

EXPERT REPORT OF JOHN R. ALFORD, Ph.D.

Scope of Inquiry

I have been retained by the Georgia Secretary of State as an expert to provide analysis related to *NAACP, et al., v. Brian Kemp* and *Austin Thompson, et al. v. Brian Kemp*. For this report, I have examined the expert report provided by plaintiffs' expert Dr. Richard Engstrom on August 8, 2018 in this case. I have provided a replication of the Ecological Inference analysis of past statewide elections involving Black candidates that were analyzed by Dr. Engstrom in his report in this case. In addition, I have provided similar Ecological Inference analysis of voting in several additional statewide elections involving white candidates in the same ten-county Atlanta metropolitan area of Georgia covered in Dr. Engstrom's analysis. My rate of compensation in this matter is \$400 per hour.

Qualifications

I am a tenured full professor of political science at Rice University. At Rice, I have taught courses on redistricting, elections, political representation, voting behavior and statistical methods at both the undergraduate and graduate level. Over the last thirty years, I have worked with numerous local governments on districting plans and on Voting Rights Act issues. I have previously provided expert reports and/or testified as an expert witness in voting rights and statistical issues in a variety of court cases, working for the U.S. Attorney in Houston, the Texas Attorney General, a U.S. Congressman and various cities and school districts.

In the 2000 round of redistricting, I was retained as an expert to provide advice to the Texas Attorney General in his role as Chair of the Legislative Redistricting Board. I subsequently served as the expert for the State of Texas in the state and federal litigation involving the 2001 redistricting for U.S. Congress, the Texas Senate, the Texas House of Representatives, and the Texas State Board of Education.

In the 2010 round of redistricting in Texas, I was again retained as an expert by the State of Texas to assist in defending various state election maps and systems including the district maps for the U.S. Congress, the Texas Senate, the Texas House of Representatives, and the current at large system for electing Justices to the State Supreme Court and Court of Appeals, as well as the winner-take-all system for allocating Electoral College votes. I have also worked as an expert on redistricting and voting rights cases at the state and/or local level in New York, Michigan, Washington, Louisiana, New Mexico, Mississippi, Wisconsin, Florida, Georgia, and Alabama. The details of my academic background, including all publications in the last ten years, and work as an expert, including all cases in which I have testified by deposition or at trial in the last four years, are covered in the attached vita (Appendix 1).

Data and Sources

In preparing my report, I have reviewed the report filed by the plaintiffs' expert, Dr. Richard Engstrom, in this case. I have relied on precinct level data, including election results, and voter turnout data available publicly from the Georgia Secretary of State's web site, as well as data provided by Dr. Engstrom that he utilized in his report in this case, and provided by him in response to a request for the data used to produce the election analysis estimates in his report in this case.

Gingles Prongs Two and Three

Two techniques commonly used in Voting Rights Act lawsuits to assess voter cohesion and polarization—Ecological Regression (ER) and Ecological Inference (EI)—are described below. While both techniques are often reported together in these cases, Dr. Engstrom reports only Ecological Inference estimates in his report. This is not problematic here, as Ecological Inference is the more recent approach, and in practice the results of the two techniques rarely provide substantively different conclusions given sufficient data.

Ecological Regression analysis is the original statistical estimation technique used in VRA lawsuits to assess voter cohesion and polarization. In a nutshell, regression is a mathematical technique for estimating the single best-fitting straight line that could be drawn to describe the relationship between two variables in a scatter plot. Ecological regression (also called Goodman's regression) is distinct from simple regression in that it relies on a data set made up of precinct level aggregations of voters and election results, rather than a data set of individual voter characteristics and vote choices. This is necessary for the sort of analysis we wish to do here because while we have election results for groups of voters at the polling-place level and also have racial characteristics for the voters in the precinct, we do not have access to the actual vote choice of individual voters.

Applied to voting rights cases, the logic of regression analysis is to determine to what degree, if any, the vote for a candidate increases in a linear fashion as the concentration of voters of a given ethnicity in the precincts increases. This is done by finding the equation for the line that best fits the scatterplot of precinct-level demographics (e.g., percent Black as a proportion of voter turnout in a precinct) and precinct-level support for a given candidate. The

slope of this equation is an estimate of Black voting cohesion for the candidate. The estimates in the same equation can be used to estimate non-Black or non-Hispanic white voting cohesion.¹

Gary King's Ecological Inference (EI) procedure differs from Ecological Regression by recognizing that at least some of the statistical assumptions underlying regression analysis do not hold when one has aggregate data rather than individual data (as we do here). Specifically, the assumptions underlying the regression technique do not recognize that the data are bounded—that is, no more than 100% and no less than 0% of Blacks can vote for a given candidate. Regression can sometimes lead to unsatisfying conclusions, e.g., a model that predicts -10% of Blacks will support a candidate, or relatedly that 110% support among Blacks for another candidate. More importantly, the regression technique does not utilize the information that is inherent in these bounds. For example, if we know that a precinct has 100 voters, of which 98 are Black and 99 people voted for the Black candidate, then we know with complete certainty that at least 97 of the Black voters voted for the Black candidate and at most 98 did. Ecological Regression fails to utilize this deterministic information and so, in some circumstances, does not use all the available data optimally. In contrast, Ecological Inference methods incorporate this information about the bounds for each precinct into the statistical analysis.

As mentioned above, Ecological Regression assumes a linear relationship between the racial composition of precincts and the precinct vote returns. Ecological Inference, in contrast, allows the relationship between the size of the demographic group and support for a candidate to be non-linear. The other major difference is in the mechanism of the actual estimation of

¹ Dr. Engstrom analysis distinguished only between African American and non-African American voters. In other words, white, Hispanic, Asian, and Other categories were grouped together as “non-African American.”

the parameters of the model. Ecological Regression uses a mathematical formula that produces a single specific estimated equation given a set of election data. Ecological Inference estimates the model parameters by an iterative procedure that, over a large number of repeated trials, yields an estimated model that may vary to some degree in repeated estimations, even given the exact same input data. While the details of this estimation procedure are mathematically complex, the bottom line is that Ecological Inference techniques use the available data in a potentially more efficient and less biased way than previous methods.

Election Analysis

To assess the degree of racially polarized voting Dr. Engstrom analyzes elections from 2010, 2012, 2014, and 2016. He includes 13 bi-racial Georgia House elections, six bi-racial Georgia Senate elections, and nine bi-racial statewide elections. In every case except one, the Black candidate in the election was also the Democratic candidate in the election.

