IN THE 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,	CIVIL ACTION NO. 1:21-CV-05337-SCJ
PLAINTIFFS,	
v.	
BRAD RAFFENSPERGER, IN HIS OFFICIAL CAPACITY AS SECRETARY OF STATE OF GEORGIA,	
DEFENDANT.	

VIDEO RECORDED DEPOSITION OF LISA HANDLEY
(TAKEN by DEFENDANT)
ATTENDING VIA ZOOM IN WASHINGTON, D.C.
FEBRUARY 16, 2023

ALSO PRESENT: Alison Bos
VIDEOGRAPHER: James Downie

REPORTED BY: Meredith R. Schramek
Registered Professional Reporter
Notary Public
(Via Zoom in Mecklenburg County, North Carolina)

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Deposition of Lisa Handley, taken by the defendant via Zoom on the 16th day of February, 2023, at 10:07 a.m., before Meredith R. Schramek, RPR, Notary Public.

C O N T E N T S

The Witness: LISA HANDLEY
Examination By Mr. Jacoutot 6

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P R O C E E D I N G S

THE VIDEOGRAPHER: This is the beginning of Media 1 in the deposition of Dr. Lisa Handley in the matter of Alpha Phi Alpha Fraternity, Incorporated, et al., versus Brad Raffensperger. Today's date February 16, 2023. The time is 10:07 a.m.

If the attorneys present will please introduce themselves for the record after which the court reporter will swear the witness.

MS. LAKIN: Sophia Lakin with the ACLU for the plaintiffs.

MS. DOUGLAS: Maura Douglas with WilmerHale for the plaintiffs.

MR. MILLER: Alex Miller with WilmerHale for the plaintiffs.

MR. JACOUTOT: And do we want to get the parties that -- this is Bryan Jacoutot for the Defendant Secretary of State.

Do we want to get the parties that are on Zoom on the record or is that fine just for the people who are in the room?

THE VIDEOGRAPHER: I think we need everybody.

MR. JACOUTOT: Yeah. So if the folks on Zoom could introduce themselves.

MS. SMITH: Casey Smith with the ACLU.

MR. JONES: Mike Jones for the Pendergrass and Grant plaintiffs.

MS. ATKINS: Schuyler Atkins with WilmerHale for the plaintiffs.

MR. JACOUTOT: I think that's everybody.

Whereupon,

LISA HANDLEY,

having been duly sworn,

was examined and testified as follows:

MR. JACOUTOT: Okay. This will be the deposition of Lisa Handley taken by Defendant, Secretary of State, Brad Raffensperger for the purpose of discovery and all purposes allowed under the Federal Rules of Civil Procedure and the Federal Rules of Evidence.

All objections except those going to the form of the question and responsiveness of the answer are reserved until trial or first use of the deposition.

Is that stipulation agreeable to you, counsel?

MS. LAKIN: It is.

MR. JACOUTOT: Okay. And how did you want to handle the witness's signature?

MS. LAKIN: We'll want to sign and -- read and sign.

MR. JACOUTOT: Read and sign? Okay.
EXAMINATION BY COUNSEL FOR DEFENDANT
BY MR. JACOUTOT:
Q Okay, Dr. Handley. My name is Bryan Jacoutot. I believe we've met before at the preliminary injunction hearing in this matter. So it's good to see you again.
A Good to see you. Can't I see you? Are you -- I'm just looking at myself.
MR. JACOUTOT: That might be a function of how -- let's pause and go off the record for just a second.
THE VIDEOGRAPHER: The time is 10:09 a.m. We're off the record.
(Off the record 10:09 a.m. to 10:11 a.m.)
THE VIDEOGRAPHER: The time is 10:11 a.m. We're back on the record.
MR. JACOUTOT: Thanks.
BY MR. JACOUTOT:
Q Sorry about that, Dr. Handley. I'll start over. My name is Bryan Jacoutot. I represent the Defendant Secretary of State, Brad Raffensperger.
The purpose of this deposition is not to confuse you in any way. So if I ask a question that I probably phrased poorly so that you don't understand

it, would you let me know and I can try and rephrase it so that we can get you to understand it?

A Yes, I will.

Q Great. Particularly because we're on Zoom, it's important for the court reporter to speak clearly -- for you to speak clearly and loudly enough so that she can hear. And be sure to say kind of audibly "yes" or "no" rather than shaking your head or saying "uh-huh" or "uh-uh" so that we can make sure we get a very clean record of your answer.

Is that agreeable?

A Okay.

Q Okay. And if at any time you need a break -- which, we'll be going for a little while so you'll -- we'll do a few breaks, I'm sure.

And so if you need one at any time, the only thing I would ask before we take that break is that if I have a question pending to you, that if you would just answer it before we go on the break and then we can go off the record.

Is that fine with you?

A Yes.

Q Great. Can you start just -- we'll get a little background on you.

Can you start by giving me your full name?

A Lisa Robin Handley.
Q And your current address?
A [redacted] Potomac, Maryland.
Q Okay. And I believe you said earlier you're in D.C. right now?
A That's correct.
Q Are you on any medication that might -- or excuse me.
Are you on any medication that might keep you from fully and truthfully participating in the deposition today?
A I am not.
Q Okay. And do you have any medical conditions that might keep you from fully and truthfully participating in the deposition?
A I do not.
Q Have you ever been arrested?
A No.
Q Okay. So never convicted of a crime?
A No.
Q Do you know of any prior lawsuits against you or a family member that relate to election law topics?
A No. I mean, I've been a witness in other cases, but I mean I haven't --
Q Not a party?

A Not a party.
Q Okay.
A Correct.
Q Thank you. Have you discussed the case with anybody?
A Yes.
Q Outside of your attorneys, who have you discussed the case with?
A Outside of my attorneys, I suppose my husband to some degree.
Q Okay. And have you -- outside of your attorneys, have you discussed this deposition with anybody?
A My husband knows I'm here.
Q Okay. Did you review anything to prepare for your deposition today?
A I reviewed my report. I reviewed Alford's report.
Q Okay. Dr. Alford?
A I'm sorry. Yes. Dr. Alford's report.
(Exhibit 1 Marked for Identification.)
BY MR. JACOUTOT:
Q Okay. And while we're on that topic -- well, first, before I go to that, because I've already got this queued up in the Exhibit Share as Exhibit 1, can I

direct attention to the documents in your Exhibit Share?

Do you have that pulled up by any chance?

If it makes sense, I can try to screen share it and maybe it will come up a little better, but let me know what's preferable for y'all.

MS. LAKIN: We only see one document; is that right?

MR. JACOUTOT: Correct. Yeah. So I'll kind of -- as I introduce them, they'll appear into that folder.

BY MR. JACOUTOT:

Q But, Dr. Handley, this is the notice of deposition to take your expert deposition in this matter.

Does that look familiar to you?

A Yes. Yes, it does.

Q Okay. And you did receive this?

A I did.

Q Okay. All right. So now I want to direct your attention to another exhibit I'll be introducing. So it should appear in that same folder here in just a second. And I'll let you know when to look for it.

MS. LAKIN: Bryan, do you mind if we go off the record for one second?

MR. JACOUTOT: Sure. That's fine.
THE VIDEOGRAPHER: The time is 10:16 a.m. We're now off the record.
(Off the record 10:16 a.m. to 10:17 a.m.)
THE VIDEOGRAPHER: The time is 10:17 a.m. We're back on the record.
(Exhibit 2 Marked for Identification.)
BY MR. JACOUTOT:
Q Okay. That gave me some time to actually go ahead and introduce what will be marked Exhibit 2 for this deposition.
And it should be up in your Exhibit Share folder. Did it appear yet, Dr. Handley?
A Yes, it did.
Q And could you open that for me?
A It's open.
Q And does the title at the top say "Expert Report of John R. Alford, Ph.D."?
A Yes.
Q Is this what you reviewed?
A Yes.
Q Okay. Any other documents that you can think of that you reviewed prior to this deposition?
A Not that I can think of, no.
Q So you've got a very robust CV which -- so I

1 won't go through every line of it. But if you could
2 maybe just give me an overview of your educational
3 history starting post high school -- so undergrad,
4 university, and beyond.
5 A Okay. I did my undergraduate work in
6 architecture at Kent State University. And then also
7 got a BA in political science and psychology at Kent
8 State University. I got a master's degree in political
9 science at Kent State University. And I got a Ph.D. in
10 political science from George Washington University.
11 Q Okay. And that's George Washington
12 University in D.C.?
13 A That's correct.
14 Q Okay. And did you attend -- the post high
15 school education, was that consecutively, where you
16 would do your undergraduate and go right into your
17 master's or did you do anything in between?
18 A I did not do anything in between my
19 undergraduate and master's degree.
20 Q And what about between your master's degree
21 and your Ph.D.?
22 A I worked for a year.
23 Q Okay. And where did you work during that
24 year?
25 A I worked mostly as a waitress.

Q Okay. So unaffiliated with the degree you were seeking essentially, the employment?
A That's correct. Unaffiliated.
Q Okay. Apart from your graduate school, did you get any other education -- formal education or training, any sort of certificates or anything like that?
A Not that I can think of.
Q Okay. As part of your Ph.D., do you have to do any sort of continuing education?
A No, not -- no. If you mean like a lawyer's continuing education thing, no. We don't do anything like that.
(Exhibit 3 Marked for Identification.)
BY MR. JACOUTOT:
Q Okay. Now in your CV on your report -- well, let me introduce your report first and have you verify for me.
A I have a paper copy of it in front of me. Is it all right if I look at that rather than --
Q Certainly. I'll just have -- basically what I'll have you to do is take a quick look at what I introduce in the Exhibit Share and make sure that they match up and then you can just confirm that they do, and then I'm fine with you going off the paper copy.

A Okay. Very good.
Q I have a paper copy as well that I'll be going off of.
MS. LAKIN: Bryan, just let me know when to refresh it.
MR. JACOUTOT: Okay. I'm pulling it up now. It takes a few minutes. A couple windows I got to go through.
It should be up now.
BY MR. JACOUTOT:
Q And, Dr. Handley, what I'm marking here as Exhibit 3 is a copy of your expert report. It says -- on the title there, it says "Expert Report of Dr. Lisa Handley," dated December 23, 2022. Sorry we interrupted your holidays with that.
But can you confirm that this is the expert report you've provided in this matter?
A Yes, it is.
Q And you noted earlier that you have a paper copy in front of you. Would you mind kind of just verifying that they're the same document?
A They are the same document.
Q Okay. Great.
So now, on your CV, which is towards the end, it lists your present employment, that you're the

president of Frontier International Electoral Consulting LLC. And you list, it looks like, a couple of other -- are these positions within Frontier International or are these sort of separate, parallel employment that you have right now?

A Separate and parallel.

Q Okay. Okay. And it says "visiting research academic." And these are all current employment that you have?

A That's correct.

Q Okay. Prior to the employment you have listed here, what did you do?

A You mean like starting back in my 20s? Or what do you mean, like --

Q Let's start with after your -- after you obtained your Ph.D., what kind of -- how did -- describe your employment history after obtaining your Ph.D. for me.

A I taught and I also worked for a firm called Election Data Services until I started my own company, Frontier.

Q So there's about -- looking here, you got your Ph.D. in 1991 and then you started Frontier in 1998.

So seven years, you were doing that kind of

work I guess?
A I started teaching before I finished my dissertation so I started working -- and I also started working for Election Data Services before that. So this goes back to about the mid '80s.
Q Okay. And is your Ph.D. in political science?
A Yes, it is.
Q Just for, you know, purposes of this deposition, do you refer to yourself as a political scientist or a social scientist? Does it matter?
A I use both terms.
Q Okay. Now, I know you've testified in cases -- many of them, I believe -- and you have a list here of your international clients and your U.S. clients. And I don't want to go through them exhaustively because we'll be here all day. But can you give me a synopsis -- well, let me rephrase that.
Can you let me know how many cases that you have been a testifying expert in since 2000? And if it's -- you can just give me the number, and if it's, like, 20, then we don't have to go into each one. We can break it down a little further. I just want to get a little -- little bit of information on how much time you've spent testifying essentially.

A Since 2020?
Q Since 2000?
A Since 2000. 40 cases maybe. That's --
Q 40 cases?
A -- a ballpark guess.
Q Okay. That's fine. And those are as testifying -- as a testifying expert?
A Do you mean by "testifying," does that include, say, giving deposition but possibly not, you know, the court -- the case settling, something like that?
Q Yes.
A Yes. Yes. That's correct.
Q Okay. Perfect. And I apologize. I interrupted you there. I will try not to do that so we get a clean record.
In looking at your CV and the clients you've listed, I wasn't able to tell this but have you ever testified for a jurisdiction sort of on behalf of the jurisdiction?
Strike that. Let me clean that up.
Have you -- have you ever testified for a jurisdiction that was defending a Section 2 case?
A I have certainly testified on behalf of defendants. I'm not going to be remembering correctly

what the cases necessarily were, but I've certainly -- related to redistricting.

Q And so you've testified in situations where your client was defending the -- defending -- excuse me.

Let me back that up.

So have you testified on behalf of a defendant that was defending a particular electoral map configuration in the U.S.?

A Yes.

Q Okay. Do you know -- can you let me know what case pops in your head when you think of one of those?

A I could tell you the jurisdictions. The case cites, no way I could come up with that. But, I mean, I can tell you jurisdictions.

Q Yeah. Let's start with jurisdictions.

A Alaska, both -- not this round of redistricting, but the two prior rounds of redistricting. I worked on behalf of the State of Alaska. Arizona, Virginia, Florida. I've just been -- I'll be working on behalf of Michigan.

Q Okay. And what -- let's start with Alaska. Do you recall what the claims against those maps were that you were defending?

A I do not. I should say there were also -- there were a variety of cases. There were at least two -- I think three cases.

Q Okay. Let me ask it this way then -- and if you don't know off the top of your head, that's fine.

When you have been a testifying expert on behalf of a defendant defending an electoral map configuration, has the -- has the plaintiff ever alleged a Section 2 violation against that defendant that you can recall?

A I believe that that was the case at least in Florida. The case ultimately became the Grand -- I think that started in part as a Section 2 case. I'm sorry. I'm not exactly sure.

Q Okay. No. That's helpful.

Moving into your involvement with this case, how did you first hear about this particular action?

A The lawyers at the ACLU told me about this particular case that they were working on.

Q Okay. Great. And that would be -- that's the first contact you sort of had, it was some attorneys from the ACLU saying, "Would you like to be involved in this case?"

A Yes.

Q Okay. What were you told that you were being

hired for?
A To conduct a racial bloc voting analysis certainly would have been the beginning of the case.
Q And were you told what the plaintiffs wanted you to prove or of their position on the issues in this case?
A I'm not exactly sure I understand the question.
They asked me do determine if voting was racially polarized is what I did.
Q Okay. Are you being retained as an expert by the plaintiffs in this action or by the attorneys representing the plaintiffs?
A I am contracted with the attorneys on this case.
Q Okay. And what compensation are you receiving?
A I get an hourly fee of $300 an hour.
Q Okay. And approximately how much would you say you've billed so far in terms of hours?
A I really don't know. I have no idea.
Q More than a hundred? Less than a hundred?
A So do you mean in terms of this litigation? Because I was also the expert for the PI --
Q Yeah. That's sort of all of that. Yeah.

A Okay. More than a hundred I should say, yes.
Q What's your ordinarily -- excuse me.
What is your ordinary hourly rate for a government entity that hires you typically?
A It's changed over time. I think when I first started doing this, it was 250 maybe. Maybe -- so it depends. Clients that have come to me in about the last year or two, I typically charge $400 an hour.
Q Okay. Do you work with the ACLU in any other cases that are active right now?
A Yes.
Q How many would you say?
A I guess I'm not really sure of what "active" means. I think the Louisiana case is certainly active. I'm not sure what you would call the Arkansas case at this point.
Q Which Arkansas case are you referring to?
A I'm sorry. I don't know the cite. Oh, but it's in my CV. I can find it for you. Hold on.
Arkansas State Conference, NAACP versus Arkansas Board of Abortion.
Q Okay. I know that one. All right. Thank you very much.
THE VIDEOGRAPHER: Can we go off for one second, please?

MR. JACOUTOT: Sure.
THE VIDEOGRAPHER: The time is 10:34 a.m. We're now off the record.
(Off the record 10:34 a.m. to 10:36 a.m.)
THE VIDEOGRAPHER: The time is 10:36 a.m. We're back on the record.
MR. JACOUTOT: Okay. Can the court reporter read back to me where we left off? I kind of lost my place.
(Record read as requested.)
MR. JACOUTOT: Thank you.
BY MR. JACOUTOT:
Q Okay. Turning to your report, you've listed all the facts and data you relied on in that report?
A I have.
Q I just want to make sure that, you know -- we're going to be redundant I think. Thank you.
So the plaintiff's counsel didn't provide you with any facts or data that is not listed in the report; is that correct?
A That's correct.
Q Did plaintiffs' counsel tell you to assume anything that you relied on when forming your opinions in this case -- excuse me -- in the report?
A No.

Q Okay. So you have mentioned earlier that you did review the report of Dr. Alford. We've introduced that as an exhibit. At least in part, is it your reading of his report that Dr. Alford uses your report and the data contained in it to form his own analysis regarding the issues of polarization in the elections you considered?

A My report as well as Dr. Palmer's report. And he also did his own analysis --

Q Okay.

A -- from data we didn't supply.

Q Gotcha. And let's -- let me direct you to that report because I want to make sure we're on the same page. Sorry.

And that, I believe, is Exhibit 2. So if we turn down to -- scroll down to page 9 of Exhibit 2 -- well, pages 8 and 9, do you see that?

A I'll be there in a second.

Q Yeah. Take your time. I don't want to start without you.

A I'm on page 8 now.

Q Okay. At the bottom we see the Herschel Walker Senate race.

A Yes.

Q And there is a table below and there's a

listing of some data there. Is that the data that you're referring to that you didn't -- you didn't have?

A That's correct.

Q Okay. In your experience, is there any problem with analysis of -- you know, using another professional's data to do an analysis?

I can rephrase that if it's a little easier. Let me go ahead and rephrase it.

In your experience, is there anything concerning to you as a political scientist having another political scientist use your data and analyzing it on his own? Is there anything problematic with that from a professional standpoint?

