitative-analysis expert in cases unconnected to elections and voting, and I have been hired as a data scientist by public & private entities.
- I. Attached to this expert report is the CV summarized here.

## II. ASSIGNMENT & SCOPE OF WORK

- A. Counsel retained me to expand on the ecological inferences presented by Dr. Lisa Handley in two specific and focused ways:
1. To determine how racial voting patterns differ, compared to the cases she employed, in **elections featuring Democrats who were not African American**, and
  2. To determine how racial voting patterns differ, compared to Handley's analysis, when it comes to **off-year elections**, when state-legislative seats in Louisiana actually are being contested.
- B. Secondly, I was invited to evaluate the use of ecological inference by Dr. Lisa Handley in her multiple reports so that I could determine whether she used best scientific practices, so that I could evaluate any possible consequences of Dr. Handley deviating from best practices, and so that I could determine whether she discussed or presented ecological inferences in a way likely to mislead or confuse laypeople.
- C. To perform this work, I was provided not only Dr. Handley's reports, but also the data she submitted in discovery. Note that, while I'm sometimes using the same basic methods of ecological inference as Handley, implemented in part through the same software as Handley, **I was not provided Dr. Handley's computer code** that showed her own work. Thus, I did need to make independent judgments regarding the best way to conduct ecological inferences for this case.
- D. Conventionally, an academic paper spends significant space at the front end explaining and justifying all of the data and methods decisions that went into the analysis. For this report, as a service to lay readers, I will emphasize the substantive explanations for what I am doing, and offer a substantive interpretation of what I've found. I try to offer the details a reader needs to understand what I estimate, but shuffle most technical details into footnotes, endnotes, and parenthetical statement. Also, rather than go for bulk as other analysts do – throwing lots of quickie analyses at readers, whether in list or summary form – I will offer illustrative & concrete comparisons. Proper scientific work doesn't simply report results; it also evaluates the quality of the output in a transparent way, which I will try to do.
- E. At the time of this writing, no agreement has been reached regarding my compensation for this work. I perform it trusting that I will be fairly compensated, having worked with the law firm previously.

### III. EXECUTIVE SUMMARY

- A. Counsel hypothesized that support for White Democrats, when estimated by race, would not look dramatically different from the voting patterns observed when Democrats nominated Black candidates. Although it's a legal, not a statistical, question whether differences are substantively significant, this report supports that expectation. Polarization is driven more by party, not candidate race.
- B. Counsel also asked me to test the hypothesis that, by using data from presidential and congressional contests to estimate voting patterns, Dr. Handley was skewing what would be expected from legislative districts in Louisiana, a state that holds legislative elections in off years. My report also supports that expectation. Louisiana's electorate in off-year contests looks and behaves differently than what we see from races determining the state's national representation.
- C. Dr. Handley's implementation of ecological inference departs from best practices in multiple ways, with implications for the stability and reliability of her estimates. In conducting my own ecological inferences for this report, I correct some of those shortfalls, and show that they can indeed make a difference in the estimation of racial voter polarization, although I cannot claim the differences are great enough that they would have altered Handley's interpretations.

### IV. THE VOTE FOR WHITE DEMOCRATS

- A. The request that I analyze support for White Democrats comes from counsel. Nonetheless, I am sympathetic to the hypothesis that a candidate's race does not matter as much as might be supposed and that polarization can arise for reasons other than candidate race.<sup>10</sup>
  - 1. Voters may use race as a shortcut to guess at a candidate's ideology,<sup>11</sup> but in the sort of high-profile national or statewide race typically used for redistricting analysis, most voters possess enough information about the candidates that they do not need sloppy shortcuts.
  - 2. To the extent voters specifically care about racial issues, they will understand the Democratic Party to be the party that embraces more-liberal racial policies, regardless of the identity of the candidate. Political parties have subsumed racial divisions.<sup>12</sup>

- B. Dr. Handley omits from her analysis most contests featuring White Democrats.\* She argues that analysis of contests with White Democrats is considered by the courts to be less “probative” (see, for example, footnote 9 in her report submitted on 30 June 2023). That is a legal judgment, not a scientific one, so I cannot speak to it. Still, her expectation seems to be that Black Democrats will perform worse than White Democrats, other things equal, writing in that footnote, “it is not sufficient for minority voters to be able to elect their candidates of choice only if these candidates are white.” If she’s right, and if the goal is either (1) to estimate typical racial voter polarization or (2) to determine the ability of African Americans to elect their candidate of choice, then censoring out elections with White Democrats is not good science. It would bias conclusions. It would exclude cases with the least racial polarization, biasing measures of racially polarized voting upward, and it would remove successes for the Black candidate of choice, making Black voters seem more shut out of the political system than they actually are. It’s true that Black voters at times might face a choice between voting sincerely for a Black candidate likely to lose or, instead, voting strategically for an acceptable White candidate likely to win – but in a two-party system, voters of all races regularly face the dilemma of whether to vote sincerely or strategically.<sup>13</sup>
- C. Candidate race can matter in two ways. It could cause group support for a party’s candidate to vary over time, rising and falling depending on the race of the nominee for a given office. Or it could cause group support for the party’s candidates to vary by race on a single ballot, with statewide candidates performing better or worse depending on their race.<sup>†</sup> To test counsel’s hypothesis, therefore, I will need to set up both sorts of comparison, beginning with the latter example: when candidates of difference races run at the same time.<sup>‡</sup>

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\* She argues that having Kamala Harris as Biden’s running mate justifies including the 2020 presidential election results, and therefore makes an exception for him. Given Biden’s relative popularity with African Americans in the South – Black voters in South Carolina revived his flagging nomination bid, after which Black voters on Super Tuesday basically cemented his rehabilitation – that contest does not counteract the thrust of Handley’s analysis.

<sup>†</sup> One complication usually ignored in research for litigation is that the candidate at the top of the ticket likely influences what happens to candidates lower down the ticket. If the race of the candidate at the top of the ticket actually matters, then that could influence who shows up to vote, with down-ballot effects.

<sup>‡</sup> I ignore a third possibility, due to the interest of time: Candidate race at the top of the ticket could influence voter turnout, thereby impacting the performance of their party’s nominees down the ballot regardless of their race. Note, though, that this insight complicates Dr. Handley’s analytical approach. Multiple elections held in the same year are not independent of each other, because it’s the same voters being drawn in or repelled by the same headliner. An analysis giving elections equal weight, ignoring that some of them overlapped on the same date, will contain error.

- D. Comparing two candidates on the same ballot is only going to capture when voters actively split their ticket, supporting one Democrat while not supporting the other. It ignores that the identity of the lead candidate on the ballot could influence how voters behave across all contests, shaping whether they show up to vote or how they're thinking about the stakes of the election. In technical terms, what I'm saying is that analysts (including Dr. Handley with her "Effectiveness Score") shouldn't assume "independence" among simultaneous elections. Having contests influence each other is one way that political party could matter more than candidate identity.
- E. Like Dr. Handley, I employ ecological inference to evaluate racially polarized voting.<sup>14</sup> I focus here first on the 2019 Louisiana statewide runoffs. That election has the benefit of including both a White Democrat (Jon Bel Edwards) running for governor and a Black Democrat (Gwen Collins-Greenup) running for Secretary of State (SoS). Contests for state office usually polarize less by party than those for president or Congress, so it's a more-cautious test of counsel's hypothesis that if I focused on presidential or Senate races.
- F. I'll begin by presenting Iterated EI results for the SoS contest. Whites clearly oppose Collins-Greenup, while Black and "Other" voters strongly support her (see Table 1). Statewide, I estimate that she receives a mere 13.5% of the White vote, while garnering 96% of the Black vote and three-quarters of the support from everyone else.
- G. I also looked at the level of polarized voting broken up by the counties Dr. Handley uses to define geographic clusters. I do this in protest, in the interest of time. Allowing the analyst to focus on arbitrarily defined geographical areas opens up the possibility of manipulating results by cherry picking – which is why I usually argue either for Metropolitan Statistical Areas (when working in an urban context) or historically meaningful regions (when working with rural/small-town counties).<sup>\*</sup> Results are fairly consistent across the state, however. Breaking that support up by Dr. Handley's "cluster" counties, the estimated Black support for Collins-Greenup does not appear to vary

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<sup>\*</sup> Although her report presents three Senate clusters and five House clusters, one of the Senate clusters and one of the House clusters unite the same two counties, so I only have seven rows in the table.