Overall, the pattern in these elections included in Dr Engstrom's Tables 1 through 4 is very similar regardless of year or the level of office. Black support for the Democratic candidate is typically in the high 90 percent range in the House, Senate, and statewide elections. The percent of non-Black support for Democratic candidate is typically in the 20s or 30s. Black voters are providing very stable cohesive support for Democratic candidates across offices and elections, and non-Black voters are providing consistent and stable support, albeit at less extreme levels, for Republican candidates.

I have replicated all of Dr. Engstrom's statewide elections, but unlike Dr. Engstrom, I have also included as well two-party contested statewide elections from the same year and ballot that did not include a Black candidate. For the 2010 elections, this added six contests to

the three contests analyzed by Dr. Engstrom. For 2012, there were no additional two-party contested statewide contests beyond the single presidential contest analyzed by Dr. Engstrom. For the 2014 elections, this added four contests to the five contests analyzed by Dr. Engstrom. These results are provided in Tables 1 and 2 below, organized by election year²

The first thing to note is that in every instance my EI estimations for elections that were included in Dr. Engstrom's report are virtually identical to his estimates. Nothing in any of what I draw from the election analysis depends in any way on a distinction between the point estimates or confidence intervals reported by Dr. Engstrom and the substantively identical point estimates and confidence intervals reported here.

Table 1: Statewide Two-Party Contested Elections 2010

2010				% Black	Low	High	% non-Black	Low	High
Office	Candidate	Party	Race	Support	CI	CI	Support	CI	CI
Senator	Michael Thurmond	D	B	99.7%	99.6%	99.7%	21.5%	21.4%	21.6%
Governor	Roy E. Barnes	D	W	99.6%	99.5%	99.7%	28.4%	28.2%	28.5%
Lt Governor	Carol Porter	D	W	99.6%	99.5%	99.7%	25.3%	25.2%	25.5%
Secretary of State	Georganna Sinkfield	D	B	99.6%	99.5%	99.6%	22.0%	21.8%	22.1%
Attorney General	Ken Hodges	D	W	99.6%	99.5%	99.7%	26.6%	26.4%	26.8%
State School Supt.	Joe Martin	D	W	99.6%	99.5%	99.6%	25.9%	25.7%	26.1%
Labor Comm'r	Darryl Hicks	D	B	99.2%	99.1%	99.3%	24.1%	24.0%	24.3%
Comm'r of Insurance	Mary Squires	D	W	99.6%	99.5%	99.7%	27.2%	27.1%	27.4%
Comm'r of Agriculture	J. B. Powell	D	W	99.6%	99.5%	99.7%	23.0%	22.8%	23.2%

² I have focused on the statewide elections because, unlike the districted House and Senate elections, the statewide elections on a given ballot all cover the same geography and the same set of voters are receiving the ballots. Within a given election year, comparing for example, a district with one Black candidate and one white candidate to a district with two white candidates, would necessarily involve comparing two completely distinct sets of voters. Likewise, comparing in a single district an election with one Black candidate and one white candidate to an earlier or later election in the same district with two white candidates, would necessarily involve comparing different election years and, at least to some degree, different voters.

Looking down the column for “% Black Support” indicates clearly that the tendency of Black voters to give highly cohesive support to Democratic candidates is not a function of the race of the candidates. Whether the Democratic candidate is Black or white, Black voter support for the Democratic candidate is always above 90 percent, and typically in the high 90 percent range. Comparing the three similar ‘Commissioner’ offices in the 2010 election, we can see that Darryl Hicks, a Black Democrat running for Labor Commissioner, was supported by an estimated 99.2% of Black voters. Mary Squires, a white Democrat running for Commissioner of Insurance, was supported by an estimated 99.6% of Black voters. J.B. Powell, a white Democrat running for Commissioner of Agriculture, was supported by an estimated 99.6% of Black voters.

Similarly, looking down the entire Table 1 column for “% non-Black Support” indicates clearly that the tendency for the percent of non-Black voter support for Democratic candidates to be in the 20s or 30s is not a function of the race of the candidates. Whether the Democratic candidate is Black or white, non-Black voter support for the Democratic candidate is in the 20 percent range. For the same three similar ‘Commissioner’ offices in the 2010 election discussed above, we can see that Darryl Hicks, a Black Democrat running for Labor Commissioner, was supported by an estimated 24.1% of non-Black voters. Mary Squires, a white Democrat running for Commissioner of Insurance, was supported by an estimated 27.2% of non-Black voters. J.B. Powell, a white Democrat running for Commissioner of Agriculture, was supported by an estimated 23.0% of non-Black voters. Thus, the support that non-Black voters gave to the Black candidate Mr. Hicks, was a bit lower than the support they gave to one of the white Commissioner candidates, Ms. Squires, but it was also bit higher than the support they gave to the other white Democratic candidate, Mr. Powell.

The 2014 election, reported below in Table 2, shows a similar pattern. Again, looking down the entire column for “% Black Support” indicates that the tendency of Black voters to give highly cohesive support to Democratic candidates is not a function of the race of the candidates. Whether the Democratic candidate is Black or white, Black voter support for the Democratic candidate is always above 90 percent, and typically in the high 90 percent range. Comparing the three similar ‘Commissioner’ offices in the 2010 election, we can see that Christopher Irvin, a white Democrat running for Commissioner of Agriculture, was supported by an estimated 98.7% of Black voters. Elizabeth Johnson, a Black Democrat running for Commissioner of Insurance, was supported by an estimated 99.5% of Black voters. Robbin Shipp, a Black Democrat running for Labor Commissioner, was supported by an estimated 99.4% of Black voters.

Table 2: Statewide Two-Party Contested Elections 2014

2014				% Black	Low	High	% non-Black	Low	High
Office	Candidate	Party	Race	Support	CI	CI	Support	CI	CI
Senator	M. Michelle Nunn	D	W	91.9%	91.7%	92.1%	36.0%	35.9%	36.3%
Governor	Jason J. Carter	D	W	98.3%	98.1%	98.4%	33.6%	33.4%	33.8%
Lt Governor	Connie J. Stokes	D	B	99.0%	98.9%	99.1%	26.2%	26.0%	26.3%
Secretary Of State	Doreen Carter	D	B	99.0%	98.9%	99.1%	26.9%	26.8%	27.0%
Attorney General	Gregory K. Hecht	D	W	98.8%	98.7%	98.9%	27.8%	27.7%	28.0%
Comm'r Of Agriculture	Christopher J. Irvin	D	W	98.7%	98.5%	98.8%	25.3%	25.2%	25.4%
Comm'r Of Insurance	Elizabeth N. Johnson	D	B	99.5%	99.4%	99.6%	26.5%	26.4%	26.7%
State School Supt	Valarie D. Wilson	D	B	99.4%	99.3%	99.5%	30.2%	30.0%	30.3%
Comm'r Of Labor	Robbin K. Shipp	D	B	99.4%	99.3%	99.5%	27.0%	26.9%	27.1%