MS. LAKIN: Objection to form.

You can answer.

BY MR. JACOUTOT:

Q I'll rephrase. I'll rephrase again.

You see that Dr. Alford used your -- used your data analysis; correct?

A Yes.

Q Is that typical in your profession, to use -- I'll let you answer that question first.

A Is it typical? No. I wouldn't say it was typical.

Q So typically, the analysis would require the

person who's writing the report to draft their own independent analysis of the figures?

A Typically, a social scientist would do their own analysis. That's correct.

Now, sometimes you would use the same database. For example, Michigan puts out very large databases that various social scientists would make use of to analyze.

Q And so would you anticipate that, you know, homogeneous precinct analysis of the same database by two different social scientists -- would you anticipate them being different at all or would they typically come out sort of the same?

A I would assume that they would come out the same if they used the same data and the same definition of what a homogenous precinct is.

Q And would you also say the same for ecological regression, ecological inference analysis too?

A Again, if they used the same data and the same definitions and the same script bar code to do it, yes.

Well, let me take that back.

Actually, ecological inference derives its estimates via a simulation process. So each time you

run it, you might get a slightly different estimate. But I mean, if I ran it twice, I would get a slightly different estimate. So if Dr. Alford ran it, he might also get the slightly different estimate.

Q And do you average those estimates together in your -- in the report for ecological inference?

A Ecological inference, basically, you run it -- ecological inference, you set the number of simulations you want to run, and I run a hundred thousand simulations and it produces for me the average -- the mean of those hundred thousand simulations. But if I ran it again a hundred thousand, it would give me a slightly different one, but I only run it a hundred thousand times and not 200,000 times.

Q Okay. Is running it a hundred thousand times sort of an academic standard or is it just a number that you've chosen that you feel comfortable with?

A The default value in ecological inference as developed by Gary King was actually 10,000, but I think most of us do a lot more than 10,000.

Q Okay. Okay. So you're -- and you're comfortable with the statistical -- I don't know if I want to say validity, but I'll ask it this way: You're comfortable with the statistical value of your analysis that you ran; right?

Are you comfortable that that provides a good picture of the facts on the ground for the cases that you -- excuse me -- for the contests that you analyzed?

A Yes. Those are reliable estimates of black and white voters' behavior.

Q Okay. And so do you see any benefit to Dr. Alford, you know, replicating that analysis himself, or do you feel that your numbers are sufficiently valid that another social scientist professional could use them to conduct his own analysis?

A I wouldn't say that he actually did an analysis if he didn't do an analysis and relied on my analysis.

Q What would you say he did?

A I would say he didn't do a statistical analysis. I would say he borrowed my estimates to do some calculations.

Q Your figures aren't flawed though; correct?

A My figures aren't flawed? I mean, I produced for you the -- you know, a variety of different estimates using a variety of different methods. And so they're all slightly different. I also gave you confidence intervals.

So I do these methods correctly. I produce

estimates that I feel are reliable, valid.
Q And so you'd be comfortable with other professionals using those estimates that are reliable and valid, as you put it?
A Well, I guess it would be depending on what they were using them for. But I believe that the estimates that I produced are reliable and valid.
Q Okay. So one thing Dr. Alford does in his report is use the analysis that you provided in order to look at the question of partisan or political polarization; is that right?
MS. LAKIN: Objection to form.
But you can answer if you can.
THE WITNESS: I'm not -- let me try and answer it this way: I would say that Dr. Alford used my data and Dr. Palmer's data to reach some conclusions he feels about political polarization. I think that answers your question.
BY MR. JACOUTOT:
Q I think it does. I appreciate that.
And to be clear, that's not something that you looked at; right?
A I was asked to look at the degree of racial polarization, which is what I did.
Q In your opinion, is it possible for social

scientists like yourself to use statistical analysis to determine or inform the question of -- excuse me. Let me rephrase that.

In your opinion, is it possible for social scientists such as yourself to use statistical analysis to determine partisan polarization?

A I would say that is a very complex statistical issue. And although I don't know that anyone has been able to address it yet, that doesn't mean that they won't be able to address it at some point in the future.

Q Have you ever attempted to address it?

A Statistically to parse out party versus race? Not directly. I mean, I provide what I would call some evidence that party doesn't explain the difference between the voting patterns of blacks and whites, but that doesn't -- that's not actually an analysis that parses out party and race.

Q Do you feel that there's any situation in which political party actually can explain the voting behavior better than race of individuals that you -- excuse me -- of the elections that you have analyzed?

MS. LAKIN: Objection to form.

BY MR. JACOUTOT:

Q Yeah. Let me rephrase it because I kind of

chopped it up.

Actually, can the court reporter read that back for me.

(Record read as requested.)

BY MR. JACOUTOT:

Q So I'll try and rephrase that.

In the elections you've analyzed, have you ever felt that party affiliation better explains the behavior of the voters in those elections than their race?

MS. LAKIN: Objection to form.

But you can answer.

THE WITNESS: The analysis that I do is done to determine if the -- in this case, for example, black voters and white voters are voting differently. That's the analysis that I do.

BY MR. JACOUTOT:

Q And that's because you were directed by the attorneys only to do that analysis?

A No. That's because that's how I've always done a racial bloc voting analysis. That's how it's been done for 50 years.

Q And you're not curious as to whether, over the last 20 years or so, whether partisan polarization might better explain it?

MS. LAKIN: Objection.

THE WITNESS: I think that you think this is an either/or proposition, and it most certainly is not. Of course race explains party. And party is therefore a mediating variable when you're describing how one votes. So it's not as simple as either/or -- it's certainly not as simple as either/or.

BY MR. JACOUTOT:

Q Well, I guess I'm not of the position that it's necessarily either/or. But my question is more can party polarization better explain voting behavior than race, not whether it's only party polarization or race that explains it.

Does that make sense?

A It makes sense but I have no idea how you would go about doing that statistically.

Q Okay. And you've never tried?

A I have never done a statistical analysis that attempts to separate out the variables, party and race, and explain voting behavior.

Q Do you agree that one might be able to separate the variables of party versus -- well, no. I don't like that. Strike that.

Since you give me precise answers, I want to do my best to give you precise questions.

Let me make sure I got your last response right. You said -- and please correct me if I'm wrong. You said that you don't believe that there's a statistical analysis that can separate out party and race; is that right?

A I don't know of one yet but there are very clever people out there. I didn't know about ecological inference 40 years ago. I don't know what's coming down the pike. But I am not aware of any statistical analysis at this point that can do something like that.

Q Okay. But given the statistical analyses that you are aware of, particularly those that you used in your report, is it your opinion that you cannot answer the question -- oh, boy. That is going to -- let me -- let me reask that.

You use ecological inference -- ecological regression and homogeneous precinct in your report; correct?

A Yes. Two forms of ecological inference -- ecological regression and homogeneous precinct analysis.

Q Okay. And the two forms of ecological inference are -- is it RxC is one of them?

A Yes.

Q And what's the other one?
A It's usually referred to as Kings EI or it's also been referred to as EI Iterative.
Q Okay. And is it your opinion that using that statistical analysis, you cannot determine whether party polarization better explains voting behavior than race polarization? That they can't be disentangled?
A That analysis tells me black and white voters are voting differently. It does not explain why they're voting differently.
Q Is it your opinion that in looking at the data that you provided that the combination of different races that you analyzed forecloses the ability for one to determine whether party better explains voter behavior than race?
A You'd have to repeat that. I'm sorry. I don't understand that question.
MR. JACOUTOT: No problem. Can the court reporter repeat it so I make sure we get it back the way I said it?
(Record read as requested.)
THE WITNESS: I would say that looking at democratic primaries takes race out of the equation and therefore provides some evidence that, at least in those contests, that party can't be explaining the

different voting patterns.
BY MR. JACOUTOT:
Q Okay. And so isn't another way of putting it that -- what you just said, that looking at democratic primaries actually controls for the party in determining -- I'll leave it at that.
A In a very narrow sense, yes.
Q What's narrow about it?
A You're looking at how people who chose to vote in the democratic primary are selecting candidates and therefore, they've already selected the party. They've all decided that they were Democrats. It doesn't explain why they've chosen to participate in the democratic primary versus the republican primary.
Q Okay. Does it matter -- strike that.
But I guess my -- to my question, though, that you said in a narrow sense I'm right when I phrase it this way, is it correct to say, though, that looking only at a party's primary elections controls for party in that analysis?
MS. LAKIN: Objection.
THE WITNESS: In the sense that everyone has -- everyone who's participating is of the same party, you are controlling for party.

BY MR. JACOUTOT:

Q Okay. Thank you. Let's turn to your report, which is Exhibit 3, which has already been marked.

A I'm going to use the copy in front of me.

Q That's fine. We've established that they're the same essentially -- not "essentially." That they are the same. They're copies.

Okay. If we can just turn to Section II on the first page. We can skip the introduction for now.

You state that you "have advised scores of jurisdictions and other clients on minority voting rights and redistricting-related issues."

Is that -- do I have that right?

A Yes.

Q Would you say most of these are in the United States? And when I'm saying "these," I'm referring to jurisdictions.

Would you say most of these jurisdictions are in the United States.

A In that sentence, I was referring to U.S. jurisdictions. But, of course, I've done the same overseas. But that's what I was referring to here, yes.

Q Okay. Good to know.

Where would you say you do most of your

1 advising on minority voting rights and
2 redistricting-related issues? Would you say it's
3 mostly U.S. based or would you say it's more in the
4 international community?
5 A Well, it depends very much on the year. So,
6 for example, from about 2010 to 2013, I was doing a lot
7 of work in the U.S. And then when my schedule frees
8 up, I tend to do a lot of work overseas. So it's sort
9 of cyclical.
10 Q Yeah. I was reading some of your reports,
11 and I was just noticing that you go into a lot of
12 international jurisdictions and it's -- they're very
13 interesting, but I didn't know sort of where you
14 focused the bulk of your time.
15 So it just sort of -- the answer is, I guess,
16 it just sort of depends on the time?
17 A That's correct.
18 Q Okay. Outside of the United States, what
19 kind of advice do you offer jurisdictions? Is it --
20 well, I'll let you answer it more broadly and we can
21 drill down. So let me rephrase it.
22 What kind of advice do you offer
23 jurisdictions outside of the United States?
24 A So it depends on the jurisdiction. A lot of
25 my work is with UN peacekeeping missions and we're

1 going in and we're setting up elections after a war.
2 So we're putting into place very -- you know, it's an
3 electoral system sort of situation, what kind of
4 electoral system are you going to put together. And if
5 you're going to put together one that includes
6 electoral districts, how would you go about drawing
7 them.
8 If you're further along in the process, it
9 may be the case that I'm actually helping to draw the
10 districts or, for example, when I worked for UNDP,
11 that's UN Development Program, like in Eastern Europe,
12 still sort of post conflict but not exactly, then
13 you're doing something a little more rigorous. You
14 might be helping them redesign an electoral system to
15 ensure there is more minority representation.
16 So it depends very much on, you know, where I
17 am and the stage of development in the country that I'm
18 going to.
19 Q Okay. And I don't know if I have this
20 actually as a deposition, let me -- if I reference the
21 article in the Journal of Representative Democracy that
22 you authored called "Drawing Electoral Districts to
23 Promote Minority Representation," do you know what I'm
24 referring to?
25 A Yeah. The name of the journal is actually

just "Representation."

Q Oh, you're right. Okay.

In that article, you reference different types of, you know, basically methods of voting. And then there were certain methods where elections are exclusive to minorities.

Is that -- is that in order to promote the minority representation, they would make the election exclusive to minorities; is that right?

A Yes. For example, in New Zealand, it used to be the case that there -- well, it's still the case that there's a Maori electorate and a set of Maori districts that overlay the regular districts, and only Maoris can participate in those elections.

Q And so you have -- I guess you have two types -- or I'm sure there's more than two types, but I think there's two types kind of focused on here. And one is where only minorities can participate in the election and then there's another -- and when I say "participate in the election," I mean be the voting base, and then they have another type where only minorities can be the candidate.

Is that right?

A That's another example. For example, in India, you will draw districts and they will be mixed

1 districts, but they attempt to have minority
2 representations by saying only certain members of this
3 caste can run as a candidate.
4 Q What do you think about the effectiveness of
5 those -- of elections styled in that way, where they
6 are sort of not like what we have here, where everybody
7 can participate, you know, above a certain age and so
8 forth, that they're exclusive to particular minority
9 groups? Do you feel that's a good way to achieve
10 minority representation? And if so, is it a desirable
11 policy objective to do so?
12 MS. LAKIN: Objection to form.
13 BY MR. JACOUTOT:
14 Q Sure. Do you feel that limiting election
15 contests to minority groups like you discussed with --
16 you know, in India, do you feel that that is a good way
17 to promote minority electoral representation?
18 A As I mentioned in my article, there's
19 evidence to suggest that, say you -- there are two
20 types of elections in -- one type of election in
21 different kinds of districts in India.
22 So there are special tribes and there are
23 special castes. Special tribes, they do say only
24 certain tribal members can run, but the districts tend
25 to be heavily concentrated with tribal members. While

in terms of castes, you can't draw districts where there are a majority of a certain caste member. And it seems that candidates who run in districts that are, say, more tribal are more responsive to their electorate then caste members who have to rely on everybody to be elected.

So there's evidence to suggest that having to rely too heavily on nonminorities means that you don't represent minorities as well.

I think that answers your question. It's the best I can do.

Q Yeah. It's very helpful.

So you said there's evidence to suggest that they're more responsive essentially in those -- in the situations where you don't have to rely on the broader electorate; is that right?

A There's evidence to suggest in India that if the electorate is also the same race as the representative, that these representatives are more responsive to their constituents.

Q Would you -- and I know we're not in India right now, but would you compare that to sort of like a homogeneous precinct that we have here in that it's -- I think what you're saying is where in India the electorate is one caste, right, it's easier just to

limit the candidacy to members of that caste?
Is that right?
A Okay. So, I'm sorry, I'm a political scientist. When you say -- it's actually tribes. You can't draw a district around castes because --
Q Okay. Oh, please. Yeah.
A But the evidence is in India that the representative is more responsive to their minority group if they can rely on that minority group to elect them.
Q Okay. And you when you say it can rely on that minority group to elect them, is that because the -- and correct me if I'm using the wrong terminology -- but the district from which they are elected is composed either almost exclusively -- exclusively or almost exclusively of that minority group?
A No. They're not that heavily tribal. So I mean the districts are more mixed than that. Well, I mean, I'm sure there are some heavily. Maybe there are some, a hundred percent or 90 percent.
But no, they're more mixed than that. So what you're doing is you're comparing districts that are, say, 40, 50, 60, versus districts that are 10 or 20.

Q Okay.
A Under 20 of the same caste versus 40, 50, 60 percent tribal.
Q Okay. Yeah, that makes sense. I appreciate it. Thank you for indulging my tangent.
Okay. Let's get back to your report here and move on to Section III. And just let me know when you're there.
A I'm there.
Q If you look right here in the first sentence after the reference to the case Thornburg v Gingles, you state that "A racial bloc voting analysis is needed to determine whether the minority group is politically cohesive; and the analysis is required to determine if white voters are voting sufficiently as a bloc to usually defeat the candidates preferred by minority voters."
Do you see that?
A Yes.
Q And I know that comes out of Thornburg v Gingles, but how do you define "politically cohesive" as used in that sentence?
A The Court adopted that criteria, precondition because there's no point in creating a district for minority voters where minority voters don't have

1 certain shared interests and vote alike.
2 So I think the idea is that the minorities
3 who vote alike are cohesive. So it's -- at least as I
4 analyze it, and I believe the Court meant it, they were
5 talking about political cohesion and particularly in
6 terms of voting matters.
7 Q And when you say "vote alike," are you
8 referring to the race of a candidate that they vote for
9 or the party of the candidate that they vote for or
10 something else?
11 A Neither. I'm just talking about supporting
12 the same candidates.
13 Q And "supporting the same candidates" -- I'll
14 get to that later. You can strike that.
15 So as we've just defined "politically
16 cohesive" for your purposes in your experience, is that
17 the accepted definition in your field?
18 A It's certainly the accepted definition by
19 courts and by a lot of social scientists. I don't know
20 that all of them embrace this but yes, I would say
21 that's the accepted definition.
22 Q Do you -- you kind of alluded to this, but do
23 you know if there's any disagreement as to that
24 definition in your field?
25 A I think there certainly was, yes. I don't

1 know how much of it exists now, but there was a lot of
2 quibbles going on early on in, say, the 1980s and 1990s
3 about say, for example, what level of voting for the
4 same candidate constituted cohesion. And the courts
5 ultimately said, of course, there is no bright line.
6 But there were lots of experts who said that, oh, it's
7 this, it's 90 percent, it's 80 percent, 70 percent,
8 60 percent.
9 Q Where would you say the field has landed in
10 terms of the percentage required? Or has it landed
11 anywhere?
12 A Well, I think the courts have told us that
13 there's no bright line. So I've certainly contended
14 there is no bright line. There is more cohesive and
15 less cohesive, but you might have some experts who have
16 their own definitions.
17 Q Would you say that if a group votes, I don't
18 know, 55 percent for one candidate, is that something
19 that you would consider politically cohesive?
20 A First of all, I'd make the decision about
21 whether a group was cohesive over more than one
22 election. Now, you might say, oh, in that one
23 particular election, they were less cohesive than they
24 are, say, in an election where they vote 65 percent in
25 a two-candidate contest for the same candidate. But

you would want to look at a series of elections before you decided.

So it may be the case in one election they only voted 55 percent and so less cohesive, but in a whole variety of other elections, they voted at 65 percent. So it's really a pattern over time and I would say that that would be cohesive.

Q And so in a two-election -- excuse me -- a two-candidate election, there's really only degrees of cohesiveness among groups of electors? Is that sort of what you're saying?

A Let me -- I'm saying that, say, 51 or 52 percent is less cohesive than 61 or 62 percent. But there's no cutoff point at which a group is cohesive or not cohesive looking at a single election.

Q Okay. And going back to that sentence in your report, it's sort of that second part where it says the "analysis is required to determine if white voters are voting sufficiently as a bloc to usually defeat the candidates preferred by minority voters," how, in your field -- excuse me.