Table 1 - Racially Polarized Voting in 2019 Statewide Runoffs

AGGREGATION	Gov	C.I.	Sec of State	C.I.	Gov vs. SoS
<u>Statewide</u>					
Black	98.5%	0.9846, 0.9861	96.0%	0.9584, 0.9616	2.5%
White	27.3%	0.2719, 0.2734	13.5%	0.1346, 0.1362	13.7%
Other	89.7%	0.8860, 0.9076	75.4%	0.7214, 0.7788	14.2%
Racial Gap	71.3%		82.5%		-11.2%
<u>Senate Cluster 1 &amp; House Cluster 3 (Bossier &amp; Caddo)</u>					
Black	98.5%	0.9826, 0.9877	96.5%	0.9596, 0.9693	2.0%
White	18.2%	0.1793, 0.1845	9.7%	0.0943, 0.1014	8.5%
Other	89.8%	0.8762, 0.9169	75.6%	0.7200, 0.8057	14.2%
Racial Gap	80.3%		86.8%		-6.5%
<u>Senate Cluster 2 (Jefferson &amp; St. Charles)</u>					
Black	98.4%	0.9817, 0.9861	96.6%	0.9615, 0.9714	1.8%
White	36.3%	0.3610, 0.3651	16.7%	0.1644, 0.1691	19.6%
Other	89.9%	0.8817, 0.9125	75.8%	0.7168, 0.8017	14.0%
Racial Gap	62.1%		79.9%		-17.8%
<u>Senate Cluster 3 (EBR, WBR, Iberville, Pointe Coupee)</u>					
Black	98.7%	0.9854, 0.9889	96.3%	0.9597, 0.9666	2.5%
White	34.3%	0.3409, 0.3460	16.2%	0.1583, 0.1663	18.1%
Other	89.9%	0.8802, 0.9174	75.6%	0.7134, 0.8089	14.3%
Racial Gap	64.4%		80.1%		-15.7%
<u>House Cluster 1 (DeSoto, Natchitoches, Red River)</u>					
Black	98.4%	0.9801, 0.9875	95.9%	0.9526, 0.9672	2.5%
White	19.8%	0.1948, 0.2030	10.7%	0.1024, 0.1124	9.1%
Other	89.6%	0.8642, 0.9303	75.4%	0.6766, 0.8221	14.3%
Racial Gap	78.6%		85.2%		-6.6%
<u>House Cluster 2 (Calcasieu)</u>					
Black	98.6%	0.9825, 0.9888	96.0%	0.9520, 0.9651	2.6%
White	27.4%	0.2719, 0.2768	12.2%	0.1185, 0.1246	15.2%
Other	89.6%	0.8720, 0.9167	75.3%	0.6957, 0.8097	14.4%
Racial Gap	71.2%		83.8%		-12.7%
<u>House Cluster 4 (Ascension, Iberville)</u>					
Black	98.4%	0.9799, 0.9871	95.3%	0.9433, 0.9620	3.1%
White	27.4%	0.2713, 0.2790	10.8%	0.1036, 0.1145	16.6%
Other	89.8%	0.8596, 0.9318	75.4%	0.6920, 0.8328	14.4%
Racial Gap	71.0%		84.5%		-13.5%
<u>House Cluster 5 (EBR, E. Feliciana)</u>					
Black	98.7%	0.9853, 0.9895	96.5%	0.9611, 0.9685	2.2%
White	34.6%	0.3432, 0.3486	17.0%	0.1664, 0.1743	17.6%
Other	89.9%	0.8794, 0.9180	75.5%	0.7046, 0.8013	14.3%
Racial Gap	64.1%		79.5%		-15.4%

much from place to place, always hovering around 96%. The White support varies a bit more, ranging from 9.7% in the Shreveport area

(Senate Cluster 1) to 17% in the combination of East Baton Rouge and East Feliciana parishes (House Cluster 5), but nowhere do I estimate that they ever come close to supporting her.\* White and Black voters were polarized statewide in the 2019 Secretary of State race.†

- H. The level of polarization does decline when we move to Democratic incumbent Gov. Jon Bel Edwards, but it remains powerful. Statewide, he received barely more than a quarter of the White vote. His improvement did not result from unique popularity among White voters, however. His estimated support among Other voters jumped by about the same amount, and while Black support for Democrats already bumping up against a ceiling, Edwards even seems to have improved among Black voters. We cannot say how much the Edwards bump resulted from his race, his incumbency, or his ideology – but even after the narrowing of racial polarization, it’s clear that a better-established, moderate White Democrat did not cause polarization to dissipate. Two additional insights are critical to notice:
1. The racial gap in voter support across parties was much wider than the difference that appeared depending on race of candidate, and
  2. The polarization by party, rather than by race of candidate, is great enough that Black voters are on the opposite side from White voters in every one of Dr. Handley’s clusters.
- I. Iterative EI comes with both a benefit and a flaw. The flaw is that it estimates the voting behavior of each racial/ethnic group separately and then blends them in a way that can retain estimation error. The benefit is that if the EI estimates are being skewed by faulty estimation assumptions, then it doesn’t hide the error by forcing results to be mathematically possible. It can return impossible results. Specifically, the vote across candidates need not sum to 100%, either losing voters (with a number notably smaller than that) or clearly overcounting them (with a number larger than 100%). Rather than

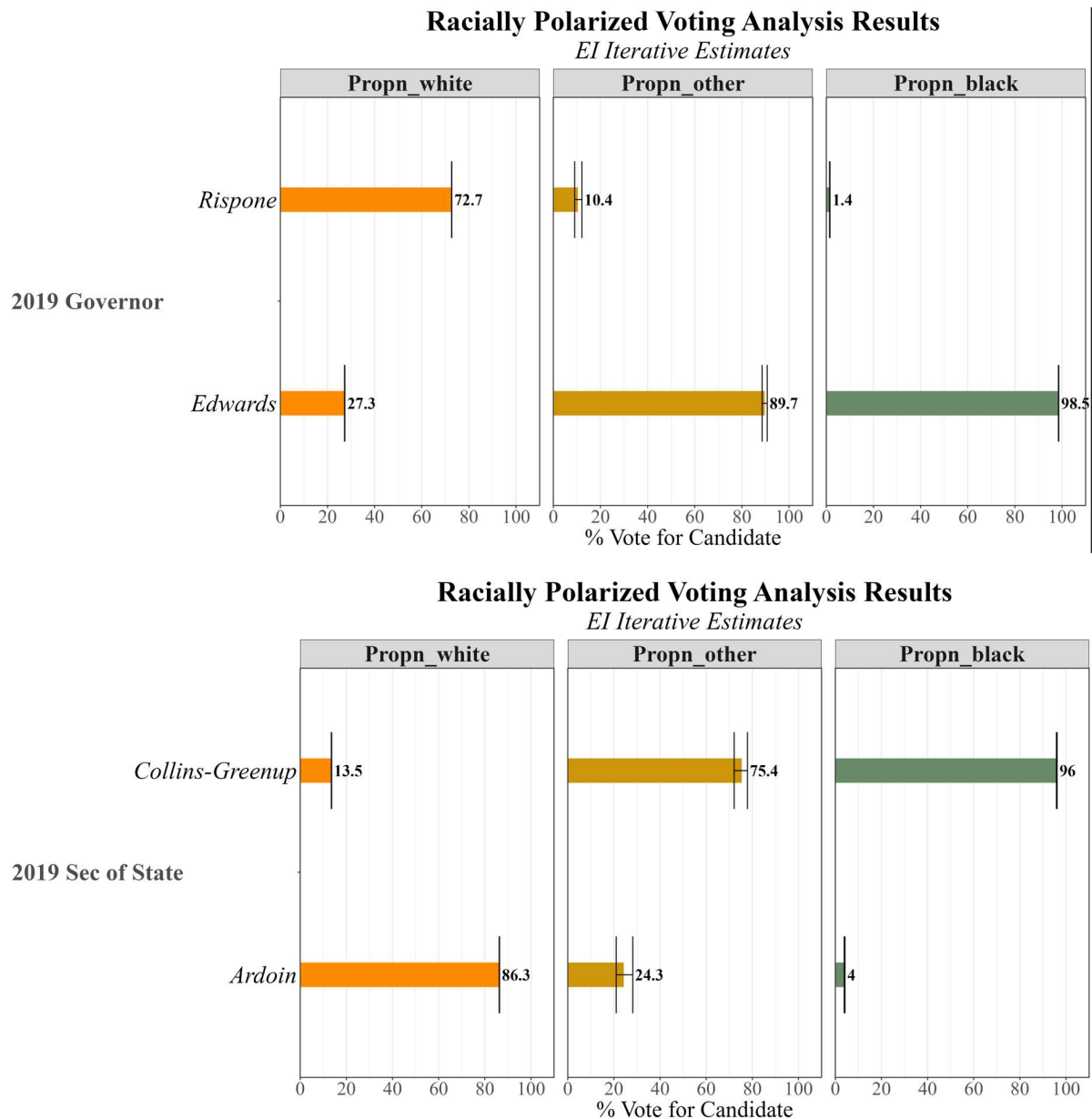
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\* The Other vote also seems consistent, but the confidence interval on those estimates is large, warning me that I lack information to estimate their vote well – which means that EI’s best guess is still rough, and will be applied almost everywhere.