Turning to non-Black voter support, in the column labeled “% non-Black Support” in Table 2, indicates clearly that the tendency for the percent of non-Black voter support for Democratic candidates to be in the 20s or 30s is not a function of the race of the candidates. Whether the Democratic candidate is Black or white, the percent of non-Black voter support for Democratic candidates is in the 20s or 30s. For the same three similar ‘Commissioner’ offices in the 2014 election discussed above, we can see that Christopher Irvin, a white Democrat running for Commissioner of Agriculture, was supported by an estimated 25.3% of non-Black voters. Elizabeth Johnson, a Black Democrat running for Commissioner of Insurance, was supported by an estimated 26.5% of non-Black voters. Robbin Shipp, a Black Democrat running for Labor Commissioner, was supported by an estimated 27.0% of non-Black voters. Thus, support among non-Black voters for the white Democratic candidate, Mr. Irvin, was similar, and if anything slightly lower, than the level of support among non-Black voters for the two Black Democratic candidates.

The fact that the patterns found by Dr. Engstrom in his analysis are patterns of voters responding to the partisan labels of candidates, and not the race of the candidates, is clear in the larger set of statewide elections provided here and discussed above. In Dr. Engstrom’s analysis, the fact that all but one of the Black candidates in his tables were also the Democratic candidates, made it difficult to see this fact, since in all but that one election, support for the Democratic candidate and support for the Black candidate were the same thing. That one exception, however, is notable. The Black candidate in the 2012 election for House District 86 was the Republican, Lisa Kinnemore. Her white Democratic opponent was Michele Henson. In Dr. Engstrom’s Table 1 he reports that he estimated that Lisa Kinnemore received 1 percent

of the Black vote. In other words 99 percent of Black voters supported the Democratic candidate, even though that Democratic candidate was white, and her Republican opponent was Black.

That is exactly the opposite of what we would expect based on the remaining 27 elections in Dr. Engstrom's analysis – *if* we assume that what those other elections show is, as Dr. Engstrom suggests, that Black voters typically give 99 percent of their votes to the Black candidate because they are responding to the fact that the candidate is Black, rather than responding to the fact that the candidate is a Democrat. In contrast, the direction and cohesion of Black votes in District 86 is *exactly* what we would expect based on the broader set of elections provided here that show that regardless of the race of the Democratic candidate, Black voters typically give something very close to 99 percent of their votes to the Democratic candidate.

In discussing the District 86 election, Dr. Engstrom offers no explanation at all for the complete reversal of Black voter support for the Black candidate in House District 86. Instead, Dr. Engstrom draws attention to the behavior of non-Black voters. He notes that his analysis suggests that in 2012, Lisa Kinnemore, the Black Republican, only received 47.5% of the non-Black vote. As noted above, both Dr. Engstrom's analysis and the additional analysis provided here suggests that percent of non-Black voters' support for Democratic candidates typically falls in the 20s or 30s. In the case of this election in District 86, non-black voters are actually providing a slight *majority* of their votes (52.3%) to the Democratic candidate. Is this because non-Black voters in this contest are shifting their votes to avoid supporting a Black candidate over a white candidate, even at the cost of crossing party lines? Or, is it simply a

function of the atypical partisan alignment of non-Black voters in the geography of District 86 (i.e. more white Democratic voters than would be typical in the 10-county area)?

Looking at another contest on the same ballot that year, the presidential contest, is helpful in addressing this question. In that election the Black candidate, President Obama, was also the Democratic candidate. In House District 86 then, the 2012 ballot provides a direct test of the importance of candidate race versus candidate party in the comparison of these two contests. The results of a replication of Dr. Engstrom's analysis for the House District 86 election, along with a similar analysis in District 86 for the 2012 presidential contest are presented in Table 3 below. Unlike the analysis in the 10-county statewide contests, only the District 86 precincts were used in the analysis in Table 3.

Table 3: State House District 86 Elections 2012

2012				% Black	Low	High	% non-Black	Low	High
Office	Candidate	Party	Race	Support	CI	CI	Support	CI	CI
House District 86	Henson	D	W	97.2%	95.6%	99.0%	52.5%	49.6%	55.4%
	Kinnemore	R	B	2.8%	1.0%	4.4%	47.5%	44.6%	50.4%
President	Obama	D	B	99.1%	97.8%	99.8%	52.4%	51.0%	54.5%
	Romney	R	W	0.9%	0.2%	2.2%	47.6%	45.5%	49.0%

The replication of the House District 86 analysis reported by Dr. Engstrom yields results that again are virtually identical to those that he reported in his Table 1. He estimated that Kinnemore received 1.0% of the Black vote and here the estimate is a very similar 2.8% of the vote. The same Black voters in District 86 were giving President Obama an estimated 99.1% of their votes in the presidential contest at the top of the ballot. In other words, these results show that Black voters were consistent in their response to the partisan cues in these

elections, voting almost exclusively for the Democratic candidate in each of these contests. In contrast, Black voters could hardly have been any less responsive to the racial cues in this election, giving one Black candidate more than 99% of their votes and the other Black candidate less than 3% of their support. Again, this clearly demonstrates that Black voters are highly cohesive, but it is equally clear that this is not cohesion for Black candidates, but instead cohesion for Democratic candidates regardless of whether that candidate is Black or white, and even, as we see here in District 86, if the Democratic candidate is white and the Republican candidate is Black.

For non-Black voters, Dr. Engstrom estimated that they provided Ms. Kinnemore with 47.5 percent of their votes, and the replication here yields the same estimate of 47.5%. This is clearly an unusually low level of support for a Republican candidate, particularly when compared to the statewide contests reported here for the full 10-county Atlanta Metro area. Dr. Engstrom notes in regard to Kinnemore's weak showing among non-Black voters that it "is the lowest estimated vote by far among the non-African American voters for a Republican candidate. The other 12 Republican candidates were estimated, as noted above, to have received from 67.3 percent to 82.2 percent of the non-African American vote" (page 10).

Since the other 12 Republican candidates that Dr. Engstrom is referring to were all white, the implication seems to be that non-Black voters are not willing to support a Black Republican at the same levels that they would a white Republican. However, looking at the results in Table 3 we can see that in fact that is not the case. These same non-Black voters gave white Republican Mitt Romney only 47.6 percent of their votes, while giving 52.4 percent support to President Obama. Apparently, a larger than average proportion of non-Black voters in the geography of District 86 lean Democratic, and their vote splits accordingly.

Any implication that non-Black support for Republican Lisa Kinnemore was diminished by the fact that she was Black, and her opponent Michele Henson is white, is not tenable in light of the essentially identical low level of non-Black support for the white Republican Mitt Romney in a contest in which he ran against a black Democrat.