How in your experience do you define the term "usually" as it's used in that sentence?

A Certainly more than half the time would be "usually." I'm not sure how much more than half the

time but --
Q Also so no bright-line rule either really?
A No bright-line -- no bright-line rule, no.
Q Okay. Do you have a cutoff where you say, "Okay, well this amount of losses clearly falls under the usually defeated standard"? So if they lose 70 percent of the time, are you going to say, that's usually defeating it?
MS. LAKIN: Objection to form.
THE WITNESS: Let me see if I can phrase this and answer your question at the same time.
I would say that if the minority preferred candidate loses 70 percent of the time, that that would be -- that would be usually losing, yes.
So I'm sorry. I don't exactly remember your question. Is that responsive to your question?
BY MR. JACOUTOT:
Q Yeah. I think -- I think it is.
Is there any situation that you can envision where a minority candidate lose -- loses 55 percent of the time to the candidate preferred by the white voting bloc where you would say that's not -- that's not usual enough to be considered usually as used in that sentence?
A Now I'm going to make a different

1 distinction, and I'm going to make a distinction
2 between something like, you know, whether you're
3 talking about the actual barrier to election or not.
4 So, in Georgia, the barrier to election is
5 the general election, not the primary elections. So,
6 you know, the fact that, say, the black-preferred
7 candidate wins or loses 0 percent, 10 percent,
8 20 percent, is relevant if the primary is the barrier.
9 What the barrier to election in Georgia is is the
10 general election.
11 So the amount of losses and wins is really
12 more relevant to whether they're ultimately obtaining
13 office or not. So 55 percent win-or-loss record -- so
14 a 55 percent win record is nice at the primary level,
15 but what really matters is you could win the primary
16 and not win the general. So in that particular
17 instance, the win record is kind of less relevant than
18 it is with regard to the actual barrier.
19 Q Okay. So let's say we're in the general
20 election world. In Georgia's population, black voting
21 age population is, I think, just a hair under
22 33 percent or a hair under a third. So in elections in
23 the general context, general election context, if --
24 strike that.
25 As you can see, I'm off my outline.

If -- I guess for the purposes of determining whether you consider the white voting bloc winning enough elections to be considered to be "usually" defeating the candidate preferred by the minority voting bloc, does it matter the level of minority representation in the state or in the jurisdiction that you're analyzing to you?

Does that affect your analysis at all?

A I'll try and answer that question as I understand it.

If you draw a sufficient number of minority districts such that minorities are, say, well represented, more than proportion are represented, of course, voting could still be racially polarized but you would have -- I mean, and it could be polarized even withing those districts, but you would have put into place a remedy. The remedy doesn't solve the racial polarization, but it ensures that minorities are represented.

Does that answer your question?

Q I believe it does. Thank you.

Okay. We can move on to -- actually, I'm at a bit of a good stopping point.

Do you want to take a break by any chance?

A Yes. I could use some more water.

MR. JACOUTOT: Does 10 minutes sound okay for everybody? We can go shorter or longer, doesn't matter to me.

MS. LAKIN: 10 is fine.

MR. JACOUTOT: Okay. Let's do it. Let's go off the record, then, and we'll do a 10-minute break and return at 11:35, say.

THE VIDEOGRAPHER: The time is 11:22 a.m. We're now off the record.

(Off the record 11:22 a.m. to 11:36 a.m.)

THE VIDEOGRAPHER: The time is 11:36 a.m. We're back on the record.

BY MR. JACOUTOT:

Q Okay. Dr. Handley, is there anything in your testimony thus far that you'd like to change at this point?

A No.

Q Okay. So if we go to the subsection on the standard statistical techniques from your report, which is at the bottom of page 2 -- it begins at the very bottom of page 2.

A Yes, I'm there.

Q You list the statistical techniques that we've discussed already: Homogeneous precinct, ecological regression, and ecological inference.

Ecological inference is subdivided, as you've mentioned, into Iterative EI and EI RxC; is that right?

A Yes.

Q In your experience, do any of these methods yield a result that's more likely to match what actually occurred?

A So homogeneous precinct estimates aren't actually estimates, they are -- that is the voting behavior of that group of precincts. So that actually happened. But, of course, it only happened for a small set of precincts.

So that actually happened.

Q Yeah. So then that obviously is going to match what happened.

Are you able to use that to extrapolate out to the nonhomogeneous precincts? Or do you just limit it just to homogeneous precincts and you're essentially reporting results in that part of your report? Isn't that what happened?

A The homogeneous precinct analysis estimates aren't actually estimates they're actual percentages. I call them estimates because it's just a small group of voters, those voters that live in homogeneous precincts. The other methods take into account all voters, not just those in homogeneous precincts.

Q Okay. Among the other methods, ecological regression, Iterative EI and EI RxC, in your experience, do any of those methods yield a result more likely to match what actually occurred?

A The reason that I use all four methods is that I think that those four methods are a good check on each other.

So if I got an estimate of, say, 20 percent -- I'm making this up -- but say 20 percent in my EI and 80 percent in my ER or EI RxC, I would know something's squirrely going on there. That's not a statistical term. That's a term of art there, but -- so I like to use these other methods as a check.

The method that I chose to sort of concentrate on is the most sophisticated method and the ones that I think that most experts agree are probably the most accurate, and that is EI RxC.

Can I -- I want to add something to that.

Now, EI RxC is better because it treats, in this particular instance, three groups -- blacks, whites, and others. So when you don't have very many others, EI Iterative is just as good. And we don't have very many others in Georgia, but there are some. Jurisdictions like Boston or New York, you'd have to use ER RxC. EI Iterative just would not work.

1 So different methodologies are appropriate in
2 different circumstances.
3 Q Okay. That makes sense. If you look at
4 Footnote 3 on -- is it Footnote 3? No. It's
5 Footnote 4. I'm sorry.
6 The second sentence there, you're talking
7 about confidence intervals. And correct me if I have
8 this wrong, but the confidence interval is simply the
9 distribution of ranges for a given statistical value
10 that would occur 95 percent of the times those
11 statistics are analyzed; is that right?
12 Am I -- I may be not wording it properly
13 but --
14 A No. Okay. So usually confidence intervals
15 take into account things like standard deviation, the
16 amount of variation. And you're certain that the real
17 value is, like, within that range.
18 But the confidence intervals associated with
19 RxC aren't constructed using standard errors. They're
20 constructed using -- remember those hundred thousand
21 simulations I talked about? It's constructed using the
22 values produced, the estimates produced through these
23 simulations.
24 And what they really are is the mean at --
25 that you distribute these values, and it's the value at

2.5 and 97.5. That's what you're reading as confidence intervals.

So "confidence intervals" is sort of an odd word, but that's the word that the folks who developed this package decided to call these. But they're actually the means at the ends of the distribution.

Q Okay. So if I put it another way, let's say you run that simulation on this -- on the data that you have a hundred thousand times. 95,000 of those results will occur between the confidence interval bookends; is that right?

A Yes. I mean, I would say it the other way around; that is, that you captured 95 percent of the simulation means within that confidence interval.

Q Okay. Thank you.

On Footnote 5, you reference something called OpenElections. Can you describe what that is for me?

A This was developed -- I think it was a group of social scientists in conjunction with reporters, actually, I think. It was funded by the Knight Foundation, which is a newspaper foundation.

And the idea was to have a repository of election results that is -- that collects election results around the country and has it available for the public, for news reporters when they want to use it,

for researchers when they want to use it. The key to this repository is that all of the election results across all of the states are formatted in a standardized manner, and that's why it makes it easy to go to that particular repository. You know exactly the formality that the data will be in.

Q Okay. Are you -- and you're pretty confident in the accuracy of the results reported in that -- that database?

A I always check the election results I have against the -- spot check at the precinct level with the secretary of state's database, but I always look at the actual election results and see that they match what's reported with the secretary of state.

Q Great.

A And I haven't come across a problem.

Q Good, good. Good to hear.

Okay. We can move on to the "elections analyzed" sort of subsection here, which is also on page 5.

And let me know when you're there.

A I'm there.

Q Okay. You begin by saying: "I have analyzed all recent (2016 to 2022) statewide general election and general runoff and contests that included black

candidates for which precinct level data is currently available."

My first question is: Why did you limit -- yeah. Why did you limit your analysis to just those elections with black candidates in them?

A Because the courts have indicated that elections with -- that offer black voters an opportunity to elect to vote for black candidates are more probative than those that do not. If you can only elect minority preferred white candidates, then you don't really have a system that doesn't violate Section 2.

So I start with elections that have only black candidates.

Now, in some jurisdictions, there might not be a sufficient number of elections. In some states, black candidates don't run in a state like that. That's not the case in Georgia.

Q So you would say that -- strike that.

Would you say that where the candidates available in a particular race are only white, would you consider that not to be the minority preferred candidate because that -- the candidates are white?

Let me strike that, actually.

I'm just trying to understand -- because I

1 think you said if you have a situation where there's
2 only white candidates available, you have a Section 2
3 violation?
4 Did I hear that right?
5 A No. That's not what I meant to say anyway.
6 If you can -- let's say that black
7 candidate -- black voters have a variety of contests,
8 some of which include black candidates, some of which
9 include white candidates, and the only candidates that
10 they are able to elect are white candidates, then you
11 probably have a violation of Section 2 because they are
12 unable to elect black candidates, but that's not to say
13 that the white candidates can't be the preferred
14 candidates of black voters.
15 Q Okay. That makes -- that makes sense.
16 And are you at all worried that focusing on
17 races with only a -- only a contest between a black
18 candidate and a white candidate, are you at all worried
19 that that might affect the reliability of the results?
20 A No. Again, if I were in a situation, I
21 think, like Arkansas, where say one candidate, one
22 black candidate ran statewide, I wouldn't base my whole
23 report on one election. I'd obviously to have to turn
24 to white versus white. But in this case, there were a
25 lot of contests that included black candidates.

Q Okay. And why is it that contests -- I know that some courts have said that contests between a black candidate and a white candidate are more probative for purposes of considering Section 2 violations than contests between a white candidate and a white candidate.

In your opinion, do you agree with that statement, number one? We'll start with that.

MS. LAKIN: Objection to the extent it calls for a legal conclusion.

THE WITNESS: I certainly agree with the courts that black voters are not being able to elect their candidates of choice if only -- if they can only elect white candidates.

BY MR. JACOUTOT:

Q Even if their preferred candidates happen to be white?

A If there are a series of black-and-white contests such that I know that the candidate of choice is white -- so, for example, when John Ossoff runs in the primary, and I'm going to get the year wrong. I think it's -- 2020 is the primary; right?

Q Yep.

A And the runoff in 2021.

There are both black and white candidates,

and the black voters selected Ossoff as their candidate of choice. So they clearly had an option of voting for black candidates. I think there were more than one black candidates running in that contest, and their candidate of choice was a white candidate.

In that instance, I'm assured that that is the candidate of choice. The white candidate is the candidate of choice.

Q Okay. And when you have black candidates versus white candidates, you're also generally assured that the black candidate is the candidate of choice of the black voters?

A No. I always do an analysis; right?

So like I just said, an example where you had both black and white candidates and black voters selected the -- the white candidate, then in that particular instance, the white candidate was the black-preferred candidate.

The only assumptions I'm doing in racial bloc voting analysis I'm seeing how black voters vote.

Q Well, so -- yeah. I understand that.

But the -- the general, I guess, rule that you're quoting -- the general rule that you're stating is that candidates in which there's a black -- contests in which there's a black candidate and a white

candidate are more probative than contests in which there's a white candidate and a white candidate.

I asked you, I think, if you agree with that.

But -- and I think, you know, you gave me sort of an answer on that.

But then I asked you: Is it always the case that where a black candidate actually makes it through the primary, right, on the Democrat side, let's say, or on the Republican side, but where the black candidate is up against a white candidate, you can be assured that the black candidate is the candidate of choice of the black voters.

And that is going to come out horrible on the transcript. So I will try to kind of break it down.

So let's start with -- I think I heard you say that you chose candidates in which there are a black candidate and a white candidate -- strike that.

You chose elections in which there are a black candidate and a white candidate because they're generally more probative; is that right?

A I chose elections that included black candidates because I feel and the courts feel those are more probative than contests that include just white candidates.

However, only if there's a sufficient number

of those contests. I would go to white-versus-white contests rather than not analyze anything at all. And I would also consider those probative, but not as probative as contests with black candidates.

Q And how about, and I'm -- like, we'll take, for example, the election between Herschel Walker and Raphael Warnock, where it was a black candidate versus a black candidate. How does that affect the probative value of the contests if at all?

A I would think that contest would be probative because there is an option to vote for a black candidate. So it's not -- I mean, there is a black candidate. In fact, there's two black candidates running in that contest.

Q So is the assumption, I guess, that if there's a black candidate in the race, that's more probative because black voters are more likely to vote for that candidate or is it just because they have the option to vote for that candidate?

A The latter. They have the option to vote for that candidate. You're not making any assumptions about who the candidate of choice is until you actually do the analysis.

Q Okay. So the one primary -- the one democratic primary, excuse me -- the one candidate in a

1 democratic race that you -- the one race that you
2 examined that was white versus white in this portion of
3 your report was the Ossoff race; correct? White
4 candidate versus white candidate?
5 A That's correct. Now, I had already analyzed
6 the primary, which included black candidates. So I was
7 assured that this white candidate was definitely the
8 choice of black voters even when they had the option of
9 voting for black candidates.
10 Q Okay. So if a candidate makes it out of the
11 democratic primary that is not preferred by black
12 voters in that primary but ultimately receives, let's
13 say, 97 percent of the black vote in the general
14 election, do you still characterize that candidate as
15 the black voters' candidate of choice for purposes of
16 the general election?
17 A For the purpose of the general election, yes.
18 Q What about more broadly speaking? Would you
19 characterize that candidate as the candidate of choice
20 of black voters?
21 MS. LAKIN: Objection.
22 THE WITNESS: If I knew that that candidate
23 did not receive -- was not the candidate of choice in
24 the primary, I would limit the conclusions I was
25 drawing to the general election. I would say that

candidate was the candidate of choice in the general election but not in the primary. I mean, this is why I look at primary elections in part.

BY MR. JACOUTOT:

Q And in the statewide general elections that you did examine where there was one black candidate and one white candidate, you did look at those primary results?

A If there was a primary, democratic primary, I looked at it, yes.

Q And in that -- in those primaries that you did look at where there was a black candidate that emerged for the general election as the victor of the democratic primary, were they uniformly the candidate of choice of the black voters in the democratic primary?

A I don't know off the top of my head.

Q It's not in your report, is it?

A Well, you could certainly look at my report and figure it out.

Q If those primary results are not in your report, would you say that's something worth adding to it?

A What primary results?

Q The primary results of the statewide general

elections from 2016 to 2022 that you analyzed that included black candidates.

A So I believe that I analyzed all democratic primaries -- all statewide democratic primaries between 2016 and 2020 that included black candidates. I don't believe I left any out. I certainly don't believe I left any out.

Q Okay. Okay. And you just can't remember off the top of your head whether the black candidates in those elections were the candidate of choice for black voters in the democratic primary?

A Some of these didn't even have primaries. I can't remember off the top of my head, no.

Q Okay. And just to be clear, you didn't analyze any of the republican primaries for any statewide general election; right?

A That's correct.

Q And why was that again?

A Because only about 1, 2, at most maybe 3 percent of the black voters who choose to vote in a primary choose to vote in the republican primary.

Q Did you conduct an analysis or did you -- how did you know that only 1 to 2 percent of black voters voted in republican primaries?

A Because I had the data and I looked at it.

Q Okay. Is that essentially that -- when it's that small of amount of voters that it doesn't really make a statistically significant sampling?

And if I'm using my terms of art wrong, please feel free to put the right ones in.

A So I didn't look at it because you wouldn't have found a black-preferred candidate when you're only talking about, say, 2 percent of the black voters; right?

But it's also true that statistically I didn't feel I would get reliable results if only 2 percent of the population that you were analyzing was of a certain -- of one group.

Q And then you finally examined recent state legislative general elections that included both black and white candidates in the seven areas of interest in those -- in those contests?

A Yes.

Q And no primaries on those; correct?

A I attempted to run primaries, but the EI RxC was producing very large confidence intervals, and I felt they weren't particularly reliable.

Q Would it be producing those confidence intervals because also it's a pretty small sample size given the district sizes?

A So two things are happening there. Yes. It's because you have a small number of precincts, first of all. So this is a geographically small area with a small -- by "sample size," you can mean a couple of things: Units analysis, or precincts here, and there's a small number of precincts. So that's affecting the confidence intervals. But also the low amount of actual, say, white voters in some of these precincts -- you need to have some variation across the precincts in the populations.

So you can't really produce reliable estimates if every single precinct of those 10 precincts has a small number of white voters. You need some variation. Same thing about the republican primary. You can't really analyze a republican primary if all of the precincts you look at, only 1 or 2 percent of a particular racial group you're trying to estimate.

Q Okay. Do you remember sort of the size of the confidence interval, you know, how large it was in these contests?

MS. LAKIN: Objection.

THE WITNESS: So the confidence intervals, of course, varied, each -- you know, in each and every election that I analyzed. Alls I know is that they

1 were broad.
2 So a lot of times not for black voters, but
3 for white voters, the range could be from 10 percent to
4 90 percent. So that doesn't tell us anything about
5 what white voters are doing. So they were very wide.
6 BY MR. JACOUTOT:
7 Q Okay. Do you happen to know if any of the
8 confidence intervals in these contests, these primary
9 contests that you decided to exclude from your
10 analysis, do you happen to know if any of those
11 contests had confidence intervals that were within the
12 range that you used in your report for other contests?
13 A So the confidence intervals for the black
14 voters could sometimes be small. So I mean, it depends
15 on whether you're talking about black voters and white
16 voters; right?
17 Q So the confidence intervals for the black
18 voters would be potentially in range of those that you
19 did include in your report, but you wouldn't
20 simultaneously get an acceptable confidence interval
21 for the white voters.
22 Am I hearing that right?
23 A So the confidence intervals are different for
24 the black voters and the white voters.
25 Q Sure.