† The voting behavior of “Other” voters also seems not to vary much, but I place less stock in that consistency. EI assumes that a group votes the same way everywhere, aside from when the precinct results clearly indicate otherwise – and while precincts are racially segregated enough that they contain extensive information about White and Black voting, it’s rare for the Other population in a precinct to be large enough that we know much about them.



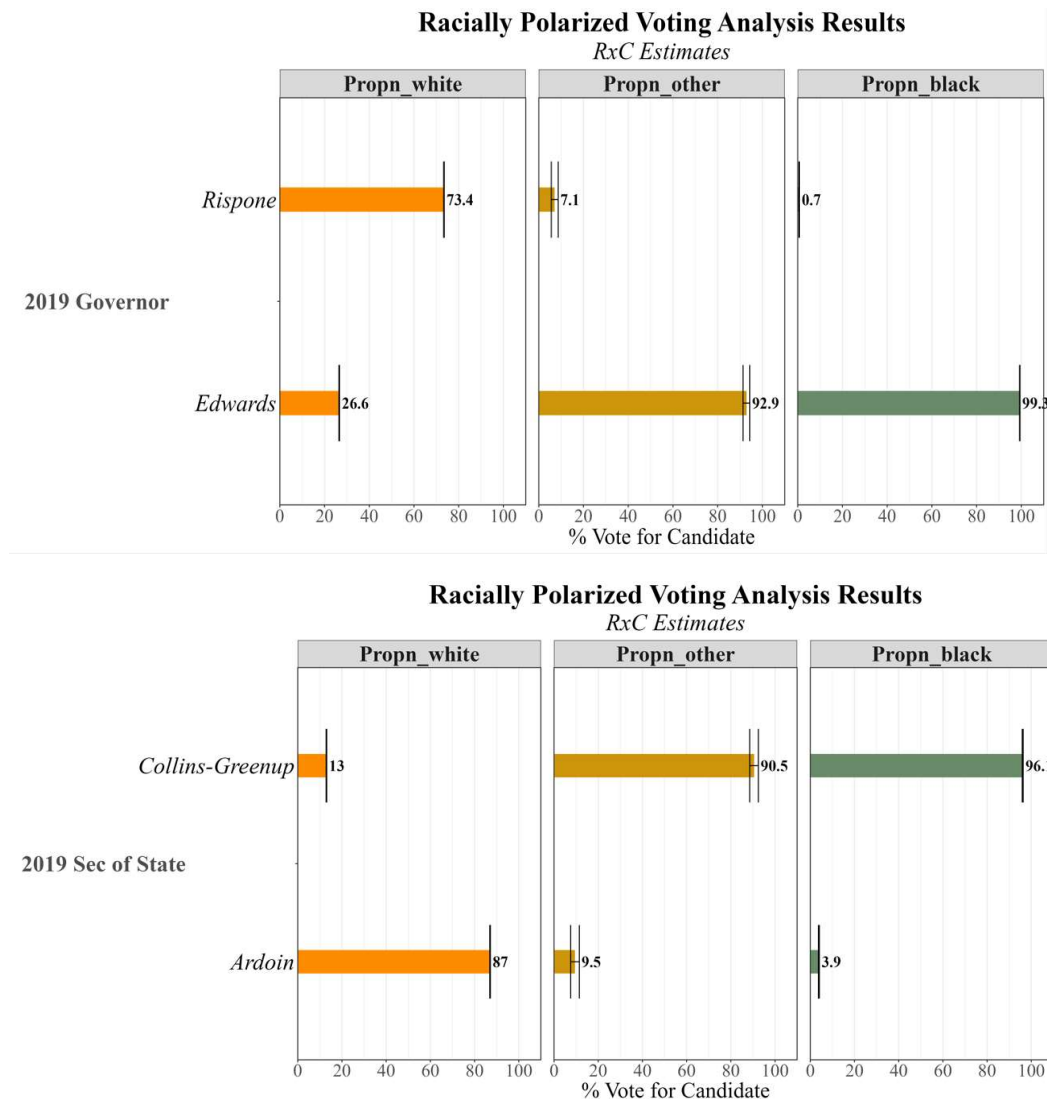
FIGURE 1 – Comparing White and Black Democratic Candidates



rely on a table to check for this problem, let's move to a graph of the reported results, which has the added benefit of giving readers a more-accessible way to see the statewide differences by candidate (see Figure 1). Summing across each group, one can see that support levels sum to approximately 100% every time. One potential warning sign fails to appear.

- J. Next, I ran the same analysis, with the same comparisons, using a different version of EI, the "RxC" version. It estimates the voting

FIGURE 2 – Comparison Results with Newer Approach to Ecological Inference



behavior of the three groups – Whites, Blacks, and Others – at the same time. Comparing the results from this analysis with the Iterated EI results also should increase confidence in what I’m doing here. EI is a method of simulation. Iterated and RxC versions build from the same core logic, so their simulations can produce fairly similar results – but they may not. One sign of a well-designed simulation is that results will be stable across somewhat different approaches to the same simulation, whereas a poorly designed simulation may churn out significantly different results after even slight changes to the approach.<sup>15</sup> That the RxC estimates are so similar to the Iterative EI estimates for White and Black voters means that what I’m estimating

isn't an accident of the specific setup. This second pass at comparing the SoS and gubernatorial races confirms what I found before: Voting is highly polarized by race even when the contest features a White Democrat, with party dividing Louisianans more than candidate race.