Summary Conclusions

Dr. Engstrom's report attempts to demonstrate that the race of candidates is linked directly to the behavior of Black versus non-Black voters in recent elections in the 10-county Metro Atlanta area. As he notes in his summary of his findings on page 12 of his report:

Racially polarized voting is acute in state House elections, state Senate elections, and statewide elections in the 10-county metro Atlanta area. As noted consistently above, African American voters in that area have been strongly cohesive in their support for the African American candidates in these elections. There is only one exception to this among the 28 elections examined. Likewise, non-African American voters have not shared this preference. Again, there is only one election where that is not the case.

Note that Dr. Engstrom is explicit in connecting the race of the candidates with the race of the voters. As he says, "African American voters in that area have been strongly cohesive in their support for the African American candidates", while in contrast "non-African American voters have not shared this preference" (for African-American candidates) (page 12, emphasis added). This is an important point, as the existence of, and the empirical demonstration of, this connection between the race of the candidate and the preferences of voters is at the heart of what distinguishes voting behavior and election losses based on race, from voting behavior and elections losses based on group differences in policy preferences or party affiliation. While Dr. Engstrom asserts that the election analysis provides empirical support for his contention

that the race of the candidates is driving voter polarization, the election analysis demonstrates exactly the opposite.

What the voting patterns actually show is that there is clear evidence of high levels, typically over 90 percent, of Black support for *Democratic* candidates, and clear, typically around 75 percent, non-Black support for *Republican* candidates. This clear pattern of partisan voting remains stable regardless of the race of the candidates.

September 28, 2018.



John R. Alford, Ph.D

APPENDIX 1

John R. Alford
Curriculum Vitae
September 2018

Dept. of Political Science
Rice University - MS-24
P.O. Box 1892
Houston, Texas 77251-1892
713-348-3364
jra@rice.edu

Employment:

Full Professor, Rice University, 2015 to present.
Associate Professor, Rice University, 1985-2015.
Assistant Professor, University of Georgia, 1981-1985.
Instructor, Oakland University, 1980-1981.
Teaching-Research Fellow, University of Iowa, 1977-1980.
Research Associate, Institute for Urban Studies, Houston, Texas, 1976-1977.

Education:

Ph.D., University of Iowa, Political Science, 1981.
M.A., University of Iowa, Political Science, 1980.
M.P.A., University of Houston, Public Administration, 1977.
B.S., University of Houston, Political Science, 1975.

Books:

Predisposed: Liberals, Conservatives, and the Biology of Political Differences. New York: Routledge, 2013. Co-authors, John R. Hibbing and Kevin B. Smith.

Articles:

“Intuitive ethics and political orientations: Testing moral foundations as a theory of political ideology.” with Kevin Smith, John Hibbing, Nicholas Martin, and Peter Hatemi. **American Journal of Political Science.** (April, 2017).

“The Genetic and Environmental Foundations of Political, Psychological, Social, and Economic Behaviors: A Panel Study of Twins and Families.” with Peter Hatemi, Kevin Smith, and John Hibbing. **Twin Research and Human Genetics.** (May, 2015.)

“Liberals and conservatives: Non-convertible currencies.” with John R. Hibbing and Kevin B. Smith. **Behavioral and Brain Sciences** (January, 2015).

“Non-Political Images Evoke Neural Predictors Of Political Ideology.” with Woo-Young Ahn, Kenneth T. Kishida, Xiaosi Gu, Terry Lohrenz, Ann Harvey, Kevin Smith, Gideon Yaffe, John Hibbing, Peter Dayan, P. Read Montague. **Current Biology.** (November, 2014).

“Cortisol and Politics: Variance in Voting Behavior is Predicted by Baseline Cortisol Levels.” with Jeffrey French, Kevin Smith, Adam Guck, Andrew Birnie, and John Hibbing. **Physiology & Behavior**. (June, 2014).

“Differences in Negativity Bias Underlie Variations in Political Ideology.” with Kevin B. Smith and John R. Hibbing. **Behavioral and Brain Sciences**. (June, 2014).

“Negativity bias and political preferences: A response to commentators Response.” with Kevin B. Smith and John R. Hibbing. **Behavioral and Brain Sciences**. (June, 2014).

“Genetic and Environmental Transmission of Political Orientations.” with Carolyn L. Funk, Matthew Hibbing, Kevin B. Smith, Nicholas R. Eaton, Robert F. Krueger, Lindon J. Eaves, John R. Hibbing. **Political Psychology**, (December, 2013).

“Biology, Ideology, and Epistemology: How Do We Know Political Attitudes Are Inherited and Why Should We Care?” with Kevin Smith, Peter K. Hatemi, Lindon J. Eaves, Carolyn Funk, and John R. Hibbing. **American Journal of Political Science**. (January, 2012)

“Disgust Sensitivity and the Neurophysiology of Left-Right Political Orientations.” with Kevin Smith, John Hibbing, Douglas Oxley, and Matthew Hibbing, **PlosONE**, (October, 2011).

“Linking Genetics and Political Attitudes: Re-Conceptualizing Political Ideology.” with Kevin Smith, John Hibbing, Douglas Oxley, and Matthew Hibbing, **Political Psychology**, (June, 2011).

“The Politics of Mate Choice.” with Peter Hatemi, John R. Hibbing, Nicholas Martin and Lindon Eaves, **Journal of Politics**, (March, 2011).

“Not by Twins Alone: Using the Extended Twin Family Design to Investigate the Genetic Basis of Political Beliefs” with Peter Hatemi, John Hibbing, Sarah Medland, Matthew Keller, Kevin Smith, Nicholas Martin, and Lindon Eaves, **American Journal of Political Science**, (July, 2010).

“The Ultimate Source of Political Opinions: Genes and the Environment” with John R. Hibbing in **Understanding Public Opinion**, 3rd Edition eds. Barbara Norrander and Clyde Wilcox, Washington D.C.: CQ Press, (2010).

“Is There a ‘Party’ in your Genes” with Peter Hatemi, John R. Hibbing, Nicholas Martin and Lindon Eaves, **Political Research Quarterly**, (September, 2009).

“Twin Studies, Molecular Genetics, Politics, and Tolerance: A Response to Beckwith and Morris” with John R. Hibbing and Cary Funk, **Perspectives on Politics**, (December, 2008). This is a solicited response to a critique of our 2005 APSR article “Are Political Orientations Genetically Transmitted?”

“Political Attitudes Vary with Physiological Traits” with Douglas R. Oxley, Kevin B. Smith, Matthew V. Hibbing, Jennifer L. Miller, Mario Scalora, Peter K. Hatemi, and John R. Hibbing, **Science**, (September 19, 2008).