A Completely different.
Q I'm sorry. I didn't mean to interrupt you.
A I'm done.
Q Okay. So I understand that. But I guess what I'm asking is: It sounds like the confidence intervals for the black voters would have been in the acceptable range in some of the contests that you analyzed -- and when I say "acceptable range," I mean within a range that you included in your report that you deemed acceptable for putting in the report.
But in that same contest where you had, let's say, an acceptable confidence interval range for the black voters, in that same confidence interval, you wouldn't necessarily have an acceptable confidence interval range for the white voters for that particular -- so you get basically half -- almost got like half the data that you needed?
MS. LAKIN: Objection. Mischaracterizing.
THE WITNESS: So I would say that the confidence intervals are typically much wider for white voters than for black voters, and it was the confidence intervals for white voters, more or less. It might be true also for black voters. I don't remember. But certainly it was consistently broad for white voters.
Now there are a lot of contests that only had

a small number of precincts, and it was probably wide for both black and white voters. I don't remember off the top of my head how many contests that would have been.

BY MR. JACOUTOT:

Q In any of the primaries that you examined for the state legislative districts, was the confidence interval for the white voters within the range of confidence intervals you found acceptable for the elections that you did include in your report?

A I did have some wide confidence intervals in my report so that's really sort impossible to answer that question. I don't remember the confidence intervals for all of the contests off the top of my head.

Q Okay. So why -- if you -- if you had data for some districts with confidence intervals for both black and white voters that you determined were acceptable confidence intervals for elections that you did include in your report, why would you choose to exclude them from your report when they occurred at the state legislative primaries?

A I would say at the very least I had very wide confidence intervals in every instance for white voters.

Q And so sort of the cumulative nature of the wide confidence intervals caused you to not include any contests even if some of those contests were acceptably -- fits acceptably within the confidence intervals you had used in other contests?

A I think we're getting black and white mixed up here in the confidence intervals.

The confidence intervals for white voters were consistently wide for the primaries, for the democratic primaries. So sometimes they were wide for the black voters and sometimes they weren't. But they were consistently wide for the white voters.

Q And I guess the question I'm asking, you know, did you ever have a situation in your primaries that you analyzed for these state legislative districts where both the confidence interval for the black voters of a particular election contest and the confidence interval of the white voters of a particular election -- of that same election contest, did you ever have a situation where those confidence intervals fit within the bounds of confidence intervals you included in your report?

A I doubt it.

Q You doubt it?

A I can't say for certain.

Q Okay. If there were contests that fit within that description, would you say that they are worth including in your report?

MS. LAKIN: Objection.

THE WITNESS: If there were contests in which the confidence intervals for both black and white voters fit within --

BY MR. JACOUTOT:

Q -- within confidence intervals that you used in your actual report.

I guess what I'm getting at here is it seems like that it's possible that primaries that you analyzed, while they did contain wide confidence intervals, there were individualized contests in those primaries that fit within the bounds of confidence intervals that you used in your report.

And if that is the case, wouldn't those be worth including instead of sort of just keeping out of the report?

A First of all, I don't agree that there were some that were. And I said I didn't know, but I didn't think so.

Q Oh, yeah. I'm sorry. I did not mean to imply that you know that there were. I'm saying if there were.

A My belief is that there were not. But I mean, I suppose I could have put in one or two contests. I'm not really sure how useful that would have been. No, I probably wouldn't have included them if it was just one or two.

Q Okay. Is that because you think they wouldn't be useful to include?

A I think that two contests out of a possible 40 could even be misleading. It could skew the results. You would want as many as you could possibly have than have just a couple. And these would be a couple that would be unusual compared to all of the others and you could get a skewed result.

Q Okay. We can move on to the "geographic areas analyzed" portion of your report, which is page 7. It begins by saying: "I examined voting patterns in seven areas of Georgia where the illustrative plans create more majority black voting age population districts than the adopted State House -- or, excuse me -- State Senate and House plans."

A Yes, I'm there.

Q Okay. And then you say: "The districts that offer black voters an opportunity to elect their candidates of choice in the illustrative plans -- in

the illustrative and adopted plans are bolded."
And you're referring to Table 1; is that right?
A That's correct.
Q We've talked about in this situation -- just to be clear, when you're talking about black voters having an opportunity to elect their candidates of choice, do you mean that they are majority BVAP?
A It happens to be the case that they are majority BVAP, but this is also based on the effectiveness scores that I -- that are discussed later in the report.
So it's based on actual -- it's a functional analysis based on election results as well.
Q Okay. And so you're not talking about, like, coalition districts in this particular report? It's only dealing with black majority -- excuse me -- black voting age population majority?
A You and I might have a different understanding of what a coalition district is.
Q That is --
A Do you want to tell me what you mean by a coalition district?
Q Majority minority is how I would describe it.
A Okay. That's not what I would describe a

coalition district as. But --

Q Well, so before you go on, how would you describe a coalition district?

A I think coalition districts, in my opinion, come through a system where you determine -- let's say black and Hispanic voters are voting very, very similarly and therefore you can combine them and create a district in which two minorities form a coalition. There's actually analysis involved in this.

But I mean, we can live with your definition of coalition just so I know what it is.

Q Yeah, let me -- how about we not use the term "coalition districts" since there could be confusion.

How about we use the term "majority minority" as distinct from majority black voting age population?

A I would prefer that.

Q Okay. So in your report, when you say they have an opportunity -- excuse me. In your report, when you say black voters have an opportunity to elect, do you mean that the district that was created is a majority black voting age population district?

A No. As I just explained, it's based on several factors, with the main one being the effectiveness analysis. I mean that effectiveness analysis shows that black voters would be able to elect

1 their candidates of choice; however, it is the case
2 that all of the affected districts are majority black.
3 Q And the effectiveness analysis -- you go into
4 that a little bit later in your report; right?
5 A Yes.
6 Q Is that an analysis of your creation?
7 A I'm not sure what you -- I mean, I created
8 those numbers. I created the index. What -- or do you
9 mean -- tell me what you mean. I'm sorry. Just
10 explain a bit more what you mean.
11 Q Hold on. Let me get to the point.
12 So you -- you create something that you term
13 a "general election effectiveness score" and a
14 "democratic primary effectiveness score"; right?
15 A That's correct.
16 MS. LAKIN: Are you looking at a particular
17 page?
18 MR. JACOUTOT: Oh, sorry. Yeah. Sure.
19 I'm jumping around a little, but just since
20 we're on topic I think it's fine to talk about now.
21 It's page 12 where those -- I think where those are
22 first introduced, those terms.
23 And let me know when you've had a chance to
24 look at it and you're there.
25 THE WITNESS: I'm on page 12.

BY MR. JACOUTOT:
Q So on page 12, you say: "I refer" -- basically what you do in this section, if I'm reading it correctly, is you take the general elections results and transpose them onto these new illustrative districts; is that right?
A I suppose. I don't think I would use those wordings. But this is what the average vote of the black-preferred candidates across the elections would be in that -- in both -- I did it for both the adopted districts and the illustrative districts.
Q Okay. And when you say "A score of less than .5 means the average vote share that these eight black-preferred black candidates received in the district is less than 50 percent," I mean, it is a -- just a straight -- if they received, let's say, 68 percent of the share of the vote, that would give them an effectiveness score of .68?
A Yes.
Q Okay. Okay. And with what we were talking about before, I'm saying, well, these are all black -- majority black voting age population that you're referring to in the Table 1 where they're bolded in the illustrative -- in both the illustrative and the adopted districts; is that right? Those bolded numbers

are all -- and those bolded numbers just so happen to be all majority black voting age population?

A The bolded numbers are both majority black and districts that produced a greater than .5 average on the GE score.

Q Okay. Thank you. That makes sense.

Do you know if -- if you look at Table 1, which is on page 7 and 8, each region basically -- or not basically. Each region adds one additional illustrative district that you would characterize as above the .5 threshold for general effectiveness -- each region adds one; is that right?

A No.

Q So tell me -- so I'm looking at, like let's just look at -- well, let me ask you this first: Which regions do not add one new generally -- general effectiveness score of .5, one district?

A The Southeastern Metro Atlanta Region, Map 4, adds two -- there are two additional districts there.

Q Yeah. You're right. I was looking at -- I was looking at 74 as bolded in both. That was my fault. They're very close to being bolded it seems.

Okay. So that one has two, but every one has at least one; right?

A Yes.

Q Are there any others that do more than one, that add more than one GE effectiveness district of .5?
A No.
Q Do you know if that's the maximum number of districts that can be added in those respective regions that would produce an effectiveness score of .5 or above for black voters?
MS. LAKIN: Objection.
MR. JACOUTOT: Sorry. Sophia, did you say objection?
MS. LAKIN: But she can answer.
THE WITNESS: I did not draw any illustrative plans, and therefore, I don't know how many, say, majority black districts you could have drawn in any area of Georgia.
BY MR. JACOUTOT:
Q Okay. In your opinion, if more majority -- since we're -- I think we're using not -- well, let me -- I'll ask it this way: In your opinion, if more majority BVAP districts could be drawn than those in the illustrative plans, could that potentially imperil the illustrative maps under Section 2 of the Voting Rights Act?
A I'm sorry. Could that do what to the maps?
Q Could that potentially imperil the maps under

Section 2?
MS. LAKIN: Objection.
THE WITNESS: Imperil the maps?
BY MR. JACOUTOT:
Q Meaning they're likely to be struck as violative of Section 2 of the Voting Rights Act.
MS. LAKIN: Objection. Calls for a legal conclusion.
THE WITNESS: If I'm not mistaken, the courts have made it clear you are not allowed to maximize the number of black voting age population districts.
BY MR. JACOUTOT:
Q In your opinion -- I understand that the courts don't require maximizing majority black districts, but in your opinion, is it good practice for map drawers to maximize the number of black voting age population -- excuse me -- majority black voting age population districts?
MS. LAKIN: Objection.
THE WITNESS: I'm usually not a map drawer either. But I mean, I wouldn't -- I mean, if you produced, say, incredibly contorted districts to do so, I certainly wouldn't embrace the idea that you should maximize the number of districts -- I'm sorry, the number of black majority districts.

BY MR. JACOUTOT:
Q I'm sorry. Can you say that last part again? You "certainly wouldn't," I think you said, and then I lost you.
A If maximizing the number of majority of black districts produced, let's say, very bizarrely shaped districts, I certainly don't think that you would be well served by maximizing the number of districts.
(Exhibit 4 Marked for Identification.)
BY MR. JACOUTOT:
Q Okay. So just because I'm getting some objections on these type of questions, I'm going to introduce another exhibit for you to look at just to kind of explain why these questions that sort of touch on legal issues are being asked to you even though -- in your capacity as a political scientist. So let me -- okay.
This is going to be introduced as Exhibit 4 -- yeah, Exhibit 4. Coming to you shortly.
One moment, please. And let me know when you have it.
A I believe that we have it up on the screen.
Q Okay. Great. And so I'll represent to you that these are excerpts from a book that you coauthored in '92 I think it was called "Minority Representation

and the Quest for Voting Equality."

Does that look familiar to you?

A I'm going to believe you that it came from there. But that was a very long time ago.

Q Okay. Well, you do recall writing -- coauthoring this book; correct?

A Yes. This -- yeah. This is mostly my dissertation.

Q Okay. That's what I wanted to get into. And your dissertation went into some -- excuse me -- the portions of the dissertation that were used in this book went into some detail of Gingles and Section 2 generally, you went into the history of Section 2, the legislative amendments of 1982.

Does that all that sound accurate to you?

A That's correct. Now, of course, this was the 1980s when this was written. So it's not exactly up to date.

Q Correct.

A Things have changed since then.

Q Yes.

A But yes, that's what my dissertation did.

Q Okay. So I just wanted to -- you know, yeah, and -- if you can look to page 53, which is -- Number 53. It's not the 53rd page in the exhibit. But

can you see that? They go in order, but they're not -- it's not every page.

A I see. I see. Hold on a second.

Q It's page 10 of the exhibit.

A Oh, my gosh. Page 10 of the exhibit. I don't even see the page numbers on the exhibit. But I found 51. So 53 must be coming. 52.

Got it. I'm at 53.

Q Okay. And so here you talk in some detail about Justice O'Connor's concurrence regarding the potential that Section 2 creates an obligation for maximum -- I'm sorry -- maximizing the amount of districts?

MS. LAKIN: Take the time that you need to look at it.

BY MR. JACOUTOT:

Q Yeah. Please. I'm not going to have you reread the whole thing.

A How far do you want me to read? I've read the first two paragraphs. What happens next?

Q I would just go right to the very top of 54 because then that section ends.

A Okay. I've read it.

Q Okay. So first -- by way of explanation, that's the reason I'm asking you about the potential

for maximum -- maximum districts. Maximally -- let's see, how did she put it? -- maximum feasible minority voting strength.

But your answer was essentially no, that you don't have to draw the most majority BVAP districts that you can if it, I guess, otherwise does not comply with traditional redistricting principles; is that right?

MS. LAKIN: Objection.

Can we just -- you mentioned a "she" in that sentence. Can you just clarify?

MR. JACOUTOT: She. Justice O'Connor, is that referring to?

MS. LAKIN: I just want to be clear of his words.

MR. JACOUTOT: Sure. Thank you.

BY MR. JACOUTOT:

Q So let me just ask you this one again: Is it your opinion that Section 2 requires states to draw the maximum number of majority BVAP districts in order to be in compliance with Section --

MS. LAKIN: Objection.

BY MR. JACOUTOT:

Q And I'll clarify that I'm not -- I know that you're not an attorney and I'm certainly not asking for

your legal conclusion.

But you have read case law and you're familiar with this area, obviously, so I'm asking you in your capacity as a political scientist who is probably more than vaguely familiar with the case law.

A And, again, I would say certainly I don't think you would be required to maximize if you had to, for example, create incredibly contorted districts, bizarrely shaped districts to do so or noncontiguous districts or things along that line.

Q Sorry. Are you familiar with the term "traditional redistricting principles" as it's used in a redistricting case -- excuse me. Strike that.

Are you familiar with the term "traditional redistricting principles"? Does it come across in your work as a redistricting expert?

A I'm familiar with the term, yes.

Q Okay. And so assuming that you can comply with traditional redistricting principles which includes contiguity, compactness, and so forth -- well, strike that.

In your definition of traditional redistricting principles, do you include the ideas of compactness and contiguity of districts?

MS. LAKIN: Objection.

1 THE WITNESS: I believe that traditional
2 redistricting principles, and in my mind also, that
3 include the idea of compactness and contiguity.
4 BY MR. JACOUTOT:
5 Q What else do -- what else, just off the top
6 of your head, do you consider when -- within your
7 definition of "traditional redistricting principles"?
8 A I'm not sure that the courts have given us a
9 list of what to consider. Sometimes you see things
10 like the cores of the existing districts. I wouldn't
11 include that there, but I think some people do. So I'm
12 not so sure that we have a clear definition. I think
13 everybody -- most people, anyway -- include contiguity
14 and compactness. I think there's quibbles beyond that.
15 Q Okay. Now, let's say you could comply with
16 traditional redistricting principles as you understand
17 that term as an expert who works in redistricting
18 matters. If you could comply with traditional
19 redistricting principles while drawing additional
20 majority BVAP districts -- we're getting too compound
21 on this question. So let me back up.
22 Is it your opinion that Section 2 requires
23 states draw the maximum number of majority BVAP
24 districts while keeping -- while complying with
25 traditional redistricting principles?

In other words, if the map is otherwise acceptable under traditional redistricting principles, does Section 2 require that the maximum number of black -- majority black voting age population districts be drawn?

MS. LAKIN: Objection.

THE WITNESS: I don't know.

BY MR. JACOUTOT:

Q Okay.

A I can add. I mean, I expect it's context specific.

Q Let me try and to give you a hypothetical, and if it doesn't go off the rails, it doesn't go off the rails, and if it does, you know, we'll put it aside.

But let's say we're at a remedy phase in Georgia for a five-district commission like the Public Service Commission of Georgia.

Are you familiar with that commission?

A I analyzed some contests. I can't tell you anything beyond this commission exists and I analyzed some. I don't know what it does.

Q That's fine. I don't think most people do.

I can represent to you that the Public Service Commission of Georgia is currently a statewide

1 elected body -- pending litigation and outcome of
2 litigation -- but currently, a statewide elected body
3 that has five commissioners, and the commissioners are
4 required to be residents of districts that are drawn.
5 So there's five districted single-member districts --
6 or commissioners. Excuse me.
7 And, again, Georgia is -- as I've said
8 earlier, this -- I think roughly a 30 -- almost a
9 33 percent majority -- excuse me, almost 33 percent
10 black voting age population, so one third.
11 So does Section 2 -- in that situation, does
12 it require that Georgia draw two districts for -- that
13 are majority black voting age population or one
14 district assuming you could otherwise comply with all
15 the traditional redistricting principles and all other
16 requirements of the law?
17 MS. LAKIN: Objection. Calls for a legal
18 conclusion. Incomplete hypothetical.
19 MR. JACOUTOT: What was that last part,
20 Sophia? I'm sorry.
21 MS. LAKIN: It's an incomplete hypothetical.
22 BY MR. JACOUTOT:
23 Q Is there any other information you'd like to
24 have for me to take a shot at that hypothetical,
25 Dr. Handley?

A I really don't have an opinion on it. I don't know one way or another. I just don't know. I mean, people who are familiar with that case, and lawyers would certainly know the answer to that question. I don't.

Q Okay. I want to ask you -- just to get away from the hypothetical, let me ask you just kind of a more broad question.

Would you agree with me if I said that if Section 2 requires jurisdictions to draw the maximum number of majority black voting age population, isn't that roughly similar to Section 2 requiring proportionality?

A I don't know why it would. I assume that you could draw, in some instances, more districts than what would be proportional. So no, I don't think so.

Q Right. So it would either -- let me ask the question again from the start.

So if Section 2 requires that you draw the maximum number of black voting age population districts in a given jurisdiction, wouldn't that either -- mean either that Section 2 requires proportionality or something beyond proportionality greater than proportional representation?

MS. LAKIN: I'm going to continue to object

to this line of questioning.

THE WITNESS: So if you could only draw, say, one district and proportionality would be two districts, maximizing wouldn't get you to proportionality.

I really don't think that you can equate the two.

MR. JACOUTOT: We are at about 12:40. I've got -- it's hard to say how much I've got left.