- K. Trying to estimate Other voters on their own is causing a bit of instability in the estimation for White and Black voters. It's not horrible, given how small that population is; getting such a small group wrong may not be throwing off the White and Black estimates much. Nonetheless, the original EI – possibly what Dr. Handley is calling “2 x 2” EI, although not having been shown her work, I cannot say – allowed an analyst to refine estimation in one other way. My applications of EI so far have been “naïve” in the sense that they assume the three racial/ethnic categories each vote more or less the same way everywhere, with just random variation from place to place.\* That might satisfy a court, but it's not the best way to perform ecological inferences.<sup>16</sup> Indeed, I don't think any of my peer-reviewed publications using ecological inference stopped with the naïve model, and I've recently published a piece that specifically illustrates how it's necessary to go beyond the naïve model – and to alter it differently depending on the year or contest – to improve the estimation of racial voting patterns in Louisiana.<sup>17</sup>
- L. Unfortunately, it seems as though best practices in ecological inference fell by the wayside when members of the consulting industry wanted to start performing ecological inferences in bulk rather than tailoring each analysis to suit the data and context of each election. Still, the basic EI package created by Gary King and his colleagues allows me to differentiate White and Other voters in a different way than just shuffling Other voters into a third, residual category. Instead of assuming that groups vote the same way everywhere – diagnostics from the naïve analysis indicate to me that they clearly do not – I can explicitly allow those estimates to shift from place to place.<sup>†</sup> That is, I can combine non-Black voters into a single group, then incorporate information about how that group differs depending on the context.<sup>18</sup> (That is, I can introduce

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\* This assumption may not be as problematic as it sounds, because EI also requires the estimate for each precinct to be mathematically possible. If the pattern across precincts is sufficiently informative – which the racial segregation in Louisiana ensures – then in practice the analyst can be very far from assuming groups are homogeneous.

† The regression for aggregation bias shows a strong pattern with non-Black voters and a weaker but still significant one with Black voters.

covariates.) This approach should improve on what I've offered so far in multiple ways. First, **leaving Other voters in a third category, and then ignoring them by focusing on the polarization between Black voters and White voters only, exaggerates the level of polarized voting** because other ethnic groups usually fall between White and Black voters (as we've seen for 2019). The more of those present in a locale, the less polarization against Black voters actually would be – something the simple White-Black divide obscures. We ought to remove that bias. At the same time, this covariate approach allows me to capture some of the regional differences among White voters, rather than assuming they're the same everywhere.

- M. What will these covariates be? First, I will encourage my EI estimation to adjust the estimate of non-Black support for the Democratic candidate to vary depending on the share of those voters who registered with the Democratic Party. It's absurd to estimate White support for the Democrat naively when the analyst has available a clear, if imperfect, signal from the voters as to how much they like Democrats. Second, because Black voters tend to be more likely to support Republican candidates when they live in mixed-race areas than when they live in overwhelmingly Black communities – or, at least, that was true before 2024 – I allow the Black support rate to depend on the density of the Black community in their precinct.
- N. With both the gubernatorial election and the secretary of state contest, considering how context might help predict the voting of Black and non-Black voters makes substantial differences from place to place. The difference is smaller for the gubernatorial contest, although still great enough to show up even in the statewide results. (See Table 2, which first presents results using only the party-registration covariate for non-Blacks, then presents results using both covariates.) The result is weaker with Edwards, the gubernatorial candidate: His estimated Black support erodes a bit, allowing slightly higher support among everyone else. So does this correction increase the effect of candidate race? No, because the correction matters more when it comes to support for Collins-Greenup. The gap in behavior corresponding to candidate race shrinks to about 10%, rather than around 13%.
- O. That downward adjustment for Collins-Greenup among African-American voters might seem questionable to a reader who knows that she was a Black candidate. Even I admit that, given more time to

Table 2 - The Statewide Effect of Including Covariates in 2019

## NAIVE 2x2 MODEL

Estimates of Support for:	Edwards	Collins-Greenup
Blacks	98.6%	96.0%
Non-Blacks	30.7%	17.2%

## NON-BLACK PARTISANSHIP 2x2 MODEL

Estimates of Support for:	Edwards	Collins-Greenup
Blacks	98.3%	95.5%
Non-Blacks	30.8%	17.4%

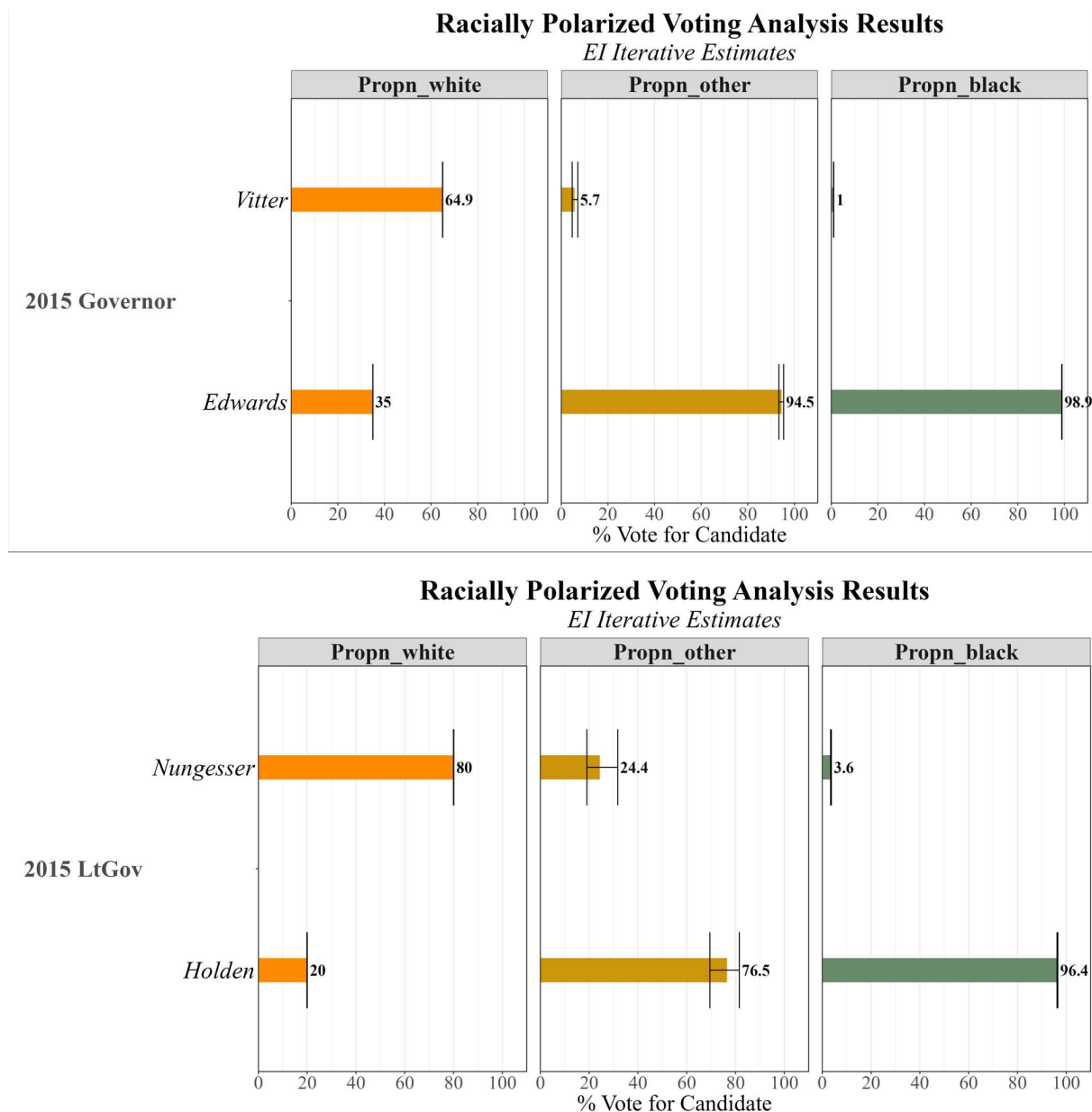
## CONTEXTUAL 2x2 MODEL

Estimates of Support for:	Edwards	Collins-Greenup
Blacks	97.8%	88.5%
Non-Blacks	31.1%	20.6%

conduct a proper analysis, I suspect it would soften. But consider that the distribution of votes across precincts indicates that no less than 15.8% of the non-Black electorate mathematically must have voted for her. (That is the “aggregate lower bound.”) This new estimate is less than five percentage points higher than the absolute minimum possible level of support she received from them. Showing the alteration in two steps makes clear that the bigger shift is caused not by letting non-Black support vary from place to place, but instead by explicitly allowing the Black vote for Democrat Collins-Greenup to drop in mixed-race places, as past research suggests that it likely would.<sup>19</sup> So while my correction might have gone too far, I still believe that it is giving a clear warning about the naïve approach that redistricting consultants apparently use: **Forcing Black voters in mixed-race areas to look like Black voters in highly Black areas inflates the level of apparent racial polarization.** More likely, as my covariate correction indicates, African Americans who’ve decided to live in mixed-race areas are less homogeneous in their politics than the naïve model assumes, while other voters who live in heavily Black areas likely are more supportive of Democrats than naïve models give them credit for.

