

**UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA
ATLANTA DIVISION**

ALPHA PHI ALPHA
FRATERNITY INC., a nonprofit
organization on behalf of members
residing in Georgia; SIXTH
DISTRICT OF THE AFRICAN
METHODIST EPISCOPAL
CHURCH, a Georgia nonprofit
organization; ERIC T. WOODS;
KATIE BAILEY GLENN; PHIL
BROWN; JANICE STEWART,

Plaintiffs,

vs.

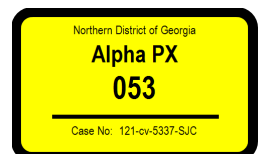
BRAD RAFFENSPERGER, in his
official capacity as Secretary of State
of Georgia.

Defendant.

Case No. 1:21-cv-05337-SCJ

Affidavit of Dr. Lisa Handley

1. Dr. John Alford testified that I used an “older iterative EI technique” that is “not the original King’s EI,” and appears to suggest my methods were somehow inappropriate in the circumstances of this case. I disagree with Dr. Alford’s characterization of my analysis. To produce EI estimates in this litigation I relied on King’s EI. I ran King’s EI iteratively (more than once) to produce



estimates of the percentage of Black and white voters supporting each of the candidates in the election contests I analyzed. To be sure, I did not use EI RxC, which was developed after King's EI.¹ But it is my expert opinion that EI RxC was not required given the circumstances of this case, and I therefore chose to rely on statistical methods that the courts are far more familiar with to analyze voting patterns by race in the six areas of interest to me in Georgia.²

2. I do use EI RxC in two situations (although even then always in combination with King's EI, as well as ecological regression and homogeneous precinct analysis). First, I use it when I am interested in estimating the voting patterns of

¹ Although EI RxC has sometimes been referred to as an "extension of King's EI," it is most commonly associated with the lead author on the article introducing the specific methodology employed to produce EI RxC estimates, Ori Rosen. (Ori Rosen, Wenxin Jiang, Gary King, and Martin A Tanner. 2001. "Bayesian and Frequentist Inference for Ecological Inference: The RxC Case." *Statistica Neerlandica*, 55, Pp. 134–156.)

² Dr. Alford appears to suggest my methodology is outdated, but the statistical analysis I employed in this case is supported by recent scholarship. A comprehensive analysis of real ecological voting data from 14 elections and 78 candidates in multiethnic settings across the United States empirically examined how these two approaches perform side by side and revealed that both methods (King's EI applied iteratively and RxC approach) lead analysts to similar conclusions about RPV. (Matt Barreto, Loren Collingwood L, Sergio Garcia-Rios, Kassra AR Oskooii. 2022. "Estimating Candidate Support in Voting Rights Act Cases: Comparing Iterative EI and EI-RxC Methods." *Sociological Methods & Research*, 51(1), Pp. 271-304, 277). The authors state that there is "remarkable consistency across the two approaches as it pertains to RPV analysis." *Id.* at 283. "To the extent that differences did emerge, they were not systematic in any way and did not alter our substantive conclusions of the overall results." *Id.* at 298. An analysis of 500 randomly generated data sets confirm there is "tremendous consistency between the two methods" such that in "voting rights cases, these observed differences would almost never alter one's substantive conclusions about RPV patterns." *Id.* at 291.

more than two racial/ethnic groups. For example, I recently used EI RxC when estimating the voting patterns of white, Black and Hispanic voters in New York City and in Chicago. Second, I use EI RxC when I do not have turnout by race, but instead must rely on voting age population by race to estimate voting patterns. When I do not have turnout by race data, I use EI RxC to take into account possible differences in turnout by race. For example, I used RxC when estimating Black and white voting patterns in Arkansas because Arkansas does not collect registration by race.

3. In this case, I was interested in the voting patterns of only Black and white voters. And, because Georgia reports voter turnout by race, I did not have to rely on voting age population by race to produce estimates and therefore did not have to account for the possibility of differential turnout by race.
4. I have used King's EI in every voting rights case I have been involved in since King's EI was first introduced into the courts more than 20 years ago, including running it iteratively in appropriate circumstances. Courts have routinely accepted and relied on my expert testimony using the exact methodology I relied on in this case.
5. Dr. Alford also suggested in his testimony that my decision not to state confidence intervals in my report undermines my analysis. As I testified, I reviewed the confidence intervals for my EI analysis and, as is my typical practice, simply did not include them in my report. If Dr. Alford believed confidence intervals were necessary to offer an opinion, he could have replicated my analysis. That is because I was asked by counsel for Defendant on Friday, January 28, 2022, to provide my "data and programming" for the analysis I conducted. I turned the requested files over promptly on January 29,

2022, and January 30, 2022. With this information, an expert in racial bloc voting analysis could simply have reproduced my analysis and reviewed the confidence intervals I considered when forming my opinions.

6. Furthermore, counsel for Defendant could have asked for the output of my analysis, which includes not only the estimates I reported but the confidence intervals for these estimates. Had I been asked to share those outputs, I would have readily done so, as is my standard practice.
7. I reserve the right to modify and/or supplement my opinions, as well as to offer new opinions.
8. Pursuant to 28 U.S.C. § 1746, I declare under penalty of perjury that the foregoing is true and correct.

Respectfully submitted and executed on February 13, 2022.



Dr. Lisa Handley