“The New Empirical Biopolitics” with John R. Hibbing, **Annual Review of Political Science**, (June, 2008).

“Beyond Liberals and Conservatives to Political Genotypes and Phenotypes” with John R. Hibbing and Cary Funk, **Perspectives on Politics**, (June, 2008). This is a solicited response to a critique of our 2005 APSR article “Are Political Orientations Genetically Transmitted?”

“Personal, Interpersonal, and Political Temperaments” with John R. Hibbing, **Annals of the American Academy of Political and Social Science**, (November, 2007).

“Is Politics in our Genes?” with John R. Hibbing, **Tidsskriftet Politik**, (February, 2007).

“Biology and Rational Choice” with John R. Hibbing, **The Political Economist**, (Fall, 2005)

“Are Political Orientations Genetically Transmitted?” with John R. Hibbing and Carolyn Funk, **American Political Science Review**, (May, 2005). (The main findings table from this article has been reprinted in two college level text books - Psychology, 9th ed. and Invitation to Psychology 4th ed. both by Wade and Tavris, Prentice Hall, 2007).

“The Origin of Politics: An Evolutionary Theory of Political Behavior” with John R. Hibbing, **Perspectives on Politics**, (December, 2004).

“Accepting Authoritative Decisions: Humans as Wary Cooperators” with John R. Hibbing, **American Journal of Political Science**, (January, 2004).

“Electoral Convergence of the Two Houses of Congress” with John R. Hibbing, in **The Exceptional Senate**, ed. Bruce Oppenheimer, Columbus: Ohio State University Press, (2002).

“We’re All in this Together: The Decline of Trust in Government, 1958-1996.” in **What is it About Government that Americans Dislike?**, eds. John Hibbing and Beth Theiss-Morse, Cambridge: Cambridge University Press, (2001).

“The 2000 Census and the New Redistricting,” **Texas State Bar Association School Law Section Newsletter**, (July, 2000).

“Overdraft: The Political Cost of Congressional Malfeasance” with Holly Teeters, Dan Ward, and Rick Wilson, **Journal of Politics** (August, 1994).

"Personal and Partisan Advantage in U.S. Congressional Elections, 1846-1990" with David W. Brady, in **Congress Reconsidered** 5th edition, eds. Larry Dodd and Bruce Oppenheimer, CQ Press, (1993).

"The 1990 Congressional Election Results and the Fallacy that They Embodied an Anti-Incumbent Mood" with John R. Hibbing, **PS** 25 (June, 1992).

"Constituency Population and Representation in the United States Senate" with John R. Hibbing, **Legislative Studies Quarterly**, (November, 1990).

"Editors' Introduction: Electing the U.S. Senate" with Bruce I. Oppenheimer. **Legislative Studies Quarterly**, (November, 1990).

"Personal and Partisan Advantage in U.S. Congressional Elections, 1846-1990" with David W. Brady, in **Congress Reconsidered** 4th edition, eds. Larry Dodd and Bruce Oppenheimer, CQ Press, (1988). Reprinted in *The Congress of the United States, 1789-1989*, ed. Joel Silby, Carlson Publishing Inc., (1991), and in *The Quest for Office*, eds. Wayne and Wilcox, St. Martins Press, (1991).

"Can Government Regulate Fertility? An Assessment of Pro-natalist Policy in Eastern Europe" with Jerome Legge. **The Western Political Quarterly** (December, 1986).

"Partisanship and Voting" with James Campbell, Mary Munro, and Bruce Campbell, in **Research in Micropolitics. Volume 1 - Voting Behavior**. Samuel Long, ed. JAI Press, (1986).

"Economic Conditions and Individual Vote in the Federal Republic of Germany" with Jerome S. Legge. **Journal of Politics** (November, 1984).

"Television Markets and Congressional Elections" with James Campbell and Keith Henry. **Legislative Studies Quarterly** (November, 1984).

"Economic Conditions and the Forgotten Side of Congress: A Foray into U.S. Senate Elections" with John R. Hibbing, **British Journal of Political Science** (October, 1982).

"Increased Incumbency Advantage in the House" with John R. Hibbing, **Journal of Politics** (November, 1981). Reprinted in *The Congress of the United States, 1789-1989*, Carlson Publishing Inc., (1991).

"The Electoral Impact of Economic Conditions: Who is Held Responsible?" with John R. Hibbing, **American Journal of Political Science** (August, 1981).

"Comment on Increased Incumbency Advantage" with John R. Hibbing, Refereed communication: **American Political Science Review** (March, 1981).

"Can Government Regulate Safety? The Coal Mine Example" with Michael Lewis-Beck, **American Political Science Review** (September, 1980).

Awards and Honors:

CQ Press Award - 1988, honoring the outstanding paper in legislative politics presented at the 1987 Annual Meeting of the American Political Science Association. Awarded for "The Demise of the Upper House and the Rise of the Senate: Electoral Responsiveness in the United States Senate" with John Hibbing.

Research Grants:

National Science Foundation, 2009-2011, "Identifying the Biological Influences on Political Temperaments", with John Hibbing, Kevin Smith, Kim Espy, Nicolas Martin and Read Montague. This is a collaborative project involving Rice, University of Nebraska, Baylor College of Medicine, and Queensland Institute for Medical Research.

National Science Foundation, 2007-2010, "Genes and Politics: Providing the Necessary Data", with John Hibbing, Kevin Smith, and Lindon Eaves. This is a collaborative project involving Rice, University of Nebraska, Virginia Commonwealth University, and the University of Minnesota.

National Science Foundation, 2007-2010, "Investigating the Genetic Basis of Economic Behavior", with John Hibbing and Kevin Smith. This is a collaborative project involving Rice, University of Nebraska, Virginia Commonwealth University, and the Queensland Institute of Medical Research.

Rice University Faculty Initiatives Fund, 2007-2009, "The Biological Substrates of Political Behavior". This is in assistance of a collaborative project involving Rice, Baylor College of Medicine, Queensland Institute of

Medical Research, University of Nebraska, Virginia Commonwealth University, and the University of Minnesota.

National Science Foundation, 2004-2006, "Decision-Making on Behalf of Others", with John Hibbing. This is a collaborative project involving Rice and the University of Nebraska.

National Science Foundation, 2001-2002, dissertation grant for Kevin Arceneaux, "Doctoral Dissertation Research in Political Science: Voting Behavior in the Context of U.S. Federalism."

National Science Foundation, 2000-2001, dissertation grant for Stacy Ulbig, "Doctoral Dissertation Research in Political Science: Sub-national Contextual Influences on Political Trust."

National Science Foundation, 1999-2000, dissertation grant for Richard Engstrom, "Doctoral Dissertation Research in Political Science: Electoral District Structure and Political Behavior."