P. If using the more-elaborate EI model has succeeded in improving the

FIGURE 3 – Confirming Polarization across Candidate Race in 2015



estimation of racially polarized voting, then **the case for polarization driven by party/ideology, rather than by candidate race, becomes even stronger**. It also would have implications for any attempt like Dr. Handley's to conduct or project ecological inferences within smaller areal units, such as state legislative districts or district clusters. If the statewide numbers are off, then localized numbers have the potential to be even more flawed.

Q. Recognizing that consultants rarely use the covariate version of EI –



and that judges usually feel more comfortable with a commonly used (if flawed) approach – I will switch back to the naïve version for now. I’ll go back in time with it first, then forward in time. The backward movement takes us to 2015, the year Edwards first won his position. That year, he also had an African-American politician running statewide on the same ballot: Kip Holden, the Democratic nominee for Lieutenant Governor. In that race, as in 2019, it’s impossible to disentangle the effect of race and ideology – but the results are roughly the same (see Figure 3). Edwards performs notably better than Holden, yet polarization remains quite strong despite the candidacy of a White Democrat. That’s true across the clusters (table not shown). The racial/ethnic vote sums close to 100%, and the two approaches to EI give similar results (graphs not shown).

- R. Should Black voters and non-Black voters have been supporting the same candidate, the next step in my analysis might have been to turn to the “jungle primary” elections that took place before these runoffs, to see if perhaps the Black candidate of choice were being foiled earlier in the process. Racially polarized voting is sufficient in the runoff elections, however, that there seems no point in dealing with their prequels. Instead, I turn to the other way to judge the effect of race: looking at the same office at different time periods, to see how much polarization changes according to candidate race for the same job. Doing so requires us to go back to the future, and look at a third gubernatorial election, the one from 2023. Republican Jeff Landry ran against an African-American Democrat, Shawn Wilson (see Table 3).
- S. That 2023 election results do indeed show racial polarization, and greater polarization than with Edwards on the ballot – although, as

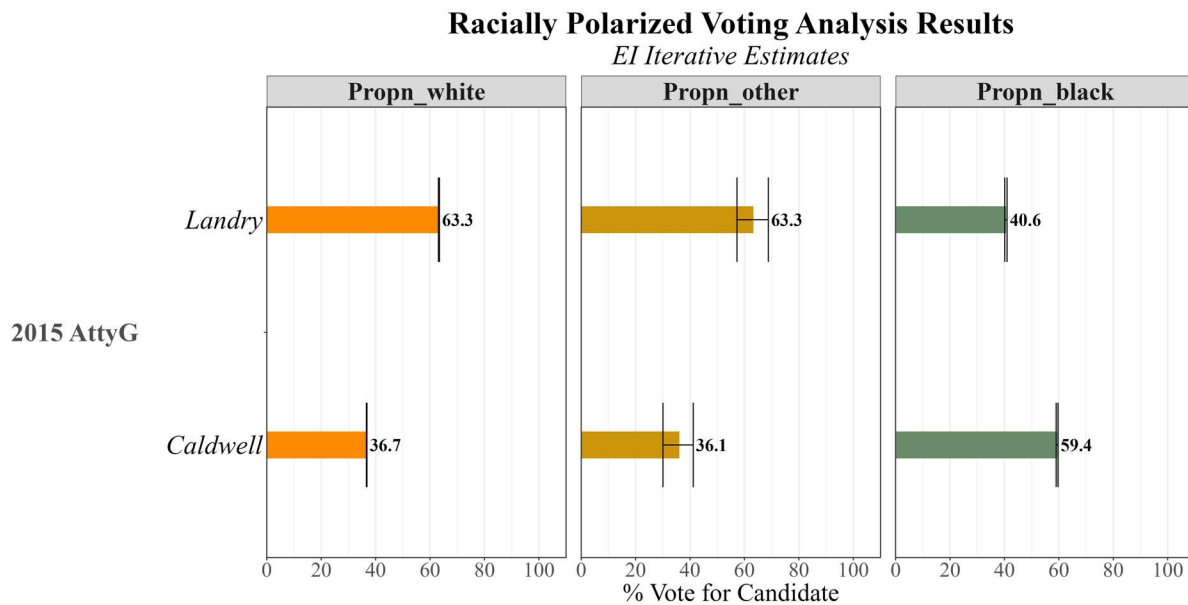
### Table 3 - Gubernatorial Elections over Time

2015

Estimates of Support for:	Black	Non-Black	Diff
Edwards (2015)	98.9%	40.2%	58.7%
Edwards (2019)	98.6%	30.7%	67.9%
Wilson (2023)	87.3%	12.3%	75.0%

NOTE: All three estimates come from the naïve EI model.

FIGURE 4 – A Residual Party Difference between Two Republicans



always, it's impossible to disentangle ideology (e.g., abortion attitudes) from race. Still, the shift between the two Edwards elections (both offering a White Democrat) is greater than the shift between the White Democrat and the Black Democrat. Racially polarized voting has been on the rise, as Louisiana voters (and especially as Louisiana White voters) increasingly reject the Democratic Party, and it started before the Democrats offered a Black gubernatorial candidate. I don't see how an analyst would attribute that pattern to candidate race under the circumstances.

- T. I'll end with one last, illustrative election. The 2015 runoff election featured a third, but this one is more interesting when it comes to separating the effect of race from the effect of party on polarization levels. The runoff for attorney general featured two White Republicans, incumbent Billy Caldwell against challenger (and future governor) Jeff Landry. Caldwell switched parties while in office, however, allowing for the possibility that the effect of party/ideology is so strong that it can linger. That's indeed what happens (see Figure 4). African-American voters do not appear to have been quite as cohesive in the 2015 attorney general race, because partisan cues no longer appeared on the ballot. But White voters and Black voters did tilt in opposite directions, despite both candidates sharing the same race – with Black voters preferring the former Democrat.

Table 4 - Voters Polarize Racially over  
White Former Democrat

AGGREGATION		Support for Caldwell		
Statewide		<i>Confidence Interval</i>		
	Black	59.4%	59.1%	59.7%
	White	36.7%	36.6%	36.8%
	Other	36.1%	30.1%	41.2%
Racial Gap		22.7%		
Senate Cluster 1 & House Cluster 3 (Bossier & Caddo)				
	Black	60.3%	59.6%	61.0%
	White	33.4%	32.9%	33.7%
	Other	36.2%	31.0%	44.4%
Racial Gap		26.9%		
Senate Cluster 2 (Jefferson & St. Charles)				
	Black	52.5%	51.8%	53.4%
	White	35.6%	35.3%	35.8%
	Other	36.5%	28.3%	42.6%
Racial Gap		16.9%		
Senate Cluster 3 (EBR, WBR, Iberville, Pointe Coupee)				
	Black	64.3%	63.8%	65.0%
	White	45.3%	44.8%	45.7%
	Other	33.1%	25.0%	38.9%
Racial Gap		19.0%		
House Cluster 1 (DeSoto, Natchitoches, Red River)				
	Black	65.8%	64.6%	67.0%
	White	40.0%	38.9%	40.4%
	Other	35.1%	25.3%	44.2%
Racial Gap		25.8%		
House Cluster 2 (Calcasieu)				
	Black	49.3%	48.1%	50.2%
	White	32.6%	32.2%	32.9%
	Other	38.1%	29.6%	45.7%
Racial Gap		16.7%		
House Cluster 4 (Ascension, Iberville)				
	Black	63.2%	62.0%	64.5%
	White	42.1%	41.4%	42.9%
	Other	35.3%	24.0%	44.1%
Racial Gap		21.1%		
House Cluster 5 (EBR, E. Feliciana)				
	Black	64.8%	64.1%	65.5%
	White	45.4%	44.9%	45.9%
	Other	33.2%	24.7%	39.5%
Racial Gap		19.4%		