(Discussion off the stenographic record.)

THE VIDEOGRAPHER: This is the end of Media 1. The time is 12:44 p.m. We're now off the record.

(Off the record 12:44 p.m. to 1:21 p.m.)

THE VIDEOGRAPHER: This is the beginning of Media 2. The time is 1:21 p.m. We're back on the record.

BY MR. JACOUTOT:

Q Okay. Dr. Handley, I hope you had a good lunch. Welcome back -- or a good lunch break anyway.

A Thank you. I hope the same for you.

Q Thank you. So I want to move on -- sticking with your report, move on to the Section IV, entitled "Voting is Racially Polarized in the Seven Areas of Georgia Analyzed." And that's on page 8 -- or it

1 starts at the bottom of page 8.
2 A Got it.
3 Q On the next page, you state that "Overall,
4 the average percentage of black vote for the
5 16 black-preferred candidates is 96.1 percent. The
6 average percentage of white vote for these
7 16 black-preferred candidates across the seven areas is
8 11.2 percent." And in the parenthetical, it says:
9 "When Ossoff is excluded, and only black-preferred
10 black candidates are considered, the average white vote
11 is slightly lower, at 11.1 percent."
12 Do you see that?
13 A Yes.
14 Q Does that matter, that difference, to you?
15 A No.
16 Q No? Okay. And would you say that Ossoff
17 enjoys roughly the same black voter support as his
18 black-preferred black Democrat colleagues enjoy in
19 general elections?
20 A Yes. I mean, I could check, but I'm pretty
21 certain he did, yes.
22 Q Okay. So let's look to the primary contests
23 you examined here, which looks like it can be found on
24 page 10.
25 A I'm there.

Q Okay. And in the middle of that top paragraph, it says that in the democratic primaries you looked at, quote, "I found that the majority (55.8 percent) of the contests I analyzed were racially polarized."

Do you see that?

A Yes.

Q What was your standard for finding racial polarization in those contests?

A Standardization is, I mean, always the same. The definition is if whites alone would have elected a different candidate than blacks voting alone would have elected, then the contest is polarized.

Q So is that essentially that if -- so is that effectively a 50 percent plus 1 standard? So if more than 50 percent of blacks preferred a particular candidate and the white voting population did not prefer that candidate, is that racial polarization to you?

A Yes.

I mean, it's not a 50 percent standard because of course you have contests with three, four, five candidates. So I'm not putting a bright line here. I'm saying if the election would produce different winners --

Q Okay.
A -- depending on whether black voters or white voters were voting.
Q Let me draw your attention to the expert report of Dr. Alford again, page 8. So that's Exhibit -- oh, did I not post it? -- sorry. I'm in the wrong file.
One moment. Okay. It's Exhibit 2.
A I'm on Exhibit 2. What page would you like me to go to?
Q Page 8. So it says here at the bottom of the first full paragraph on page 8, it says: "Even ignoring any concern for establishing minority or majority cohesion and applying a very loose standard of blacks and whites simply preferring different candidates, Dr. Handley is only able to conclude that 'the majority (55.8 percent) of the contests I analyzed were racially polarized.'"
Do you see that language?
A Yes.
Q Do you agree with that characterization of your polarization standard where he says -- and I'm not talking about the, I guess, the editorializing portion where he calls it a very loose standard of where he says where blacks and whites simply prefer different

candidates, do you agree with that characterization of how you -- of what you consider a polarized contest -- a racially polarized contest?

A No.

Q What do you think is wrong with it?

A Well, for example, you could have -- you could have an election in which, say, 55 percent of the white voters vote for one candidate, Candidate A, and 95 percent of the black voters vote for Candidate A. Now, they are voting differently, but that is not a polarized contest. So I would say that language is too loose.

Q Would you -- how would you clean it up? Before -- actually, let me rephrase that.

Instead of saying blacks and whites simply preferring different candidates for your definition of racial polarization, would it be fair to say that you consider racial polarization to be present where the -- where whites prefer a candidate and blacks prefer a different candidate in the same election contest?

A I wouldn't phrase it that way, no.

Q How could -- how would you phrase it?

A I would change the word "prefer" to "elect." Right? So whites would have elected a different candidate than blacks would have elected.

Q Okay. Okay. Is that definition common? Is that definition of racial polarization that you used, is that common in your experience?
A Yes.
Q Do you know if courts accept that definition?
A Yes.
Q So if we were to use that standard in your report, your report reveals that only a bare majority of racial polarization is present in democratic primaries; right? Just 55.8 percent?
A I'm not sure I'd call that a "bare majority," but 55 percent of the contests were polarized.
Q Okay. You then go on to say -- let's see if I can fine my quote here?
A Are we looking at Alford's report or my report?
Q We can put Alford's report to the side.
There we go. So right after -- again, right in the middle of that top paragraph, right after the 55.8 percent figure, it says: "Moreover, in over 67 percent of the contests that were not polarized, it was because black voters supported white candidates preferred by white voters (e.g., John Ossoff in the 2020 democratic primary for U.S. Senate; John Barrow and Lindy Miller in their 2018 primary bids for

Secretary of State and Public Service Commission District 3, respectively; and Jim Barksdale in 2016 ... primary for U.S. Senate)."

Do you see that?

A Yes, I do.

Q Okay. And you highlight that that's distinct from white voters supporting the black candidate essentially; right?

A I mean, I talk about that in the next sentence.

Q Yeah. So then it's fair to say that approximately one third of contests that were not polarized were due to white voter crossover; right?

A What -- say that again. To what?

Q Yeah. So you say 67 percent of the contests were not polarized because black voters crossed over to the white candidate -- to the preferred white candidate, I guess.

And I guess maybe "crossover's" not the correct term to use, but it's because black voters voted with the white voters essentially; right?

A Well, in any contest that's not polarized, that means that black and white voters are supporting the same candidate; right?

Q Mm-hmm.

A Yes.
Q So in this, you make a distinction, though. You say in 67 percent of the contests that were not polarized, it was because black voters supported white candidates preferred by white voters.
Am I right?
A Right.
Q Why does that matter in your opinion?
A I'm not sure that matters so much to me, but it appears to matter to, say, Dr. Alford, who argues that black and white support -- that white voters vote for white and black candidates at comparable rates in the general election. They don't in the primary election. In the primary election, there's quite a difference between support for black-preferred black candidates and black-preferred white candidates on behalf of the white voters. So it's a counter, basically, to Alford -- Dr. Alford. I'm sorry.
Q That's fine. Counter to Dr. Alford.
A I'm sorry?
Q I was just repeating you and thinking.
Does it matter for purposes of finding racial polarization?
A I mean, it's a -- no. It's irrelevant, the race of the candidate that voters are supporting. It's

only relevant who they're supporting and whether they're supporting the same candidate or not.

Q Is that -- do you know if that is the Supreme Court's -- how do I phrase this? I'll probably get an objection but I'm going to go ahead and ask it.

Do you know if that standard that you just cited is supported by a case -- a Supreme Court case in which the majority made that pronouncement?

MS. LAKIN: Objection.

THE WITNESS: I can only speak to one Supreme Court case. So I -- I don't know the answer to that question.

I can tell you it -- that is from the -- it's founded in the Gingles, but -- in the Thornburg v Gingles opinion, but it could, of course, show up in many others. I don't know.

BY MR. JACOUTOT:

Q Do you know if the majority of the Court joined that standard or if it was a plurality?

MS. LAKIN: Objection.

THE WITNESS: I don't remember.

BY MR. JACOUTOT:

Q Okay. So when you say that what matters is the race of the voters supported the same candidate and not the race of the candidate, that's your opinion as a

political scientist, not necessarily a reflection of the legal standard, the prevailing legal standard?

A Yes.

Q Turning back to the democratic primary, you'd agree with me that there is much less racial polarization in the democratic primary than there is in the general election; correct?

A Yes. A hundred percent of the general elections were polarized. Of the elections I looked at, a hundred percent were polarized. That's higher than 55 percent.

Q Pretty dramatically higher, wouldn't you say?

A A hundred percent is pretty stark.

Q Okay. I want to move on to your concluding paragraph, which I think is on 31 -- yeah.

And so we might rehash a little bit of what we've already talked about here, but you say that "My analysis of voting patterns by race determined that voting in all seven areas of Georgia that I examined is residentially polarized."

Do you see that?

A Yes.

Q And just to be clear, you didn't look at the question of why the races vote the way they do to create this polarization. You've just established that

it exists in the general elections; is that right?
A I did not look at causation. That's correct.
Q Okay. And you've established, too, that to a lesser degree, it's present in the democratic primary contests -- excuse me. Let me make sure you know what "it" is referring to.
You state here that all the seven areas of Georgia you examined are racially polarized, but in the democratic primary contests you examined, it's true that they are racially polarized by your standards but to a lesser degree; is that right?
A Yes. But my conclusion that voting is polarized in Georgia is based on the general elections.
Q Okay. And why didn't you look into the causation -- potential for causation of the racial polarization?
A I have never looked into the reason for the polarization. I think the law is clear and certainly the analysis that I've conducted and everybody that I know has conducted looks at just the voting patterns of black and white and not the intent behind it or the causation behind it in terms of the Gingles factors.
Q Okay. And I think at the beginning of our deposition, you mentioned that it might be possible, I think you said, for some very clever people to

determine the causes of racial polarization; is that right?

A I said I don't know of people being able to do it now, but that doesn't mean that they wouldn't be able to do it and I just don't know about it yet or that they will develop methods for doing it in the future.

(Exhibit 5 Marked for Identification.)

BY MR. JACOUTOT:

Q Okay. I'm going to give you one, I believe, final exhibit, more of your handiwork. And this exhibit.

Okay. Let me know when you've got that. I've sent it through.

A I have it.

Q Okay. This is an article you coauthored in the Journal of Race, Ethnicity, and Politics. I believe it's 2019.

Do you know? Can you confirm that? I think it's in your CV, actually -- in your report.

But does that article look familiar to you?

A Sorry. I'm just looking up the year. It's listed in my CV as "forthcoming." I would say it's come.

Q Okay.

A I don't know when.
Q Okay. But yeah. So it's listed as forthcoming. Pretty recent; right?
A I assume so.
Q Well, let me just direct you to the top where it says -- under the copyright, it says "The Race, Ethnicity, and Politics Section of the American Political Science Association 2019."
Do you have any reason to dispute that 2019 was the year that this came out?
A No. But I can't see where you're talking about.
Q It's above the title.
A 2019, yes.
Q Okay.
A I should update my vitae.
Q Okay. Do you recall the substance of this article?
A No, not really. I think, sort of generally speaking, the sweet spot is the point at which you have a district that's nonmajority black but will elect black-preferred candidates because blacks predominate in the primary and they get enough white crossover voting in general to elect the candidate, the black candidate of choice. I think that's what the second

clause is about. But I have not looked at this for years. I mean, it came out in 2019. It was probably done in 2016 or '17.

Q Okay. Would you like to take a quick look at it to kind of refamiliarize it? Or -- I'm happy just to walk you through the parts that I found worth talking about.

I'll tell you what. Why don't we start -- I'll walk you through some of these parts I want to draw your attention to. And if you feel the need to read the entire thing or refamiliarize yourself with it, just let me know and we can do that.

A Okay.

Q Okay. So the introduction here sort of somewhat summarizes -- and to be clear, this is a paper coauthored with three other authors. But the introduction somewhat summarizes your findings in the paper.

It says right after -- kind of right in the middle, right after the "1992" and "2015," it says: "However, our data show that there has been a shift in the minority concentration required."

A I'm sorry. I'm sorry. I'm sorry. I don't know where you are. Are you on the abstract?

Q I'm on the introduction.

A I was in the wrong place. I'm sorry.
Okay. Tell me where I'm going in the introduction.
Q It's right after it says "1992" and "2015." I don't know if that's pretty easy to see that. It starts with "however"?
A What page are we on?
MS. LAKIN: Bryan, if you have a couple questions, would it be maybe smoother if we just printed this?
MR. JACOUTOT: Yeah. Go ahead. I've got a few, not many, but I think it would be worth it. Yeah.
THE WITNESS: Okay. I can read it a lot better. This is hard for me. That's why I have the report in paper.
MR. JACOUTOT: No problem. We can go off the record for a little bit until we get it printed.
THE VIDEOGRAPHER: The time is 1:45 p.m. We're now off the record.
(Off the record 1:45 p.m. to 1:47 p.m.)
THE VIDEOGRAPHER: We're back on the record.
BY MR. JACOUTOT:
Q Okay. I'm sorry, Dr. Handley.
What was your question? I think you started out with a question.

A Oh, you wanted me -- you were reading in a certain place. Now I have something that I can read.
Q Yes.
A And I need to know where you want me to look.
Q Okay. It's going to be at the beginning of the introduction, probably eight or nine lines down right after it says "1992" and "2015."
Do you see that?
A Yes.
Q Okay. And the article is talking about how, in the past, you needed to achieve a majority voter -- majority minority voter representation to sort of secure an election of a minority representative.
And the article says: "However, our data show that there has been a shift in the minority concentration required: Prior to the 2010 round of redistricting, minority candidates had a better than equal chance of being elected only in majority minority districts."
And then it goes on to say: "More recently. Districts falling in the 40 to 50 percent black or Hispanic range have offered minority candidates a better than equal opportunity to be elected to legislative office."
And if you go down to the very bottom, it

1 says -- the second to last line at the end, it says:
2 "We argue that the best explanation for the increase in
3 the number of minority legislators is the rise in
4 republican voting strength, particularly in the South,
5 and the heightened partisan polarization."
6 Do you see that?
7 A Yes.
8 Q Okay. I'll move you to page 279 of this
9 report.
10 MS. LAKIN: Objection. Are we just reading?
11 Is there a question to the deponent there?
12 MR. JACOUTOT: Yes. I do have to quote one
13 more thing and then I have a question.
14 BY MR. JACOUTOT:
15 Q Okay. So if you look at page 279, kind of
16 smack in the middle there, it says --
17 A Page what? I'm sorry. What page?
18 Q Page 279. So it's two pages after the one
19 you were just on, I think.
20 A Page 279?
21 Q At the top right.
22 A Do you mean page 5 of the article?
23 Q It would be -- one, two, three, four -- five,
24 yes.
25 A Okay. I'm there.

Q Kind of smack in the middle it says "Second, the marked increase in partisan polarization" -- I'll let you find that before I go --

A I've got it. I've got it.

Q Okay.

"Second, the marked increase in partisan polarization, especially in the South, with whites supporting the Republican and minorities -- and minorities strongly supporting congressional and legislative candidates who are Democrats, is very likely to have produced an increase in racial polarization in the general election."

So as I'm reading that, it kind of creates -- it suggests that partisan polarization produces the racial polarization.

Is that how you are reading it or how you wrote it?

A No.

Q So what do you get from -- let me ask: What do you get from this line? It says: "The marked increase in partisan polarization, especially in the South, with whites supporting the Republican Party and minorities strongly supporting congressional and legislative candidates who are Democrats, is very likely to have produced an increase in racial

polarization in general elections"?

Why would partisan polarization produce racial polarization? What am I -- is that not what's occurring?

A No. What this is saying is as whites flee the Democratic Party, as they have over the last 50 years, and turned to the Republican Party, polarization has increased. Now, you can call that partisan polarization in the fact that now there are a lot more white Republicans when there used to be white Democrats and black Democrats, and now there's sort of white Republicans, black Democrats, and some white Democrats. This refers to the realignment of the South.

Q But what it's essentially saying is Republicans support Republicans and Democrats support Democrats; right?

MS. LAKIN: Objection.

THE WITNESS: No. It says that as the whites are moving from the Republican -- from the Democratic Party, polarization is increasing because whites are no longer voting for Democrats when they might have voted for Democrats 40 years ago or 30 years ago. And because it's only whites moving, it's making voting more polarized.

BY MR. JACOUTOT:
Q All right. Let me direct your attention to the next page. And it's the -- I want to read you a -- direct your attention to -- I think it's just one -- yeah. One sentence there right before Footnote 4, it's the sentence leading up to it, it starts with "the increase in political polarization."
A Yes.
Q Okay. It's: "The increase in political polarization suggests that, while white voters in general are less likely to vote for minority candidates since these candidates are overwhelmingly associated with the Democratic Party and many white voters are Republican, white Democrats are more likely to vote for African-American or Latino Democrat than a white Republican."
Do you see that?
A Yes.
Q How is that not saying that Republicans vote Republican and Democrats vote Democrat? That's -- you don't read that that way?
A That's not what that says. I agree that Democrats vote Democrat and Republicans vote Republican, however.
Q And it also says that the political

polarization is because -- political polarization in that Republicans -- white Republicans don't vote for minorities is because those minorities are Democrats not because they're minorities; right?

MS. LAKIN: Objection.

THE WITNESS: No.

BY MR. JACOUTOT:

Q That's not what that says?

A Well, it doesn't say that.

Q Is that an accurate reflection of what it means?

A Is what an accurate reflection of what it means? Repeat what you said. I'm sorry.

Q That white voters in general are less likely to vote for minority candidates since these candidates are overwhelmingly associated with the Democratic Party.

Do you see that?

A Yes.

Q Isn't that attributing a causal -- a cause to why white voters aren't voting for minorities that is distinct from their race and, in fact, completely associated with their party?

A No. I think it's saying that white voters tend to be Republican more than they used to be, and

now that's why they're voting Republican because they tend to be Republican.

We can see that in Georgia. Whites tend to be Republican in the general election.

Q Sure. But it's also offering -- it's offering causation, right, because the whites that are Republican are not voting for minorities because the minorities are Democrats; right?

MS. LAKIN: Objection.

MR. JACOUTOT: What's your objection, Sophia?

MS. LAKIN: At this point, we're getting argumentative. And it's been asked and answered.

MR. JACOUTOT: Well, it's been asked. I'm not sure it's been answered.

BY MR. JACOUTOT:

Q So I guess what you're saying is you don't read that portion -- well, I'm not going to ask the same question again because we'll get the same objection.

MR. JACOUTOT: Can the court reporter read back my last question? And, Sophia, if you want to object, that's fine. I just want to get the last question read back so it's phrased as I originally phrased it.

(Record read as requested.)

BY MR. JACOUTOT:

Q So, Dr. Handley, you would say that is not an accurate characterization of that portion of the paper?