Rice University Research Grant, 1985, Recent Trends in British Parliamentary Elections.

Faculty Research Grants Program, University of Georgia, Summer, 1982. Impact of Media Structure on Congressional Elections, with James Campbell.

Papers Presented:

"The Physiological Basis of Political Temperaments" 6th European Consortium for Political Research General Conference, Reykjavik, Iceland (2011), with Kevin Smith, and John Hibbing.

"Identifying the Biological Influences on Political Temperaments" National Science Foundation Annual Human Social Dynamics Meeting (2010), with John Hibbing, Kimberly Espy, Nicholas Martin, Read Montague, and Kevin B. Smith.

"Political Orientations May Be Related to Detection of the Odor of Androstenone" Annual meeting of the Midwest Political Science Association, Chicago, IL (2010), with Kevin Smith, Amanda Balzer, Michael Gruszczynski, Carly M. Jacobs, and John Hibbing.

"Toward a Modern View of Political Man: Genetic and Environmental Transmission of Political Orientations from Attitude Intensity to Political Participation" Annual meeting of the American Political Science Association, Washington, DC (2010), with Carolyn Funk, Kevin Smith, and John Hibbing.

"Genetic and Environmental Transmission of Political Involvement from Attitude Intensity to Political Participation" Annual meeting of the International Society for Political Psychology, San Francisco, CA (2010), with Carolyn Funk, Kevin Smith, and John Hibbing.

"Are Violations of the EEA Relevant to Political Attitudes and Behaviors?" Annual meeting of the Midwest Political Science Association, Chicago, IL (2010), with Kevin Smith, and John Hibbing.

"The Neural Basis of Representation" Annual meeting of the American Political Science Association, Toronto, Canada (2009), with John Hibbing.

“Genetic and Environmental Transmission of Value Orientations” Annual meeting of the American Political Science Association, Toronto, Canada (2009), with Carolyn Funk, Kevin Smith, Matthew Hibbing, Pete Hatemi, Robert Krueger, Lindon Eaves, and John Hibbing.

“The Genetic Heritability of Political Orientations: A New Twin Study of Political Attitudes” Annual Meeting of the International Society for Political Psychology, Dublin, Ireland (2009), with John Hibbing, Cary Funk, Kevin Smith, and Peter K Hatemi.

“The Heritability of Value Orientations” Annual meeting of the Behavior Genetics Association, Minneapolis, MN (2009), with Kevin Smith, John Hibbing, Carolyn Funk, Robert Krueger, Peter Hatemi, and Lindon Eaves.

“The Ick Factor: Disgust Sensitivity as a Predictor of Political Attitudes” Annual meeting of the Midwest Political Science Association, Chicago, IL (2009), with Kevin Smith, Douglas Oxley Matthew Hibbing, and John Hibbing.

“The Ideological Animal: The Origins and Implications of Ideology” Annual meeting of the American Political Science Association, Boston, MA (2008), with Kevin Smith, Matthew Hibbing, Douglas Oxley, and John Hibbing.

“The Physiological Differences of Liberals and Conservatives” Annual meeting of the Midwest Political Science Association, Chicago, IL (2008), with Kevin Smith, Douglas Oxley, and John Hibbing.

“Looking for Political Genes: The Influence of Serotonin on Political and Social Values” Annual meeting of the Midwest Political Science Association, Chicago, IL (2008), with Peter Hatemi, Sarah Medland, John Hibbing, and Nicholas Martin.

“Not by Twins Alone: Using the Extended Twin Family Design to Investigate the Genetic Basis of Political Beliefs” Annual meeting of the American Political Science Association, Chicago, IL (2007), with Peter Hatemi, John Hibbing, Matthew Keller, Nicholas Martin, Sarah Medland, and Lindon Eaves.

“Factorial Association: A generalization of the Fulker between-within model to the multivariate case” Annual meeting of the Behavior Genetics Association, Amsterdam, The Netherlands (2007), with Sarah Medland, Peter Hatemi, John Hibbing, William Coventry, Nicholas Martin, and Michael Neale.

“Not by Twins Alone: Using the Extended Twin Family Design to Investigate the Genetic Basis of Political Beliefs” Annual meeting of the Midwest Political Science Association, Chicago, IL (2007), with Peter Hatemi, John Hibbing, Nicholas Martin, and Lindon Eaves.

“Getting from Genes to Politics: The Connecting Role of Emotion-Reading Capability” Annual Meeting of the International Society for Political Psychology, Portland, OR, (2007.), with John Hibbing.

“The Neurological Basis of Representative Democracy.” Hendricks Conference on Political Behavior, Lincoln, NE (2006), with John Hibbing.

“The Neural Basis of Representative Democracy” Annual meeting of the American Political Science Association, Philadelphia, PA (2006), with John Hibbing.

“How are Political Orientations Genetically Transmitted? A Research Agenda” Annual meeting of the Midwest Political Science Association, Chicago Illinois (2006), with John Hibbing.

"The Politics of Mate Choice" Annual meeting of the Southern Political Science Association, Atlanta, GA (2006), with John Hibbing.

"The Challenge Evolutionary Biology Poses for Rational Choice" Annual meeting of the American Political Science Association, Washington, DC (2005), with John Hibbing and Kevin Smith.

"Decision Making on Behalf of Others" Annual meeting of the American Political Science Association, Washington, DC (2005), with John Hibbing.

"The Source of Political Attitudes and Behavior: Assessing Genetic and Environmental Contributions" Annual meeting of the Midwest Political Science Association, Chicago Illinois (2005), with John Hibbing and Carolyn Funk.

"The Source of Political Attitudes and Behavior: Assessing Genetic and Environmental Contributions" Annual meeting of the American Political Science Association, Chicago Illinois (2004), with John Hibbing and Carolyn Funk.

"Accepting Authoritative Decisions: Humans as Wary Cooperators" Annual Meeting of the Midwest Political Science Association, Chicago, Illinois (2002), with John Hibbing

"Can We Trust the NES Trust Measure?" Annual Meeting of the Midwest Political Science Association, Chicago, Illinois (2001), with Stacy Ulbig.

"The Impact of Organizational Structure on the Production of Social Capital Among Group Members" Annual Meeting of the Southern Political Science Association, Atlanta, Georgia (2000), with Allison Rinden.

"Isolating the Origins of Incumbency Advantage: An Analysis of House Primaries, 1956-1998" Annual Meeting of the Southern Political Science Association, Atlanta, Georgia (2000), with Kevin Arceneaux.

"The Electorally Indistinct Senate," Norman Thomas Conference on Senate Exceptionalism, Vanderbilt University; Nashville, Tennessee; October (1999), with John R. Hibbing.