- U. Because this contest is so different from the previous races analyzed, it might be helpful to look at the results once again broken down regionally (see Table 4). The more-limited polarization shows up across almost every one of Dr. Handley's clusters (see Table 4). Racially polarized voting clearly appears in all but one instance, which is the analysis of House Cluster 2. That cluster may stand out because challenger Landry comes from the southwest region of Louisiana, the location of Calcasieu Parish, and briefly represented it in Congress.
- V. In sum, it is generally true that Louisiana White voters and Louisiana Black voters line up on opposite sides of the political divide. Dr. Handley's exclusive focus on contests with Black candidates might lead a layperson to conclude that racially polarized voting primarily reflects a reaction among voters to the race of Black Democrats. Insofar as such a conclusion diminishes the significance of political party (and/or ideological differences or resource differences that overlap with party), it would be faulty. Much of the polarization appears even in elections for statewide office, which typically are less partisan than elections for national office, including in elections when both candidates shared the same racial identity. Racially polarized voting even appeared in one contest when both race and party were the same, with only candidate background (with one being a former Democrat) and arguably candidate ideology separating them. I am not qualified to say what the legal implications might be of this feature of Louisiana voting, but counsel asked me to test the hypothesis that RPV responds more to party than to candidate race, and I find that hypothesis to be confirmed in contemporary Louisiana.

## V. THE VOTE IN OFF-YEAR ELECTIONS

- A. Counsel asked me to test the hypothesis that, by using data from presidential and congressional contests to estimate voting patterns, Dr. Handley might be skewing what would be expected from legislative districts in Louisiana, a state that holds legislative elections in off years. This second hypothesis also seemed to possess face validity: Turnout tends to differ significantly between years with presidential elections and years without them.
- B. Louisiana collects voter turnout by race, so the easiest place to start is by looking at demographic differences between on-year and off-year elections. Louisiana's complicated electoral structure makes such observations more complicated than usual. Elections regularly take place in October, November, and December. State elections take place in odd-numbered years. Still, looking at turnout by race/ethnicity across contests, patterns emerge in the contemporary data (see Table 5).
- C. The first clear pattern is that Louisiana's African-American voters have not been particularly mobilized by federal elections. Since 2012, when Black turnout was especially high for Barrack Obama's reelection effort, participation has consistently declined in November of presidential-election years. This pattern was not at all reversed by the 2024 presidential election, despite the presence of Kamala Harris at the top of the ticket. Indeed, the gap in turnout between White voters and Black voters was never so large since Obama's last hurrah. Once again, candidate race holds less power than usually supposed. Nor does White voter turnout explain this growing gap, given that it does not change much from 2016 to 2020 to 2024. Presidential turnout underestimates Black voting strength in Louisiana for the simple reason that Black voters have been sitting those contests out, relatively speaking.
- D. What African Americans do not sit out are runoff elections in December. Black turnout was relatively strong in December of 2015 and 2019, despite a moderate White Democrat topping the ticket. That mobilization would only be strengthened by the tendency of Other voters to sit those contests out. African Americans represent a greater share of the electorate during statewide runoff elections. Candidate race should not explain these patterns. Relative Black strength slips in 2023, despite an unresolved Secretary of State election with an African-American woman carrying the Democratic barrier. Notably, Black voters also sat out the October jungle primary, despite an African-American male at the top of the ticket, helping lead to his landslide loss. Should it help, these data are summarized in graphical form

TABLE 5 - Turnout Varies by Race/Ethnicity over Time

YEAR	Total Turnout				Racial Gap	
	TOTAL	WHITE	BLACK	OTHER	White - Black	White - Other
2012 Nov	67.93	69.36	67.19	52.86	2.2	16.5
2012 Dec	15.74	17.93	12.72	7.45	5.2	10.5
2013 Oct	13.22	15.96	9.62	5.62	6.3	10.3
2013 Nov	12.19	15.30	7.60	4.30	7.7	11.0
2014 Nov	51.52	54.79	47.33	34.91	7.5	19.9
2014 Dec	43.64	45.50	42.21	27.81	3.3	17.7
2015 Oct	39.20	42.34	35.22	22.79	7.1	19.6
2015 Nov	40.19	41.92	38.91	25.07	3.0	16.9
2016 Nov	67.79	71.47	62.04	56.49	9.4	15.0
2016 Dec	29.46	32.13	25.74	18.46	6.4	13.7
2018 Nov	50.78	53.65	46.88	38.82	6.8	14.8
2018 Dec	17.68	18.67	16.96	9.89	1.7	8.8
2019 Oct	45.90	49.97	40.35	29.65	9.6	20.3
2019 Nov	51.05	52.75	50.24	35.24	2.5	17.5
2020 Nov	70.14	74.47	63.09	60.70	11.4	13.8
2020 Dec	16.99	17.22	17.79	10.03	-0.6	7.2
2021	12.39	12.24	13.46	6.80	-1.2	5.4
2022	46.72	52.56	37.85	31.28	14.7	21.3
2023 Oct	36.31	41.57	28.84	19.94	12.7	21.6
2023 Nov	23.09	26.81	17.77	11.75	9.0	15.1
2024 Nov	66.35	72.07	57.24	54.42	14.8	17.7
2024 Dec	11.25	11.93	10.84	6.53	1.1	5.4

NOTE: Data from the Louisiana Secretary of State's Elections & Voting page.

as well (see Figure 3 at back of report).

- E. Another feature of presidential-election years can downplay African-American voting strength, which is that at least as far as party registration is concerned, Louisiana's Black voters are less cohesive in November on presidential-election years than they are in other elections. Black Republicans, independents, and third-party registrants turn out more heavily during those high-profile contests than they do during the election years when state offices are filled (see Table 6). Even if we look solely within the African-American electorate, presidential elections have been bringing out a notably different set of voters in partisan terms compared to other elections. What we do not know, based solely on state voter registration/turnout data, is whether those African-American voters also show less cohesion when it comes to vote choice. They could be turning out to vote for the Democratic



TABLE 6 - Alterations in the African-American Electorate over Time

YEAR	Total Turnout		Democrats	Republicans	Independent or Other	Dem - GOP
	TOTAL	BLACK				
2012 Nov	67.93	67.19	70.94	54.26	52.30	16.7
2012 Dec	15.74	12.72	14.53	8.26	5.07	6.3
2013 Oct	13.22	9.62	11.09	5.86	3.53	5.2
2013 Nov	12.19	7.60	8.81	4.58	2.69	4.2
2014 Nov	51.52	47.33	52.28	37.16	28.08	15.1
2014 Dec	43.64	42.21	47.05	30.31	23.72	16.7
2015 Oct	39.20	35.22	39.80	25.01	17.93	14.8
2015 Nov	40.19	38.91	43.89	27.24	20.25	16.7
2016 Nov	67.79	62.04	66.61	50.98	45.02	15.6
2016 Dec	29.46	25.74	29.58	15.99	11.44	13.6
2018 Nov	50.78	46.88	51.88	34.74	28.95	17.1
2018 Dec	17.68	16.96	19.63	10.58	7.39	9.1
2019 Oct	45.90	40.35	45.61	29.54	21.73	16.1
2019 Nov	51.05	50.24	55.57	37.56	31.65	18.0
2020 Nov	70.14	63.09	67.93	51.27	46.51	16.7
2020 Dec	16.99	17.79	20.74	10.93	7.61	9.8
2021	12.39	13.46	16.00	6.86	4.39	9.1
2022	46.72	37.85	42.95	27.86	20.78	15.1
2023 Oct	36.31	28.84	33.52	20.79	13.43	12.7
2023 Nov	23.09	17.77	20.88	12.20	7.59	8.7
2024 Nov	66.35	57.24	62.51	47.01	40.98	15.5
2024 Dec	11.25	10.84	12.85	6.32	4.76	6.5

presidential candidate, despite their decision not to register with the Democratic Party. My final analysis returns to ecological inference to address that question, bringing in presidential voting information for the first time to compare the level of Black voter cohesion across contests.