A Again, I would say that that says that lots of whites are Republicans so they're voting Republican and lots of minority candidates are Democrats and white Democrats might support them but white Republicans do not.

Q So isn't it true that the predominant factor, then, in this analysis is the party of the individual rather than their race?

A It doesn't explain, for example, why whites are voting Republican and why blacks are voting democratic by any means. I mean, I think you have to look at explanations like policy stances. We know that whites moved to the Republican Party in large response to the civil rights legislation supported by Democrats.

So, I mean, that doesn't say anything about causation or it doesn't go deep enough into causation. It's simply saying that, well, now whites are embracing the white -- the Republican Party. But it doesn't say why. We know that whites are voting for Republicans in Georgia.

Q But it does offer a reason why white voters may not be voting for minority candidates; right? It

offers the explanation that those minority candidates are in the Democratic Party.

MS. LAKIN: Objection.

BY MR. JACOUTOT:

Q You can answer.

A There are white Democrats who are voting for minorities.

Q True. Because those minorities are Democrats; correct?

A Because the voters are Democrats. Yes.

Q Okay.

MR. JACOUTOT: That is, I think, all I have. Would you guys give me just like three minutes to go over my notes and make sure I've covered everything?

MS. LAKIN: Sure. Absolutely.

THE VIDEOGRAPHER: The time is 1:59 p.m. We're now off the record.

(Off the record 1:59 p.m. to 2:01 p.m.)

THE VIDEOGRAPHER: The time is 2:01 p.m. We're back on the record.

MR. JACOUTOT: Dr. Handley, that's all the questions I have for you today. Thank you very much for your participation.

MS. LAKIN: And I have no questions. So I

think we are done today.

THE VIDEOGRAPHER: This concludes the deposition. The time is 2:01 p.m. We're now off the record.

THE COURT REPORTER: E-tran for you.

And, Ms. Lakin, E-tran?

MS. LAKIN: Yes.

(Signature reserved.)

(Deposition concluded 2:03 p.m.)

CERTIFICATE OF REPORTER

STATE OF NORTH CAROLINA)
COUNTY OF MECKLENBURG)

I, MEREDITH R. SCHRAMEK, hereby certify that the witness whose testimony appears in the foregoing deposition was duly sworn by me; that the testimony of said witness was taken by me to the best of my ability and thereafter reduced to typewriting under my direction; that I am neither counsel for, related to, nor employed by any of the parties to the action in which this deposition was taken; and, further, that I am not a relative or employee of any attorney or counsel employed by the parties thereto, nor financially or otherwise interested in the outcome of the action.

I further certify that I have no direct contract with any party in this action, and my compensation is based solely on the terms of my subcontractor agreement.

Nothing in the arrangements made for this proceeding impacts my absolute commitment to serve all parties as an impartial officer of the court.

This, the 28th (

MEREDITH R. SCHRAMEK, RPR, CCR 3040

To: Lisa Handley
Re: Signature of Lisa Handley
Date Errata due back at our offices: 30 days

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Georgia Code

Title 9, Chapter 11

Article 5, Section 9-11-30

(e) Review by witness; changes; signing.

If requested by the deponent or a party before completion of the deposition, the deponent shall have 30 days after being notified by the officer that the transcript or recording is available in which to review the transcript or recording and, if there are changes in form or substance, to sign a statement reciting such changes and the reasons given by the deponent for making them. The officer shall indicate in the certificate prescribed by paragraph (1) of subsection (f) of this Code section whether any review was requested and, if so, shall append any changes made by the deponent during the period allowed. If the deposition is not reviewed and signed by the witness within 30 days of its submission to him or her, the officer shall sign it and state on the record that the deposition was not reviewed and signed by the deponent within 30 days. The deposition may then be used as fully as though signed unless, on a motion to suppress under paragraph (4) of subsection (d) of Code

Section 9-11-32, the court holds that the reasons given for the refusal to sign require rejection of the deposition in whole or in part.

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Veritext Legal Solutions represents that the foregoing transcript is a true, correct and complete transcript of the colloquies, questions and answers as submitted by the court reporter. Veritext Legal Solutions further represents that the attached exhibits, if any, are true, correct and complete documents as submitted by the court reporter and/or attorneys in relation to this deposition and that the documents were processed in accordance with our litigation support and production standards.

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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*, v. BRAD RAFFENSPERGER, in his official capacity as Secretary of State of Georgia, *Defendant*.	CASE NO. 1:21-CV-05337-SCJ

DEFENDANT'S NOTICE TO TAKE THE EXPERT DEPOSITION OF LISA HANDLEY, Ph.D.

PLEASE TAKE NOTICE that, pursuant to Rules 26 and 30 of the Federal Rules of Civil Procedure, counsel for Defendant Brad Raffensperger, in his official capacity as Secretary of State of Georgia, will take the oral examination of Plaintiffs' expert, Lisa Handley, Ph.D. on Thursday, February 16, 2023, beginning at 10:00 a.m. and continuing thereafter until completed via Zoom videoconferencing through Veritext Legal Solutions. Details

Exhibit
0001

regarding the videoconferencing will be emailed to those participating once all arrangements are finalized.

The deposition shall be taken before a Notary Public or some other officer authorized by law to administer oaths for use at trial. The deposition will be taken by oral examination with a written and/or sound and visual record made thereof (*e.g.*, videotape, LiveNote, etc.). The deposition will be taken for the purposes of cross-examination, discovery, and for all other purposes permitted under the Federal Rules of Civil Procedure or any other applicable law.

This 10th day of February, 2023.

Respectfully submitted,

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CERTIFICATE OF SERVICE

I hereby certify that on February 10, 2023, I caused a copy of the foregoing to be served by electronic mail on all counsel of record.

/s/ Bryan P. Tyson
Bryan P. Tyson

Attorney for Defendant

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

Scope of Inquiry

I have been retained by the Georgia Secretary of State and State Election Board as an expert to provide analysis related to *Grant v. Raffensperger*, *Alpha Phi Alpha v. Raffensperger*, and *Pendergrass v. Raffensperger*. All three cases allege the current U.S. Congressional, state Senate, and state House districts in Georgia violate Section 2 of the Voting Rights Act. In early 2022, I provided a report and testified in the preliminary injunction hearing in this matter. I have examined the reports and supplemental reports provided by plaintiffs' experts Dr. Maxwell Palmer, and Dr. Lisa Handley in this case. My rate of compensation in this matter is $500 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, including on behalf of 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

Exhibit
0002

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 Alabama, Arkansas, Florida, Georgia, Kansas, Louisiana, Michigan, Mississippi, New Mexico, New York, Pennsylvania, Washington, and Wisconsin. 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 CV (Appendix 1).

Data and Sources

In preparing this report, I have reviewed the reports filed by the plaintiffs' experts in this case. I have relied on the analysis provided to date by Dr. Palmer and Dr. Handley in their expert reports in this case. I have also relied on various election and demographic data provided by Dr. Palmer and Dr. Handley in their disclosures related to their reports in this case. In addition, I relied on data on turnout by race for the 2022 Republican Primary election provided to counsel by the Georgia Secretary of State, and 2022 precinct-level election results for that election downloaded from the publicly available website of the Georgia Secretary of State.

Dr. Palmer's Reports

Dr. Palmer, in his report in *Pendergrass v. Raffensperger* dated 12/12/2022, provides the results of an EI election analysis that he used to assess Racially Polarized Voting (RPV) in each of 40 contests between 2012 and 2022, and reports the results in his Tables 1 through 6 for five U.S. Congressional districts and as a combined focus area. Similarly, in his report in *Grant v. Raffensperger* dated 12/12/2022, Dr. Palmer provides the EI results for the same 40 contests between 2012 and 2022 as reported in his Tables 2 through 6, for three Georgia House and two Georgia Senate focus areas. The race of the candidate preferred by Black voters is indicated in Dr. Palmer's tables with an asterisk by the name of each Black candidate, and the absence of an asterisk indicating a non-Black candidate. Across the 40 reported contests 19 of the preferred candidates are Black and 21 are non-Black, providing an ideal, almost equal distribution, for comparing both Black and white voter support for Black-preferred candidates that happen to be Black, with Black voter support for Black-preferred candidates that happen not to be Black.

However, despite having this data identified in his reports and the associated opportunity analyze it, there is no discussion of the impact, if any, that the race of the candidate might have on the behavior of Black or white voters in these contests. Also, Dr. Palmer provides no party labels in these tables, and does not mention the party of candidates in his discussion of the results of his analysis.

As evident in Dr. Palmer's Tables 1-6 in his *Pendergrass* report, and Tables 2-6 in his *Grant* report, the pattern of polarization is quite striking. Black voter support for their preferred candidate is typically in the 90 percent range and scarcely varies at all across the ten years examined from 2012 to 2022. Nor does it vary in any meaningful degree from the top of the ballot elections for U.S. President to down-ballot contests like Public Service Commissioner. While slightly more varied, estimated white voter opposition to the Black-preferred candidate is typically above 80 percent. In the *Pendergrass* Table 1 for the combined focus area, Dr. Palmer reports estimates of Black voter support that only varies between 96 and 99 percent when results are rounded to the nearest percent. White voter opposition to the Black preferred candidate is slightly more varied, but still remarkably stable, ranging in *Pendergrass* Table 1 only from 84.5% to 91.4 percent.

What accounts for this remarkable stability in the divergent preferences of Black and white voters across years and offices? It is clearly not Black voter's preference for Black candidates, or white voter's disinclination to vote for Black candidates. At 98.5 percent, the average Black support for the 19 Black candidates identified as Black in Palmer's *Pendergrass* Table 1 is indeed nearly universal, but so is the average 98.4 percent support for the 21 candidates identified as non-Black in Table 1. Similarly, the average white vote in opposition to the 19 candidates identified as Black in *Pendergrass* Table 1 is a clearly cohesive 88.1 percent, but so is the average 87.1 percent white voter opposition to the 21 candidates identified as non-Black. The same can said for Dr. Palmer's results in his *Grant* report where, for example, the average Black support for the 19 candidates identified as Black in Table 2 is 98.2 percent, and Black voter support for the 21 candidates identified as non-Black is a nearly identical 98.1 percent. Similarly, the average white vote in opposition to the 19 candidates identified as Black in *Grant* Table 2 is a clearly cohesive 90.1 percent, but so is the average 89.1 percent white voter opposition to the 21 candidates identified as non-Black.

If we do consider the party affiliation of the candidates, the pattern over these election contests is stark in both the *Grant* report and the *Pendergrass* report. In all 40 contests the candidate of choice of Black voters is the Democrat and the candidate of choice of white voters is the Republican.

In contrast, the race of the candidates does not appear to be influential. Black voter support for Black Democratic candidates is certainly high, as Dr. Palmer's Tables 2 through 6 in *Grant* and Tables 1 through 5 in *Pendergrass* clearly show, but those same figures also show Black voter support in the same high range for white Democratic candidates as it is for Black Democratic candidates. Similarly, white voter support for Black Democratic candidates is very low, but white voter support for white Democratic candidates is also very low.[1] In other words, there appears to be just one overarching attribute of candidates that uniformly leads to their relative acceptability or unacceptability among white voters and Black voters alike. And it is not the candidate's race. It is their party affiliation.

For example, in the 2022 contest for Governor in Dr. Palmer's *Pendergrass* Table 1 (his combined focus region) Stacey Abrams, the Black Democratic candidate, gets an estimated 98.5% of the Black vote, but in the same election in the adjacent Lt. Governor contest Charlie Bailey, a white Democrat, gets an almost identical estimated 98.4% of the Black vote. Looking at White voters a similar pattern is clear. Abrams gets an estimated 10.3% of the white vote, but in the same election in the adjacent Lt. Governor contest Baily, the white Democrat, received a similar estimated 12.1% of the white vote.

Similarly, in the 2021 U.S. Senate runoffs in Dr. Palmer's *Pendergrass* Table 1 (his combined focus region) Raphael Warnock, the Black Democratic candidate gets an estimated 98.7% of the Black vote, but in the same election in the other Senate contest Jon Ossoff, a white Democrat gets an identical estimated 98.7% of the Black vote. Looking at white voters a similar pattern is clear. Warnock, the Black Democratic candidate, gets an estimated 15.2% of the white vote, but in the same election in the other Senate contest, Ossoff, the White Democrat, gets an almost identical estimated 14.5% of the white vote.

[1] The limited evidence from the 2022 endogenous elections provided in Dr. Palmer's supplemental reports do not contradict this broad pattern.

Moving beyond his EI analysis, Dr. Palmer also provides reconstituted election results to demonstrate the success rate of Black preferred candidates in his focus areas. Given that as mentioned above the Black preferred candidate is always the Democratic candidate and given the dominance of political party in the EI results as discussed above, it is no surprise that these tables show stable performance for Democratic candidates across the 40 contests, regardless of race. For example, in Dr. Palmer's Table 7 in his *Pendergrass* report, the average vote share for the Democratic candidate is 41.7 percent in the 19 contests where the Democratic candidate is Black, and a very similar 42.3 percent in the 21 contests where the Democratic candidate is not Black.

In short, all that Dr. Palmer's analysis demonstrates is that Black voters provide uniformly high levels of support for Democratic candidates and white voters provide uniformly high levels of support for Republican candidates. There is no indication in these EI results that the high levels of Black voter support for Democratic candidates is connected in any meaningful way to the race of the Democratic or Republican candidates. Similarly, there is no indication in these results that the high levels of white voter support for the Republican candidates is connected in any meaningful way to the race of the Democratic or Republican candidates.

Dr. Handley's Report

Dr. Handley's December 12, 2022 report in *Alpha Phi Alpha* focuses first on general elections, and reports results similar to those reported by Dr. Palmer. Black voters support Democratic candidates and white voters support Republican candidates. She indicates that she has chosen to focus on racially contested elections, so this limits the ability to see whether this partisan pattern varies at all with the race of the candidates, but in the two contests without a Black Democrat, the Ossoff 2020 Senate contest and 2021 runoff, the results for both Black and White voters are very similar to the results for the racially contested elections, as was the case in Dr. Palmer's larger set of general elections.

Unlike Dr. Palmer, Dr. Handley also analyzes eleven racially contested statewide Democratic primaries. The results in these primaries are very different from the general election patterns. The general election pattern is a very important contrast to keep in mind when evaluating the results for these eleven primary contests. In the general elections, Black support for the Democratic candidate is very high and very stable in the upper 90% range. Similarly,

White voter opposition to the Democratic candidates is also high and stable in the 80 percent and up range.

While there is not currently a bright-line court standard for determining the level of support needed under *Gingles* prongs 2 and 3 to demonstrate cohesion, multiple plaintiffs' experts have recently discussed a minimum of 60 percent threshold for cohesion in a two-person contest. Simply having a preferred candidate (50 percent plus 1 in a two-candidate contest) is not sufficient. This is, of course, true by definition. If simply having a preferred candidate was sufficient to establish cohesion, then the *Gingles* 2 threshold test would always be met in two candidate contests and thus not actually constitute a test at all. As Dr. Palmer notes on page 4 of his *Pendergrass* report, "[i]f the group's support is roughly evenly divided between the two candidates, then the group does not cohesively support a single candidate". Even if a more stringent 75 percent or 80 percent threshold was the cohesion threshold standard, the results for the general elections provided by both Dr. Palmer and Dr. Handley clearly establish partisan polarization, with Blacks always favoring Democratic candidates at stable levels well above 80 percent, and whites favoring Republican candidates at similarly stable levels, typically above 80 percent.

Applying the 60 percent threshold for cohesion to the 40 general election contests in Dr. Palmer's *Grant* report or the 40 general election contests in Dr. Palmer's *Pendergrass* report, produces the same clear result. In 40 out of 40 contests, Black voters provide cohesive support to the Democratic candidate and white voters provide cohesive support to the opposing Republican candidate. This unequivocal result is what Palmer references as supporting his conclusion of polarized voting. As he states on pages 5-6 of his December 12, 2022 *Grant* report:

> *Black voters are extremely cohesive, with a clear candidate of choice in all 40 elections. In contrast to Black voters, Figure 2 shows that White voters are highly cohesive in voting in opposition to the Black-preferred candidate in every election across the five focus areas. Table 1 lists the average level of support for the Black-preferred candidate for Black and White voters in each focus area. Across all five focus areas, Black voters support their preferred candidate with an average of 98.5% and a minimum of 95.2% of the vote, and White voters support Black-preferred candidates with an average of 8.3% and a maximum of 17.7% of the vote. This is strong evidence of racially polarized voting across all five focus areas.*

The same can be said for the 16 general election contests that Dr. Handley includes for each of her seven focus regions as reported in her Appendix C1-C7. In every one of the 16 contests examined in all seven regions, Black voter support for the Democratic candidate clearly exceeds 60 percent and in all the regular elections (excluding the one 20 candidate special Senate election in 2020) exceeded 90 percent. White voters provided cohesive support to the opposing Republican candidates exceeding 60% in every contest with the sole exception of the 2022 Senate contest in Appendix 1, where the white estimated vote fell just short of 60 percent at 59.3 percent.

As Dr. Handley, herself, states on page 9 of her December 23, 2022 Report:

> *Overall, the average percentage of Black vote for the 16 Black-preferred candidates is 96.1%. The average percentage of White vote for these 16 Black-preferred candidates across the seven areas is 11.2%. (When Ossoff is excluded, and only Black-preferred Black candidates are considered, the average White vote is slightly lower: 11.1 %.) The highest average White vote for any of the 16 candidates is 14.4% for Raphael Warnock in his 2022 general election bid for re-election. While the percentage of White support for candidates preferred by Black voters varies across the areas, in five of the seven areas the average did not even reach 10%. White crossover voting was the highest in the Eastern Atlanta Metro Region (Map 1), but only about one third of White voters typically supported the Black-preferred Black candidates in this area.*

She finds similarly clear evidence of polarization when she considers the analysis of state legislative elections included in her Appendix B1 and B2, stating on page 9 of her December 23, 2022:

> *Nearly every one of the 54 of the state legislative elections analyzed (53 of the 54 contests, or 98.1%) was racially polarized. The estimates of Black and White support for the state legislative candidates in these contests analyzed can be found in Appendices B1 (State Senate) and B2 (State House). Black voters were quite cohesive in supporting Black candidates in these state legislative contests: on average, 97.4% of Black voters supported their preferred Black state senate candidates, and 91.5% supported their preferred Black state house candidate. Very few White voters supported these candidates, however: Black-preferred Black state senate candidates garnered, on average, 10.1% of the White vote; Black-preferred Black state house candidates received, on average, 9.8% of the White vote.*

Based on their summary descriptions of their general election analysis, it is clear that both Dr. Palmer and Dr. Handley know what a convincing pattern of polarization looks like. That clear pattern is not present once candidate party labels are removed from the contest. Dr. Palmer

makes no effort to address this issue of conflating polarization in support for Democratic versus Republican candidates with racial polarization. Dr. Handley attempts to address the issue by providing analysis for eleven Democratic primaries in each of her seven focus regions.