"Interest Group Participation and Social Capital" Annual Meeting of the Midwest Political Science Association, Chicago, Illinois (1999), with Allison Rinden.

"We're All in this Together: The Decline of Trust in Government, 1958-1996." The Hendricks Symposium, University of Nebraska, Lincoln. (1998)

"Constituency Population and Representation in the United States Senate," Electing the Senate; Houston, Texas; December (1989), with John R. Hibbing.

"The Disparate Electoral Security of House and Senate Incumbents," American Political Science Association Annual Meetings; Atlanta, Georgia; September (1989), with John R. Hibbing.

"Partisan and Incumbent Advantage in House Elections," Annual Meeting of the Southern Political Science Association (1987), with David W. Brady.

"Personal and Party Advantage in U.S. House Elections, 1846-1986" with David W. Brady, 1987 Social Science History Association Meetings.

"The Demise of the Upper House and the Rise of the Senate: Electoral Responsiveness in the United States Senate" with John Hibbing, 1987 Annual Meeting of the American Political Science Association.

"A Comparative Analysis of Economic Voting" with Jerome Legge, 1985 Annual Meeting of the American Political Science Association.

"An Analysis of Economic Conditions and the Individual Vote in Great Britain, 1964-1979" with Jerome Legge, 1985 Annual Meeting of the Western Political Science Association.

"Can Government Regulate Fertility? An Assessment of Pro-natalist Policy in Eastern Europe" with Jerome Legge, 1985 Annual Meeting of the Southwestern Social Science Association.

"Economic Conditions and the Individual Vote in the Federal Republic of Germany" with Jerome S. Legge, 1984 Annual Meeting of the Southern Political Science Association.

"The Conditions Required for Economic Issue Voting" with John R. Hibbing, 1984 Annual Meeting of the Midwest Political Science Association.

"Incumbency Advantage in Senate Elections," 1983 Annual Meeting of the Midwest Political Science Association.

"Television Markets and Congressional Elections: The Impact of Market/District Congruence" with James Campbell and Keith Henry, 1982 Annual Meeting of the Southern Political Science Association.

"Economic Conditions and Senate Elections" with John R. Hibbing, 1982 Annual Meeting of the Midwest Political Science Association. "Pocketbook Voting: Economic Conditions and Individual Level Voting," 1982 Annual Meeting of the American Political Science Association.

"Increased Incumbency Advantage in the House," with John R. Hibbing, 1981 Annual Meeting of the Midwest Political Science Association.

Other Conference Participation:

Roundtable Participant – Closing Round-table on Biopolitics; UC Merced Conference on Bio-Politics and Political Psychology, Merced, CA.

Roundtable Participant “Genes, Brains, and Core Political Orientations” 2008 Annual Meeting of the Southwestern Political Science Association, Las Vegas.

Roundtable Participant “Politics in the Laboratory” 2007 Annual Meeting of the Southern Political Science Association, New Orleans.

Short Course Lecturer, "What Neuroscience has to Offer Political Science” 2006 Annual Meeting of the American Political Science Association.

Panel chair and discussant, "Neuro-scientific Advances in the Study of Political Science” 2006 Annual Meeting of the American Political Science Association.

Presentation, "The Twin Study Approach to Assessing Genetic Influences on Political Behavior" Rice Conference on New Methods for Understanding Political Behavior, 2005.

Panel discussant, "The Political Consequences of Redistricting," 2002 Annual Meeting of the American Political Science Association.

Panel discussant, "Race and Redistricting," 1999 Annual Meeting of the Midwest Political Science Association.

Invited participant, "Roundtable on Public Dissatisfaction with American Political Institutions", 1998 Annual Meeting of the Southwestern Social Science Association.

Presentation, "Redistricting in the '90s," Texas Economic and Demographic Association, 1997.

Panel chair, "Congressional Elections," 1992 Annual Meeting of the Southern Political Science Association.

Panel discussant, "Incumbency and Congressional Elections," 1992 Annual Meeting of the American Political Science Association.

Panel chair, "Issues in Legislative Elections," 1991 Annual Meeting of the Midwest Political Science Association.

Panel chair, "Economic Attitudes and Public Policy in Europe," 1990 Annual Meeting of the Southern Political Science Association

Panel discussant, "Retrospective Voting in U.S. Elections," 1990 Annual Meeting of the Midwest Political Science Association.

Co-convener, with Bruce Oppenheimer, of Electing the Senate, a national conference on the NES 1988 Senate Election Study. Funded by the Rice Institute for Policy Analysis, the University of Houston Center for Public Policy, and the National Science Foundation, Houston, Texas, December, 1989.

Invited participant, Understanding Congress: A Bicentennial Research Conference, Washington, D.C., February, 1989.

Invited participant--Hendricks Symposium on the United States Senate, University of Nebraska, Lincoln, Nebraska, October, 1988

Invited participant--Conference on the History of Congress, Stanford University, Stanford, California, June, 1988.

Invited participant, "Roundtable on Partisan Realignment in the 1980's", 1987 Annual Meeting of the Southern Political Science Association.

Professional Activities:

Other Universities:

Invited Speaker, Annual Lecture, Psi Kappa -the Psychology Club at Houston Community College, 2018.

Invited Speaker, Annual Allman Family Lecture, Dedman College Interdisciplinary Institute, Southern Methodist University, 2016.

Invited Speaker, Annual Lecture, Psi Sigma Alpha – Political Science Dept., Oklahoma State University, 2015.

Invited Lecturer, Department of Political Science, Vanderbilt University, 2014.

Invited Speaker, Annual Lecture, Psi Kappa -the Psychology Club at Houston Community College, 2014.

Invited Speaker, Graduate Student Colloquium, Department of Political Science, University of New Mexico, 2013.

Invited Keynote Speaker, Political Science Alumni Evening, University of Houston, 2013.

Invited Lecturer, Biology and Politics Masters Seminar (John Geer and David Bader), Department of Political Science and Biology Department, Vanderbilt University, 2010.

Invited Lecturer, Biology and Politics Senior Seminar (John Geer and David Bader), Department of Political Science and Biology Department, Vanderbilt University, 2008.

Visiting Fellow, the Hoover Institution, Stanford University, 2007.

Invited Speaker, Joint Political Psychology Graduate Seminar, University of Minnesota, 2007.

Invited Speaker, Department of Political Science, Vanderbilt University, 2006.

Member:

Editorial Board, Journal of Politics, 2007-2008.

Planning Committee for the National Election Studies' Senate Election Study, 1990-92.