- F. Most of my analysis so far has been focused on earlier election years, because Dr. Handley's data for those contests was clean, which allowed me to ensure that I was using the exact same information she had available. For this final analysis, I move to more-recent elections – because if my conclusions mostly rely on elections from years ago, they risk being obsolete as soon as I offer them. For that reason, my comparison between presidential and gubernatorial results will look at 2020 and 2023. In making this comparison between the last White presidential candidate and a Black gubernatorial candidate, I reject the idea that having Kamala Harris as a ticket mate made much difference, which fits with the elections literature.

- G. This time, I use data that I gathered myself, and I return to the superior covariate-based EI estimation. The models were set up to predict GOP support rather than Democratic support, so we expect the African-American numbers to be lower, not higher.
- H. Neither the presence of an elderly White candidate at the top of the 2020 presidential ticket, nor the appearance of more Black voters from outside the Democratic Party, stopped Louisiana's Black voters from cohering around Joe Biden's 2020 presidential candidacy. He performed worse in some regions, it seems – more small-town and rural parishes – than in urban areas. But his opponent, Donald Trump, only achieves an estimated 7.5% of the Black vote in even his most competitive parish cluster. In each cluster, Biden outperformed among Black voters the African-American candidate who ran for governor in 2023. In the clusters around East Baton Rouge, African-American support for Republicans especially seems to have jumped. Once again, we see two things: That candidate race is not the driving force that it sometimes is taken to be, and that the off-year electorate has not been behaving in the same way as the electorate in years with federal elections.

## VI. EXECUTIVE SUMMARY

- A. This report was not an open-ended response and reaction to Dr. Handley's multiple submissions in the litigation. Rather, counsel asked me to test two specific hypotheses, the legal significance of which are unknown to me. I did think, however, that both hypotheses were consistent with the social science on race, ethnicity, and elections. The first hypothesis was that "racially polarized voting" does not respond to candidate race, even when isolated to Democratic candidacies, but instead grows out of different partisan preferences. The second is that the electorate in off-year Louisiana elections differs notably from the electorate in the federal elections that Dr. Handley used as part of her Effectiveness Scores.
- B. I was not provided with any of Dr. Handley's computer code, nor did she describe her methodology clearly enough for me to replicate and extend it. And while I was ostensibly provided her data, what I received did not appear to include all of it, and some of the data were corrupted. Specifically, some of her data's precinct identifiers had turned into dates, preventing an immediate way to link up different portions of the analysis. For this reason, my team and I needed to write our own computer code, carrying out the analysis in our own way, and

Table 7 - Comparing Black Voter Cohesion in 2020 &amp; 2023

AGGREGATION	Pres '20	Confidence Interval		Gov '23	Confidence Interval		Diff
	Estimate	Lower	Higher	Estimate	Lower	Higher	
Statewide	5.3%	5.1%	5.5%	12.7%	12.4%	13.1%	7.5%
Senate Cluster 1 & House Cluster 3 (Bossier & Caddo)	4.4%	4.0%	5.2%	8.2%	7.1%	9.4%	3.8%
Senate Cluster 2 (Jefferson & St. Charles)	4.8%	4.0%	5.5%	10.0%	8.6%	11.4%	5.1%
Senate Cluster 3 (EBR, WBR, Iberville, Pointe Coupee)	4.6%	4.1%	5.1%	17.2%	16.5%	18.1%	12.6%
House Cluster 1 (DeSoto, Natchitoches, Red River)	7.1%	5.8%	8.4%	15.4%	13.8%	17.2%	8.3%
House Cluster 2 (Calcasieu)	4.4%	4.4%	5.2%	12.4%	11.4%	14.0%	8.1%
House Cluster 4 (Ascension, Iberville)	7.5%	6.5%	8.6%	12.8%	11.0%	14.8%	5.2%
House Cluster 5 (EBR, E. Feliciana)	4.3%	3.8%	4.9%	18.1%	17.1%	18.9%	13.7%

NOTE: Ecological inferences were produced using base 2x2 EI, with covariates for both the Black vote (i.e., Black density) and for the non-Black vote (i.e., registration as Democrats).

for recent times, we obtained and processed my own data from the Louisiana governmental resources. Nonetheless, I hope this analysis helps add clarity to the remedial proceedings for which it was intended.

- C. Regarding the first hypothesis, racially polarized voting appears to be more a function of distinct partisan (and perhaps ideological) preferences rather than a function of candidate race. African-American candidates across the board not only received less support from White voters, they failed to energize African-American voters, sometimes receiving significantly less support than White candidates on the same ballot or who previously ran for the same office. I was not surprised by this result, because I knew just from my knowledge of current events that a bottom-up racial reaction from the electorate was not all that held those candidates back. Top-down, elite-level differences in the campaigns no doubt worked on the electorate to shape their behavior.
- D. The second hypothesis posed that the electorate in even-numbered years would differ in recognizable ways from the electorate in odd-numbered years. Again, I find this supposition to be supported by contemporary Louisiana voting behavior. African Americans have been relatively unmotivated by presidential elections since 2012, and of those who do vote, they were less likely to be registered Democrats. Nonetheless, looking at the last presidential election with a White candidate, and comparing it to the last gubernatorial election, it is clear that White candidates do not erode Black voter cohesion and Black candidates far from guarantee it – and also that the electorate in federal elections may not do much to inform an analyst attempting to forecast the behavior of voters in state-legislative elections.

## ENDNOTES

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1

[https://www.researchgate.net/publication/376798358\\_Familiarity\\_Doesn't\\_Breed\\_Contempt\\_The\\_Political\\_Geography\\_of\\_Racial\\_Polarization](https://www.researchgate.net/publication/376798358_Familiarity_Doesn't_Breed_Contempt_The_Political_Geography_of_Racial_Polarization)

<sup>2</sup> Voss, D. Stephen. 1996. "Beyond Racial Threat: Failure of an Old Hypothesis in the New South." *Journal of Politics* 58:1156-70.

3

[https://www.researchgate.net/publication/268341180\\_Racial\\_Polarization\\_and\\_Turnout\\_in\\_Louisiana\\_New\\_Insights\\_from\\_Aggregate\\_Data\\_Analysis](https://www.researchgate.net/publication/268341180_Racial_Polarization_and_Turnout_in_Louisiana_New_Insights_from_Aggregate_Data_Analysis)

<sup>4</sup> Voss, D. Stephen. "Less White than Ever? Using Ecological Inference to Probe the Trump Coalition's Diversity in Louisiana" *The Forum*, 2025. <https://doi.org/10.1515/for-2025-2007>.

<sup>5</sup> King, Gary. 1997. *A Solution to the Ecological Inference Problem: Reconstructing Individual Behavior from Aggregate Data*. Princeton, NJ: Princeton University Press. Pp. xxii, 22-24.

<sup>6</sup> Voss, D. Stephen. 2004. "Using Ecological Inference for Contextual Research: When Aggregation Bias Is the Solution as Well as the Problem." In Gary King, Ori Rosen, and Martin Tanner (eds.), *Ecological Inference: New Methodological Strategies*. New York: Cambridge University Press. Pp. 69-96.

<sup>7</sup> Voss, D. Stephen. "Less White than Ever? Using Ecological Inference to Probe the Trump Coalition's Diversity in Louisiana" *The Forum*, 2025. <https://doi.org/10.1515/for-2025-2007>.

<sup>8</sup> Voss, D. Stephen, and David Lublin. 2001. "Black Incumbents, White Districts: An Appraisal of the 1996 Congressional Elections." *American Politics Research* 29(March): 141-82; Voss, D. Stephen, and Penny Miller. 2001. "Following a False Trail: The Hunt for White Backlash in Kentucky's 1996 Desegregation Vote." *State Politics and Policy Quarterly* 1(March):63-82; Lublin, David, and D. Stephen Voss. 2002. "Context and Francophone Support for Sovereignty: An Ecological Analysis." *Canadian Journal of Political Science* 35(March):75-101;

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<sup>10</sup> See, for example, Grofman, Bernard and Lisa Handley. 1995. "1990s Issues in Voting Rights." *Mississippi Law Journal* 65:205-70; Voss, D. Stephen, and David Lublin. 2001. "Black Incumbents, White Districts: An Appraisal of the 1996 Congressional Elections." *American Politics Research* 29(March): 141-82.