But looking at the Democratic primary contests, as reported in Dr. Handley's Appendix C1-C7, the contrast to the pattern in the partisan general elects is stark. As detailed above, the pattern of Black voter support for Democratic candidates and white voter support for their Republican opponents in general elections is near universal, and both Black and white voters show strong and highly stable levels of cohesion. In contrast the pattern Dr. Handley identifies in the Democratic primaries is far from universal or stable. The support of Black voters for Black candidates varies widely, and seldom reaches above 80 percent. Similarly, white voter support for Democratic candidates is typically below 20% in the general elections, but in the primaries white support for Black candidates varies widely and is often fairly evenly divided. In many of the contests within Dr. Handley's six focus regions, for example, the votes of Blacks, whites, or both are divided too evenly to characterize the voting as cohesive. Even ignoring any concern for establishing minority or majority cohesion and applying a very loose standard of Blacks and whites simply preferring different candidates, Dr. Handley is only able to conclude that "the majority (55.8%) of the contests I analyzed were racially polarized" (page 10), a level not much above chance, and far below the 100 percent or 98.1 percent reported for general elections.

If we consider the *Gingles* 2 and 3 cohesion thresholds, even this slight result disappears. Using even a modest 60% standard for voter cohesion, Black voters vote cohesively for Black candidates in only 35 contests out of 77 (46 percent). If we add the instances where Blacks vote cohesively for white candidate that rises to 49 contests (64 percent of the 77 total). In those 49 contests, white voters cohesively opposed the Black preference in only 10 contests (20 percent of the 49 contests).

Herschel Walker Senate Race

The recent 2022 Republican U.S. Senate primary provides an additional racially contested primary to consider. Among the six candidates, the majority winner was Herschel Walker, one of the three Black candidates. Given that Black voters were less than 12 percent of the voters in in any county in the state in that primary, and that Walker received a majority of the vote in every county in Georgia, it is clear the Walker was the preferred candidate among White voters

in the Republican primary. This can be seen as well in an initial look at EI estimates for the area covered in Dr. Handley's Appendix A1, reproduced below in Table 1 (Eastern Atlanta Metro Region – Map Area 1, Dekalb, Henry, Morgan, Newton, Rockdale, and Walton). With an estimated 62 percent support among Black voters, and 67 percent support among white voters, Walker is the preferred candidate of both Black and white voters in the Republican primary.

Table 1; Ecological Estimates of Voting Patterns by Race in the 2022 Republican U.S. Senate Primary for Dr. Handley's Eastern Atlanta Metro Region

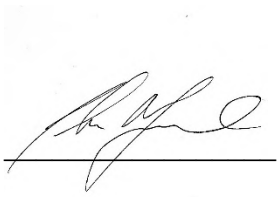
			95% Confidence Interval			95% Confidence Interval			95% Confidence Interval	
Last Name	**Candidate Race**	**Black support**	**Low**	**High**	**White Support**	**Low**	**High**	**Other Support**	**Low**	**High**
Herschel Walker	Black	**62.4%**	57.8%	67.4%	**67.0%**	66.3%	67.6%	5.3%	1.8%	11.7%
Kelvin King	Black	**10.1%**	7.7%	12.8%	**2.5%**	2.0%	3.0%	17.5%	12.5%	22.5%
"Jon" McColumn	Black	**3.0%**	1.7%	4.8%	**0.9%**	0.6%	1.2%	22.4%	18.8%	25.4%
Gary Black	white	**12.8%**	9.6%	16.2%	**15.3%**	14.5%	16.0%	9.3%	3.3%	17.0%
Latham Saddler	white	**7.1%**	4.1%	10.7%	**12.7%**	11.9%	13.5%	15.7%	7.8%	24.0%
Josh Clark	white	**4.5%**	2.7%	6.8%	**1.6%**	1.1%	2.2%	29.8%	23.7%	35.3%

Summary Conclusions

The partisan general election analysis report by Dr. Palmer and Dr. Handley show that Black voters cohesively support Democratic candidates, regardless of whether those candidates are Black or White. Similarly, white voters cohesively vote for Republican candidates, and in opposition to Democratic candidates, regardless of whether those Democratic candidates are Black or white. Thus, it is cohesive Black voter support for *Democratic* candidates, and white voter support for *Republican* candidates that the general election analysis reveals, not cohesive Black voter support for *Black* candidates and white voter support for *white* candidates. Nonetheless, the voting pattern is clearly one of partisan polarized voting, with both highly cohesive Black vote for the Democrat and highly cohesive white vote for the Republican candidate. The more limited analysis of Democratic primaries reported by Dr. Handley shows a very different picture of voting behavior from the general elections. Nothing even approaching the levels of Black and white cohesion seen in the general elections appears anywhere in the

primary contests, and the overall patterns are mixed and variable even within the same set of voters on the same day as we see in the multiple contests in the 2018 Democratic primary. Similarly, the 2022 U.S. Senate Republican primary indicates that white Republican primary voters are willing to support a Black Republican candidate over multiple white opponents.

February 6, 2023



John R. Alford, Ph.D.

Appendix 1

CV

John R. Alford

Curriculum Vitae
January 2023

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

Employment:

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:

"Political Orientations Vary with Detection of Androstenone," with Amanda Friesen, Michael Gruszczynski, and Kevin B. Smith. **Politics and the Life Sciences**. (Spring, 2020).

"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; 2016 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 Senate, 2021-2023.

Member, University Parking Committee, 2016-2022.

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, Soto Palmer v. Hobbs, (Washington State), racially polarized voting analysis, 2022.

Expert Witness, Pendergrass v. Raffensperger, (Georgia State House and Senate), racially polarized voting analysis, 2022.

Expert Witness, LULAC, et al. v. Abbott, et al., Voto Latino, et al. v. Scott, et al., Mexican American Legislative Caucus, et al. v. Texas, et al., Texas NAACP v. Abbott, et al., Fair Maps Texas, et al. v. Abbott, et al., US v. Texas, et al. (consolidated cases) challenges to Texas Congressional, State Senate, State House, and State Board of Education districting, 2022.

Expert Witness, Robinson/Galmon v. Ardoin, (Louisiana), racially polarized voting analysis, 2022.

Expert Witness, Christian Ministerial Alliance et al v. Arkansas, racially polarized voting analysis, 2022.

Expert Witness, Johnson v. Wisconsin Elections Commission, 2022.

Expert Witness, Rivera, et al. v. Schwab, Alonzo, et al. v. Schwab, Frick, et al. v. Schwab, (consolidated cases) challenge to Kansas congressional map, 2022.

Expert Witness, Grant v. Raffensperger, challenge to Georgia congressional map, 2022

Expert Witness, Brooks et al. v. Abbot, challenge to State Senate District 10, 2022.

Expert Witness, Elizondo v. Spring Branch ISD, 2022.

Expert Witness, Portugal v. Franklin County, et al., challenge to Franklin County, Washington at large County Commissioner's election system, 2022.

Consulting Expert, Gressman Math/Science Petitioners, Pennsylvania Congressional redistricting, 2022.

Consultant, Houston Community College – evaluation of election impact for redrawing of college board election districts, 2022.

Consultant, Lone Star College – evaluation of election impact for redrawing of college board election districts, 2022.

Consultant, Killeen ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Houston ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Brazosport ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Dallas ISD – evaluation of election impact for redrawing of school board election districts, 2022.

Consultant, Lancaster ISD – redrawing of all school board member election districts including demographic analysis and redrawing of election districts, 2021.

Consultant, City of Baytown – redrawing of all city council member election districts including demographic analysis and redrawing of election districts, 2021.

Consultant, Goose Creek ISD – redrawing of all board member election districts including demographic analysis and redrawing of election districts, 2021.

Expert Witness, Bruni et al. v. State of Texas, straight ticket voting analysis, 2020.

Consulting Expert, Sarasota County, VRA challenge to district map, 2020.

Expert Witness, Kumar v. Frisco ISD, TX, racially polarized voting analysis, 2019.

Expert Witness, Vaughan v. Lewisville ISD, TX, racially polarized voting analysis, 2019.

Expert Witness, Johnson v. Ardoin, (Louisiana), racially polarized voting analysis, 2019.

Expert Witness, Flores et al. v. Town of Islip, NY, racially polarized voting analysis, 2018.

Expert Witness, Tyson v. Richardson ISD, racially polarized voting analysis, 2018.

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

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.

IN THE UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF GEORGIA

ATLANTA DIVISION

ALPHA PHI ALPHA FRATERNITY INC., et al.; *Plaintiffs*, vs. BRAD RAFFENSPERGER, in his official capacity as Secretary of State of Georgia. *Defendant*.	Case No. 1:21-cv-05337-SCJ

EXPERT REPORT OF DR. LISA HANDLEY

December 23, 2022

Exhibit
0003

Report on the 2022 Georgia State House and Senate Plans

Dr. Lisa Handley

I. Introduction

Scope of Project I was retained by plaintiffs in this case as an expert to conduct an analysis of voting patterns by race in several areas in the State of Georgia to determine whether voting in these areas is racially polarized. In addition, I was asked to assess the ability of Black voters to elect their candidates of choice in these areas, comparing the state legislative plans adopted by the Georgia State Legislature (Adopted State Senate and House Plans) to the illustrative plans (Illustrative State House and Illustrative State Senate Plans) drawn by plaintiffs' expert demographer, Bill Cooper, in this litigation.[1]

Summary Conclusion In the seven areas of Georgia that I studied for this project, voting is racially polarized. This polarization impedes the ability of Black voters to elect candidates of their choice to the state legislature unless districts are specifically drawn to provide Black voters with an opportunity to elect their preferred candidates. The Adopted State Senate and State House Plans thus fail to offer Black voters an opportunity to elect their preferred candidates in areas of the state where voting is racially polarized and where (as demonstrated by the Illustrative State Senate and State House Plans) additional majority Black opportunity districts could have been created. This failure dilutes the opportunity of Black voters to participate in the electoral process and to elect candidates of their choice to the Georgia State Legislature.

II. Professional Background and Experience

I have over thirty-five years of experience as a voting rights and redistricting expert. I have advised scores of jurisdictions and other clients on minority voting rights and redistricting-related issues. I have served as an expert in dozens of voting rights cases. My clients have included state and local jurisdictions, independent redistricting commissions (Arizona, Colorado, Michigan), the U.S. Department of Justice, national civil rights organizations, and such international organizations as the United Nations.

[1] I am being compensated at a rate of $300 an hour for work on this project.

I have been actively involved in researching, writing, and teaching on subjects relating to voting rights, including minority representation, electoral system design, and redistricting. I co-authored a book, *Minority Representation and the Quest for Voting Equality* (Cambridge University Press, 1992), and co-edited a volume, *Redistricting in Comparative Perspective* (Oxford University Press, 2008), on these subjects. In addition, my research on these topics has appeared in peer-reviewed journals such as *Journal of Politics*, *Legislative Studies Quarterly*, *American Politics Quarterly*, *Journal of Law and Politics*, and *Law and Policy*, as well as law reviews (e.g., *North Carolina Law Review*) and a number of edited books. I hold a Ph.D. in political science from The George Washington University.

I have been a principal of Frontier International Electoral Consulting since co-founding the company in 1998. Frontier IEC specializes in providing electoral assistance in transitional democracies and post-conflict countries. In addition, I am a Visiting Research Academic at Oxford Brookes University in Oxford, United Kingdom. Attached to the end of this report as Appendix E is a copy of my curriculum vitae.

III. Analyzing Voting Patterns by Race

An analysis of voting patterns by race serves as the foundation of two of the three elements of the "results test" as outlined in *Thornburg v. Gingles*: a racial bloc voting analysis is needed to determine whether the minority group is politically cohesive; and the analysis is required to determine if White voters are voting sufficiently as a bloc to usually defeat the candidates preferred by minority voters. The voting patterns of White and minority voters must be estimated using statistical techniques because direct information about the race of the voters is not, of course, available on the ballots cast.

To carry out an analysis of voting patterns by race, an aggregate level database must be constructed, usually employing election precincts as the units of observation. Information relating to the demographic composition and election results in these precincts is collected, combined, and statistically analyzed to determine if there is a relationship between the racial composition of the precincts and support for specific candidates across the precincts.

Standard Statistical Techniques Three standard statistical techniques have been developed over time to estimate vote choices by race: homogeneous precinct analysis, ecological

regression, and ecological inference.[2] Two of these analytic procedures – homogeneous precinct analysis and ecological regression – were employed by the plaintiffs' expert in *Thornburg v. Gingles*, have the benefit of the Supreme Court's approval in that case, and have been used in most subsequent voting rights cases. The third technique, ecological inference, was developed after *Gingles* was decided and was designed, in part, to address some of the disadvantages associated with ecological regression analysis. Ecological inference analysis has been introduced and accepted in numerous district court proceedings and is generally accepted as the most accurate method for estimating voting patterns by race.

Homogeneous precinct (HP) analysis is the simplest technique. It involves comparing the percentage of votes received by each of the candidates in precincts that are racially or ethnically homogeneous. The general practice is to label a precinct as homogeneous if at least 90 percent of the voters or voting age population is composed of a single race. In fact, the homogeneous results reported are not estimates – they are the actual precinct results. However, most voters in Georgia do not reside in homogeneous precincts and voters who do reside in homogeneous precincts may not be representative of voters who live in more racially diverse precincts. For this reason, I refer to these percentages as estimates.

The second statistical technique employed, *ecological regression* (ER), uses information from all precincts, not simply the homogeneous ones, to derive estimates of the voting behavior of minorities and Whites. If there is a strong linear relationship across precincts between the percentage of minorities (or Whites) and the percentage of votes cast for a given candidate, this relationship can be used to estimate the percentage of minority (or White) voters supporting the candidate.

The third technique, *ecological inference* (EI), was developed by Professor Gary King. This approach also uses information from all precincts but, unlike ecological regression, it does not rely on an assumption of linearity. Instead, it incorporates maximum likelihood statistics to produce estimates of voting patterns by race. In addition, it utilizes the method of bounds, which

[2] For a detailed explanation of homogeneous precinct analysis and ecological regression see Bernard Grofman, Lisa Handley and Richard Niemi, *Minority Representation and the Quest for Voting Equality* (Cambridge University Press, 1992). See Gary King, *A Solution to the Ecological Inference Problem* (Princeton University Press, 1997) for a more detailed explanation of ecological inference.

uses more of the available information from the precinct returns than ecological regression.[3] Unlike ecological regression, which can produce percentage estimates of less than 0 or more than 100 percent, ecological inference was designed to produce only estimates that fall within the possible limits. However, EI does not guarantee that the estimates for all of the candidates add to 100 percent for each of the racial groups examined.

In conducting my analysis of voting patterns by race in recent elections in Georgia, I also used a more recently developed version of ecological inference, which I have labeled "EI RxC" in the summary tables found in the Appendices. Unlike the other methods discussed, this approach permits the analysis of more than two groups simultaneously. Georgia collects racial and ethnicity data on several groups – Black, White, Asian, American Indian, Hispanic, and "Other" voters – and I conducted the EI RxC analysis using three groups: Black voters, White voters, and all other voters combined. In the summary tables, I report estimates only for the two groups of interest: Black and White voters. Another advantage of EI RxC is that it produces generally accepted confidence intervals for each of the reported estimates.[4] I have included the 95% confidence intervals for each estimate listed in the summary tables in the Appendices.

Database To analyze voting patterns by race using aggregate level information, a database that combines election results with demographic information is required. This database is almost always constructed using election precincts as the unit of analysis. The demographic composition of the precincts is based on voter registration or turnout by race if this information is available; if it is not, then voting age population or citizen voting age population is used. Georgia collects voter registration data by race and reports turnout counts by race for all of the precincts in each election cycle. This information is included in the database.

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[3] The following is an example of how the method of bounds works: if a given precinct has 100 voters, of whom 75 are Black and 25 are White, and the Black candidate received 80 votes, then at least 55 of the Black voters voted for the Black candidate and at most all 75 did. (The method of bounds is less useful for calculating estimates for White voters, as anywhere between none of the Whites and all of the Whites could have voted for the candidate.)

[4] The 95% confidence intervals reported in the summary tables indicate that 95% of the simulated estimates produced via EI RxC fell within the range specified. The larger the confidence interval, the more uncertainty associated with the reported estimate. Factors that influence the size of the confidence interval include the number of precincts and the variation in the percentage of Black and White voters across the precincts in the area under investigation.

The precinct election results and the turnout by race counts for the primary and general elections in 2016, 2018, and 2020;[5] the runoff election in January 2021; and the 2022 general election were obtained from the Georgia Secretary of State's website or directly from the office of the Secretary of State.[6]

In order to incorporate census population and census geography into the database, the 2020 Census Block shapefiles, and total and voting age populations by race and ethnicity, were obtained from the Census FTP portal. The 2016, 2018, and 2020 precinct-level shapefiles were acquired from the Voting and Election Science Team at Harvard University and the 2020 precincts were joined to the January 2021 runoff election.[7]

Elections analyzed I have analyzed all recent (2016-2022) statewide general election and general runoff contests that included Black candidates for which precinct level data is currently available. The 14 general elections that meet this criteria are as follows:[8] the 2022 general election contests for U.S. Senate, Governor, Commissioners of Agriculture, Insurance, and Labor, and School Superintendent; the 2021 runoff for U.S. Senate (Special) and Public Service Commission District 4; the 2020 general elections for U.S. Senate (Special), and Public Service Commission Districts 1 and 4; and the 2018 general election contests for Governor, Commissioner of Insurance, and School Superintendent. I also analyzed the two contests in which Jon Ossoff ran – the 2021 runoff for U.S. Senate and the November 2020 general election for U.S. Senate – because my analysis of the 2020 Democratic primary for U.S. Senate, which included three Black candidates, indicates that Ossoff was clearly the candidate preferred by Black voters.