Nominations Committee, Social Science History Association, 1988

Reviewer for:

American Journal of Political Science

American Political Science Review

American Politics Research

American Politics Quarterly

American Psychologist

American Sociological Review

Canadian Journal of Political Science

Comparative Politics

Electoral Studies

Evolution and Human Behavior

International Studies Quarterly

Journal of Politics
Journal of Urban Affairs
Legislative Studies Quarterly
National Science Foundation
PLoS ONE
Policy Studies Review
Political Behavior
Political Communication
Political Psychology
Political Research Quarterly
Public Opinion Quarterly
Science
Security Studies
Social Forces
Social Science Quarterly
Western Political Quarterly

University Service:

Member, University Parking Committee, 2016-2018.

Member, University Benefits Committee, 2013-2016.

Internship Director for the Department of Political Science, 2004-2018.

Member, University Council, 2012-2013.

Invited Speaker, Rice Classroom Connect, 2016.

Invited Speaker, Glasscock School, 2016.

Invited Speaker, Rice Alumni Association, Austin, 2016.

Invited Speaker, Rice Alumni Association, New York City, 2016.

Invited Speaker, Rice TEDxRiceU , 2013.

Invited Speaker, Rice Alumni Association, Atlanta, 2011.

Lecturer, Advanced Topics in AP Psychology, Rice University AP Summer Institute, 2009.

Scientia Lecture Series: "Politics in Our Genes: The Biology of Ideology" 2008

Invited Speaker, Rice Alumni Association, Seattle, San Francisco and Los Angeles, 2008.

Invited Speaker, Rice Alumni Association, Austin, Chicago and Washington, DC, 2006.

Invited Speaker, Rice Alumni Association, Dallas and New York, 2005.

Director: Rice University Behavioral Research Lab and Social Science Computing Lab, 2005-2006.

University Official Representative to the Inter-university Consortium for Political and Social Research, 1989-2012.

Director: Rice University Social Science Computing Lab, 1989-2004.

Member, Rice University Information Technology Access and Security Committee, 2001-2002

Rice University Committee on Computers, Member, 1988-1992, 1995-1996; Chair, 1996-1998, Co-chair, 1999.

Acting Chairman, Rice Institute for Policy Analysis, 1991-1992.

Divisional Member of the John W. Gardner Dissertation Award Selection Committee, 1998

Social Science Representative to the Educational Sub-committee of the Computer Planning Committee, 1989-1990.

Director of Graduate Admissions, Department of Political Science, Rice University, 1986-1988.

Co-director, Mellon Workshop: Southern Politics, May, 1988.

Guest Lecturer, Mellon Workshop: The U.S. Congress in Historical Perspective, May, 1987 and 1988.

Faculty Associate, Hanszen College, Rice University, 1987-1990.

Director, Political Data Analysis Center, University of Georgia, 1982-1985.

External Consulting:

Expert Witness, NAACP v. East Ramapo Central School District, racially polarized voting analysis, 2018.

Expert Witness, Georgia NAACP v. State of Georgia, racially polarized voting analysis, 2018.

Expert Witness, Arismendez v. Coastal Bend College, racially polarized voting analysis, 2017.

Expert Witness, United States v. City of Eastpoint, racially polarized voting analysis, 2017.

Expert Witness, Georgia NAACP v. Gwinnett County, racially polarized voting analysis, 2017.

Expert Witness for the State of Texas, Lopez, et al v. Abbott, a challenge to the current system of statewide at-large elections for the Texas Supreme Court and the Texas Court of Criminal Appeals, including election analysis, and racially polarized voting analysis, 2017.

Expert witness for the State of Texas, Perez, et al v State of Texas (and consolidated cases), challenge to adopted Texas election districts for the US Congress and the Texas House of Representatives, 2011-2017.

Expert Witness for Coppell ISD, Jain v. Coppell ISD, racially polarized voting analysis, 2016.

Consultant, City of Clute, Texas – Demographic analysis and redrawing of election districts, 2015.

Expert Witness for Carrollton-Farmers Branch ISD, Ramos v. Carrollton-Farmers Branch ISD, racially polarized voting analysis, 2015.

Expert Witness for Coahoma County, Columbus Partee, et al. v. Coahoma County, Mississippi, racially polarized voting analysis, 2015.

Expert Witness for the State of Louisiana, Terrebonne Parish NAACP v. Jindal, racially polarized voting analysis, 2015.

Expert Witness for the City of Pasadena, Patino v. City of Pasadena, racially polarized voting analysis, 2015.

Expert Witness for the City of St. Gabriel, York v. City of St. Gabriel, racially polarized voting analysis, 2014.

Consultant, Houston ISD – Incorporation of North Forest ISD, and the consequent redrawing of all nine board member election districts including demographic analysis, board and public hearing presentations and support for pre-clearance submission, 2014.

Expert Witness for Grand Prairie ISD, Rodriguez v. Grand Prairie ISD, racially polarized voting analysis, 2014.

Expert Witness for Irving ISD, Benevides, v Irving ISD, racially polarized voting analysis, 2014.

Expert Witness for Pasadena ISD, Garcia-Sonnier et al v., racially polarized voting analysis, 2013.

Expert witness for the City of Yakima, Montes v. City of Yakima, challenge to Yakima, Washington At-Large City Council Elections, 2012.

Consultant, Lamar ISD – redrawing of all board member election districts including demographic analysis and redrawing of election districts, board and public hearing presentations, and support for pre-clearance submission, 2012.

Expert witness for Harris Co, Rodriguez, et. al. v., challenge to adopted Harris County Commissioners' Court precincts, 2011.

Consultant, City of Baytown – redrawing of all board member election districts including demographic analysis and redrawing of election districts, board and public hearing presentations, and support for pre-clearance submission, 2011.

Consultant, Goose Creek ISD – redrawing of all board member election districts including demographic analysis and redrawing of election districts, board and public hearing presentations, and support for pre-clearance submission, 2011.

Consultant, San Antonio Water System – Analysis of preclearance issues related to merger with BexarMet Water Authority, 2011.

Expert witness for the State of Texas, Texas v US, preclearance suit for Texas statewide districts, 2011.*

Expert witness for the State of Texas, Davis v Perry (and consolidated cases), challenge to adopted Texas Senate districts, 2011.

Expert witness for the State of Texas, Perez, et al v State of Texas (and consolidated cases), challenge to adopted Texas statewide districts, 2011-2017.

Expert witness, Fabela, et al. v City of Farmers Branch, Farmers Branch city council at large district challenge, 2011.

Expert Witness, El Paso Apartment Owners Assoc. v City of El Paso, analysis of racial patterns in housing occupancy, 2009.

Expert Witness, Benevides, v Irving ISD, racially polarized voting analysis, 2008-2009.

Expert Witness, Benevides, v City of Irving, racially polarized voting analysis, 2008-2009.

Expert Witness, Reyes, et. al. v City of Farmers Branch, racially polarized voting analysis, 2007-2008.