<sup>11</sup> Sigelman, Carol K., Lee Sigelman, Barbara J. Walkosz and Michael Nitz. 1995. "Black Candidates, White Voters: Understanding Racial Bias in Political Perceptions." *American Journal of Political Science* 39(Feb.):243-66

<sup>12</sup> Carmines, Edward G., and James A. Stimson. *Issue Evolution: Race and the Transformation of American Politics*. Princeton University Press, 1989. <https://doi.org/10.2307/j.ctv141636r>.

<sup>13</sup> Bol, D., & Verthé, T. (2019, September 30). Strategic Voting Versus Sincere Voting. Oxford Research Encyclopedia of Politics. Retrieved 9 Jun. 2025, from <https://oxfordre.com/politics/view/10.1093/acrefore/9780190228637.001.0001/acrefore-9780190228637-e-932>.

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<sup>14</sup> At times, I will use the base EI package. It implements the seminal simulation-based approach to ecological inference outlined in Gary King, *A Solution to the Ecological Inference Problem: Reconstructing Individual Behavior from Aggregate Data* (Princeton: Princeton University Press, 1997), <http://j.mp/ecinfbook>. The package itself is King, Gary, and Molly Roberts, *Ecological Inference*, V. 1.3-3, Aptech Systems, Windows, 1997. Other times I will rely on a user interface called eiCompare: Collingwood, L., et al. 2016. eiCompare: Comparing Ecological Inference Estimates across EI and EI: RxC. *R J.*, 8(2). It not only converts King's 2x2 base EI into an iterative form, it also provides a relatively easy way to run the RxC version of the method, as introduced in Ori Rosen, Wenxin Jiang, Gary King, and Martin A.. Tanner (2001) "Bayesian and Frequentist Inference for Ecological Inference: The RxC Case." (*Statistica Neerlandica*, Vol.55, nr.2, pp 134-156), <http://j.ms/eiRxC>.

<sup>15</sup> Elliott, Corrine F., James PC Duncan, Tiffany M. Tang, Merle Behr, Karl Kumbier, and Bin Yu. 2025. "Designing a Data Science simulation with MERITS: A Primer." <https://arxiv.org/abs/2403.08971>.

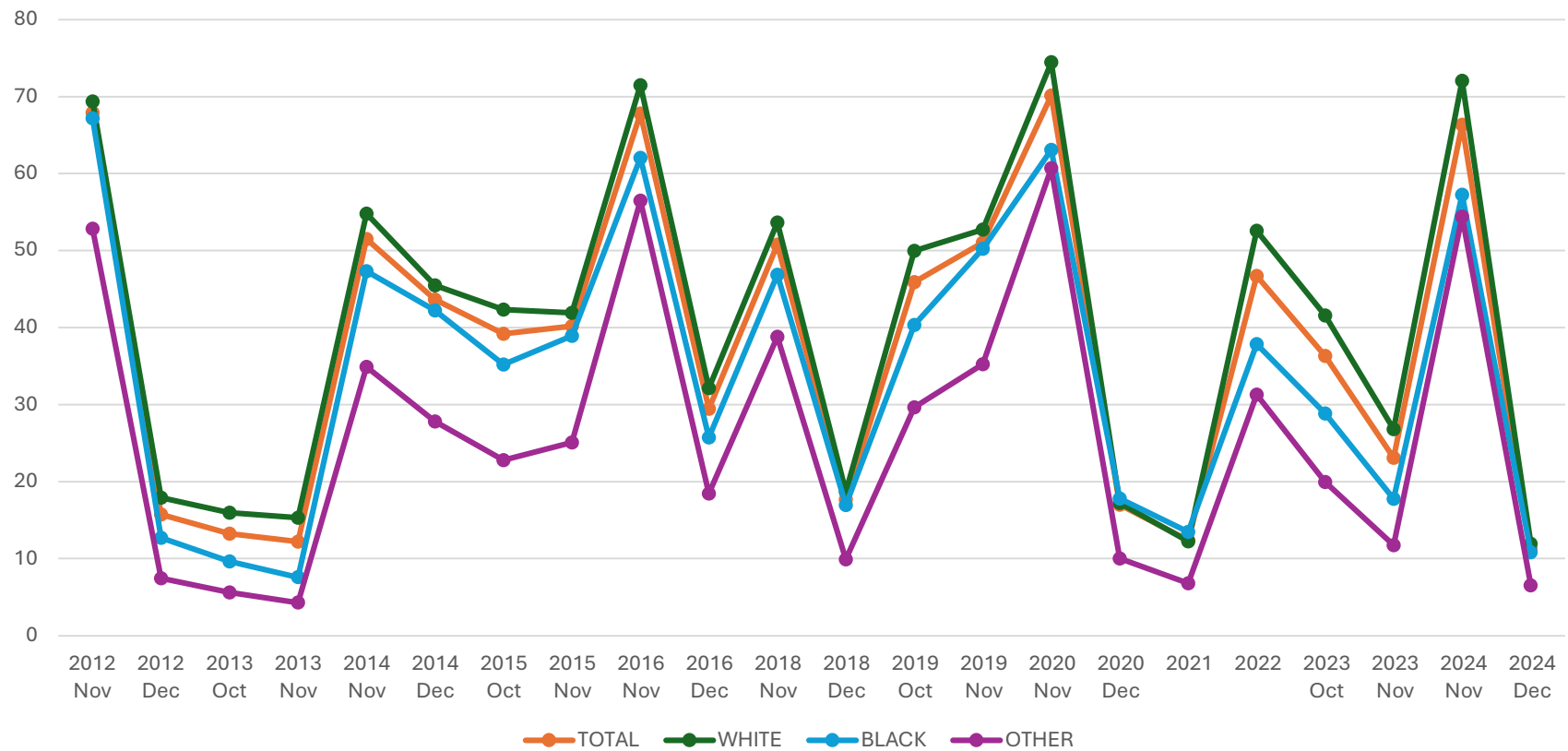
<sup>16</sup> Gnaldi, Michela, Venera Tomaselli, and Antonio Forcina, "Ecological Fallacy and Covariates: New Insights Based on Multilevel Modelling of Individual Data," *International Statistical Review* 86, no. 1, 119-135 (2018): <https://doi.org/10.1111/insr.12244>.

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<sup>18</sup> Voss, D. Stephen, "Using Ecological Inference for Contextual Research: When Aggregation Bias Is the Solution as Well as the Problem," *Ecological Inference: New Methodological Strategies*, edited by Gary King, Ori Rosen, and Martin Tanner, New York: Cambridge University Press, 2004.

<sup>19</sup> Block Jr, Ray, and Christina S. Haynes, "Exploring the Oral Histories of African Americans Who Support Donald Trump," *President Trump's First Term: The Year In C-Span Archives Research*, edited by Robert X. Browning, Purdue University Press, 2020; Sommer, Udi, and Idan Franco, "Trump's African Americans? Racial resentment and Black Support for Trump in the 2020 Elections," *Politics, Groups, and Identities* 12, no. 4, 921-947 (2024): <https://doi.org/10.1080/21565503.2023.2265899>.

FIGURE 3 - Turnout by Race/Ethnicity over Time





### Certification

The opinions expressed above are sworn, under penalty of perjury, to be true and based on the facts and criteria available to the expert witness as of the time of this report. This expert reserves the right to supplement this report as new information becomes available or as requested by the Plaintiffs.

Signed this 10<sup>th</sup> day of June 2025.

A handwritten signature in cursive script that reads "D Stephen Voss".

Dennis G. "Stephen" Voss, Jr.

Double Denny Consulting