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[5] The 2016–2020 election results were processed and formatted by OpenElections.

[6] The turnout by race data for the primary election held in May 2022 was not made available in time for inclusion in this report, and I reserve the right to update my analysis to include that data at a later point in time.

[7] The 2022 precinct shapefiles have not been made available to date. The election returns for the 2016, 2018, 2020, and 2021 election cycles were disaggregated down to the level of the 2020 census block using the relevant shape files. This block-level dataset was then reaggregated up to the level of the in-cycle precincts, taking into account splits in the precincts by the adopted and illustrative plans. I reserve the right to update my analysis once the 2022 shapefiles have been provided.

[8] The turnout by race data for the December 2022 runoff election for U.S. Senate has not been made available to date. I reserve the right to update my analysis to include that data at a later point in time.

In addition to the 16 general and runoff elections examined, I also analyzed 11 recent (2016-2020) statewide Democratic primaries, including a primary runoff, that included Black candidates:[9] the 2020 Democratic primaries for U.S. Senate and Public Service Commission District 4; the 2018 Democratic primaries for Governor, Lieutenant Governor, Commissioner of Insurance, Commissioner of Labor, Secretary of State, School Superintendent, and Public Service Commission District 3; the 2018 Democratic primary runoff for School Superintendent; and the 2016 Democratic primary for U.S. Senate. Republican primaries were not examined because the overwhelming majority of Black voters who participate in primaries cast their ballots in Democratic rather than Republican primaries. As a consequence, Democratic primaries are far more probative than Republican primaries in ascertaining the candidates preferred by Black voters.[10]

Finally, I examined recent state legislative general elections that included both Black and White candidates in the seven areas of interest. The courts have considered elections for the office at issue – often referred to as endogenous elections – to be particularly probative. Because there has only been one set of state legislative elections (2022) under the Adopted Plans, I also analyzed biracial state legislative elections conducted between 2016 and 2020 in the state legislative districts under the previous state house and state senate plans that are located within the seven areas of interest. More specifically, a state legislative contest was analyzed if (1) the state house or state senate district was or is wholly contained within any areas of interest or overlapped with any of Illustrative or Adopted districts (listed in Table 1) being compared in the area, and (2) the contest included at least one Black and one White candidate.[11] In addition, all 2022 state legislative contests in the Adopted Plans identified as districts of interest (Table 1) were analyzed,

[9] Precinct level turnout by race data for the 2022 statewide Democratic primaries was not made available in time for inclusion in this report, and I reserve the right to update my analysis to include that data at a later point in time.

[10] In addition, producing reliable estimates for Black voters in Republican primaries would not have been possible.

[11] There was one state house election contest (State House District 147 in 2018) that met the criteria but the district contained less than ten precincts and reliable estimates of voting behavior by race could not be produced.

even if the contest did not include at least one Black and one White candidate.[12] In total, 16 recent state senate contests and 38 state house contests were analyzed.

Geographic areas analyzed I examined voting patterns in seven areas of Georgia where the Illustrative Plans create more majority Black voting age population (BVAP)[13] districts than the Adopted State Senate and House Plans.[14] The seven areas of interest, the set of Illustrative and Adopted districts being compared in each of these areas, and the counties encompassed by these areas,[15] are listed in Table 1. The districts that offer Black voters an opportunity to elect their candidates of choice in the Illustrative and Adopted Plans are bolded.

Table 1: Georgia Areas of Interest Analyzed

Area of Interest	Illustrative Districts	Adopted Districts	Counties
State Senate Districts			
Eastern Atlanta Metro Region (Map 1)	**10** **17** **43**	**10** 17 **43**	Dekalb, Henry, Morgan, Newton, Rockdale, Walton
Southern Atlanta Metro Region (Map 2)	**16** **28** **34** 39	16 28 **34** **44**	Clayton, Coweta, Douglas, Fayette, Heard, Henry, Lamar, Pike, Spalding

[12] There was one 2022 state house election contest (State House District 146) that contained less than ten precincts and reliable estimates of voting behavior by race could not be produced. Two of the 2022 contests analyzed were not biracial: two White candidates competed in State House District 74 and two Black candidates competed in State House District 153.

[13] BVAP has been calculated by counting all persons who are 18 or older who checked "Black or African American" on their census form. This includes persons who are single-race Black, or any part Black (i.e., persons of two or more races who indicate "Black" as one of the races), including those who marked both Hispanic and Black.

[14] The 2022 Adopted Plans create 14 majority BVAP state senate districts and 49 majority BVAP state house districts. The Illustrative Plans create 18 majority BVAP state senate districts and 54 majority BVAP state house districts. The seven areas of interest include three of the four additional state senate districts and all five of the additional state house districts offered by the Illustrative Plans.

[15] All counties that overlapped any of the Adopted or Illustrative districts being compared in the area of interest were included in the analysis if more than 10% of the county's population is encompassed by one of these districts.

Area of Interest	Illustrative Districts	Adopted Districts	Counties
East Central Georgia with Augusta (Map 3)	**22** **23** **26** 44	**22** 23 25 **26**	Baldwin, Bibb, Burke, Butts, Columbia, Emanuel, Glascock, Hancock, Henry, Houston, Jasper, Jefferson, Jenkins, Johnson, Jones, Lamar, McDuffie, Monroe, Morgan, Putnam, Richmond, Screven, Taliaferro, Twiggs, Walton, Warren, Washington, Wilkes, Wilkinson
State House Districts			
Southeastern Atlanta Metro Region (Map 4)	**74** **75** **78** **115** **116** **117** 118 134 135	74 **75** **78** **115** **116** 117 118 134 135	Butts, Clayton, Fayette, Henry, Jasper, Lamar, Monroe, Pike, Putnam, Spalding, Upson
Central Georgia (Map 5)	**128** **133** 144 155	**128** 133 149 155	Baldwin, Bibb, Bleckley, Dodge, Glascock, Hancock, Jefferson, Johnson, Jones, Laurens, McDuffie, Taliaferro, Telfair, Twiggs, Warren, Washington, Wilkes, Wilkinson
Southwest Georgia (Map 6)	152 **153** **171** 172 173	152 **153** 171 172 173	Colquitt, Cook, Decatur, Dougherty, Grady, Lee, Mitchell, Seminole, Stewart, Terrell, Thomas, Tift, Webster, Worth
Macon Region (Map 7)	**142** **143** **145**	**142** **143** 145	Bibb, Crawford, Houston, Peach, Twiggs

IV. Voting is Racially Polarized in the Seven Areas of Georgia Analyzed

Voting is racially polarized in all seven areas of Georgia that I examined. In all 16 of the recent general and general runoff elections I analyzed (including the two elections that included Jon Ossoff), Black voters were cohesive in supporting their preferred candidates in these areas. And in all 16 of these elections, White voters bloc voted against the candidates preferred by Black voters. In other words, in every recent general election contest that included a Black candidate, in

all seven of the areas studied, voting was racially polarized. The results of my analysis of statewide general and runoff elections by area of interest can be found in Appendices A1-A7, with a separate appendix for each area of interest.

Overall, the average percentage of Black vote for the 16 Black-preferred candidates is 96.1%. The average percentage of White vote for these 16 Black-preferred candidates across the seven areas is 11.2%. (When Ossoff is excluded, and only Black-preferred Black candidates are considered, the average White vote is slightly lower: 11.1%.) The highest average White vote for any of the 16 candidates is 14.4% for Raphael Warnock in his 2022 general election bid for re-election. While the percentage of White support for candidates preferred by Black voters varies across the areas, in five of the seven areas the average did not even reach 10%. White crossover voting was the highest in the Eastern Atlanta Metro Region (Map 1), but only about one third of White voters typically supported the Black-preferred Black candidates in this area.

Nearly every one of the 54 of the state legislative elections analyzed (53 of the 54 contests, or 98.1%) was racially polarized. The estimates of Black and White support for the state legislative candidates in these contests analyzed can be found in Appendices B1 (State Senate) and B2 (State House). Black voters were quite cohesive in supporting Black candidates in these state legislative contests: on average, 97.4% of Black voters supported their preferred Black state senate candidates, and 91.5% supported their preferred Black state house candidate. Very few White voters supported these candidates, however: Black-preferred Black state senate candidates garnered, on average, 10.1% of the White vote; Black-preferred Black state house candidates received, on average, 9.8% of the White vote. All but one of the successful Black state legislative candidates in contests analyzed for this report were elected from majority Black districts; the one exception was elected from a district that was majority minority in composition.[16]

My conclusion that voting is racially polarized in the seven areas of interest in Georgia rests on the results of my analysis of voting patterns in recent general and runoff elections – both

[16] Black-preferred Black candidates won state legislative contests in majority Black State Senate Districts 22 (2022), 34 (2022 and 2018), 41 (2022), and 43 (2022 and 2016); and in State House Districts 63 (2020), 75 (2022), 111 (2018), 116 (2022), 126 (2018), 128 (2018) and 153 (2022). The only district that elected a Black-preferred Black candidate that was not majority Black was District 109 in 2020. The district had a 42.18% BVAP but was only 46.9% non-Hispanic White in voting age population.

the statewide and the endogenous (state legislative) elections. General elections are clearly the barrier to electing candidates preferred by Black voters to the state legislature – at least outside of districts that provide Black voters with an opportunity to elect their preferred candidates. However, because there is typically a two-stage election process in the United States, I analyzed recent Democratic primary elections in the seven areas of interest as well. My analysis was limited to the 11 statewide Democratic primaries and Democratic runoffs that included Black candidates between 2016 and 2020 as turnout by race for the 2022 Democratic primary was not made available in time for inclusion in this report.[17] I found that the majority (55.8%) of the contests I analyzed were racially polarized. Moreover, in over 67% of the contests that were not polarized, it was because Black voters supported White candidates preferred by White voters (e.g., Jon Ossoff in the 2020 Democratic primary for U.S. Senate; John Barrow and Lindy Miller in their 2018 primary bids for Secretary of State and Public Service Commission District 3, respectively; and Jim Barksdale in the 2016 Democratic primary for U.S. Senate), rather than because White voters supported the Black candidate. Overall, White voters supported Black-preferred Black candidates in only 14.3% of the Democratic primary election contests analyzed. The results of my analysis of statewide Democratic primaries and Democratic runoffs by area of interest can be found in Appendices C1-C7, with a separate appendix for each area of interest.

Although many of the Democratic primary contests analyzed were racially polarized, because the majority of Whites who cast ballots in primaries choose to vote in Republican primaries, candidates supported by Black voters often win the Democratic nomination in districts that do not have significant Black populations. The barrier to elected legislative office for candidates preferred by Black voters is usually not the Democratic primary – it is the general election. Minus a substantial Black population in the district, Black voters are very unlikely to be able to elect their preferred candidates to the Georgia state legislature in the seven areas of interest I studied for this project.

[17] While I was able to analyze statewide Democratic primaries in the areas of interest, my attempt at analyzing state legislative Democratic primaries produced confidence intervals that were too wide to ascertain the candidates of choice of White voters. This was in large part due to the limited number of precincts in the legislative districts and the consistently low number of White voters turning out to vote in Democratic primaries in these precincts.

V. The State Senate and State House Plans Adopted in 2022 Dilute Black Voting Strength

The Adopted State Senate and House Plans fail to provide Black voters with opportunities to elect their preferred candidates that the Illustrative Plans would provide. In order to compare the opportunities provided by the Illustrative Plans to the Adopted Plans, a district-specific, functional analysis is necessary. This assessment depends not only upon the demographic composition of the district but the voting patterns in that district and whether the candidates preferred by minority voters can actually win in the district – this is what is meant by "functional."

Because no elections have taken place in the Illustrative districts of interest, election results from recent statewide elections were reconfigured to conform to the boundaries of the proposed district boundaries to make a determination about the "opportunity to elect" in these proposed districts. To perform this analysis, precinct election returns from these recent elections were disaggregated down to the level of the census block. The block-level election data was then reaggregated up, or recompiled, to the level of the Illustrative districts of interest to determine how the Black-preferred Black candidates would have fared in these districts. In order to be able to directly compare the opportunities provided by the Illustrative districts and the Adopted districts of interest, this exercise was also carried out for the Adopted districts of interest. (Of course, if there was a competitive 2022 election contest in the Adopted state legislative districts of interest, this information was also used to assess whether the Adopted district offered Black voters an opportunity to elect their candidate of choice.)

The best election contests to use for a functional analysis are recent elections that included a viable minority candidate supported by minority voters but not by White voters. While all 14 of the recent statewide general election contests that I analyzed that included Black candidates satisfy these conditions, the lack of precinct shapefiles for the 2022 precincts meant that only eight of these contests could be recompiled to use in my assessment:

Election Cycle	Office	Black Candidate
2021 Runoff	U.S. Senate (Special)	Raphael Warnock

Election Cycle	Office	Black Candidate
	Public Service Commission District 4	Daniel Blackman
2020 General	U.S. Senate (Special)	Raphael Warnock
	Public Service Commission District 1	Robert Bryant
	Public Service Commission District 4	Daniel Blackman
2018 General	Governor	Stacey Abrams
	Commissioner of Insurance	Janice Laws
	School Superintendent	Otha Thornton

After recompiling the election results for these contests to conform to the boundaries of the Adopted and Illustrative districts of interest, the average vote share received by the eight Black-preferred Black candidates in each district was calculated. I refer to this average as the general election effectiveness score (GE score). A score of less than .5 means that the average vote share that these eight Black-preferred Black candidates received in the district is less than 50%.

To provide an indication of how Black-preferred Black candidates would fare in Democratic primaries, seven recent statewide Democratic primaries were used to construct a Democratic primary effectiveness score (DPR score). The seven primaries chosen were the seven contests between 2016 and 2020 in which Black voters supported the Black candidate. In one of these seven contests, White voters also consistently supported the Black candidate (Daniel Blackman in the Democratic primary for Public Service Commission District 4 in 2020); in another contest, White voters often supported the Black candidate (Stacey Abrams in the 2018 Democratic primary for governor). The other five contests included in the index were consistently racially polarized. The primaries chosen, and the name of the Black candidate supported by Black voters in each of these primary contests, are as follows:

Election Cycle	Office	Black Candidate
2020 Democratic primary	Public Service Commission District 4	Daniel Blackman
2018 Democratic primary	Governor	Stacey Abrams
	Lieutenant Governor	Triana Arnold James

Election Cycle	Office	Black Candidate
	Commissioner of Insurance	Janice Laws
	Commissioner of Labor	Fred Quinn
	School Superintendent	Otha Thornton
2018 Democratic primary runoff	School Superintendent	Otha Thornton

In my comparisons of the Adopted and Illustrative Plans in the seven areas of interest, I considered the composition of the district (the percent BVAP), the GE score, and the DPR score (although, as expected, the primary was not an impediment to election in any of the districts examined) to ascertain whether the district was likely to provide Black voters with an opportunity to elect their candidates of choice. For the Adopted districts, I also considered the results of the 2022 state legislative election in my assessment.

As the plan comparison tables (Plan Comparison Tables 1-7), below, clearly demonstrate, Black voters would have a greater opportunity to elect their candidates of choice in the Illustrative districts than in the Adopted districts in the same area. Moreover, in each of these seven areas, the additional Black opportunity district in the Illustrative Plan was created by pulling in substantial population from at least one district in the Adopted Plan that fails to provide Black voters with an opportunity to elect their preferred candidates. (Appendix D identifies each of the additional Illustrative districts, the Adopted districts that overlap with each of these additional Illustrative districts, and the percentage of the population in the Illustrative district that was drawn from each of the Adopted districts.)

Assessment of seven geographic areas of interest This section provides a very brief description of the voting patterns and opportunities to elect under the Illustrative versus Adopted plans in each of the seven areas. Maps of the seven areas showing the Illustrative and Adopted districts of interest are followed by district comparison tables summarizing the opportunity to elect candidates of choice for Black voters (as reflected in the BVAP, GE and DPR scores listed for each district), as well as the actual results of any contested general elections in 2022 using the district lines adopted by the legislature. The districts that offer Black voters an opportunity to elect their candidates of choice to the state legislature are shaded pink in the maps and shaded

grey in the Comparison Tables. The number under each district number in each map is the percent BVAP of the district.

Eastern Atlanta Metro Region (Map Area 1) Voting is racially polarized in this area – in all 16 of the general elections analyzed, Black and White voters supported different candidates. The Adopted State Senate Plan includes two districts that offer Black voters an opportunity to elect their preferred candidates. The Illustrative Plan offers three Black opportunity districts in this area, as shown in Map 1 and Comparison Table 1.

Southern Atlanta Metro Region (Map Area 2) Voting is racially polarized in this area – in all 16 of the general elections, Black and White voters supported different candidates. The Adopted State Senate Plan includes two districts that offer Black voters an opportunity to elect their preferred candidates. The Illustrative Plan offers three Black opportunity districts in this area, as shown in Map 2 and Comparison Table 2.

East Central Georgia (Map Area 3) Voting is racially polarized in this area – in all 16 of the general elections, Black and White voters supported different candidates. The Adopted State Senate Plan includes two districts that offer Black voters an opportunity to elect their preferred candidates. The Illustrative Plan offers three Black opportunity districts in this area, as shown in Map 3 and Comparison Table 3.

Southeastern Atlanta Metro Region (Map Area 4) Voting is racially polarized in this area – in all 16 of the general elections, Black and White voters supported different candidates. The Adopted State House Plan includes four districts that offer Black voters an opportunity to elect their preferred candidates. The Illustrative Plan offers six Black opportunity districts in this area, as shown in Map 4 and Comparison Table 4.

Central Georgia (Map Area 5) Voting is racially polarized in this area – in all 16 of the general elections, Black and White voters supported different candidates. The Adopted State House Plan includes one district that offers Black voters an opportunity to elect their preferred candidates. The Illustrative Plan offers two Black opportunity districts in this area, as shown in Map 5 and Comparison Table 5.

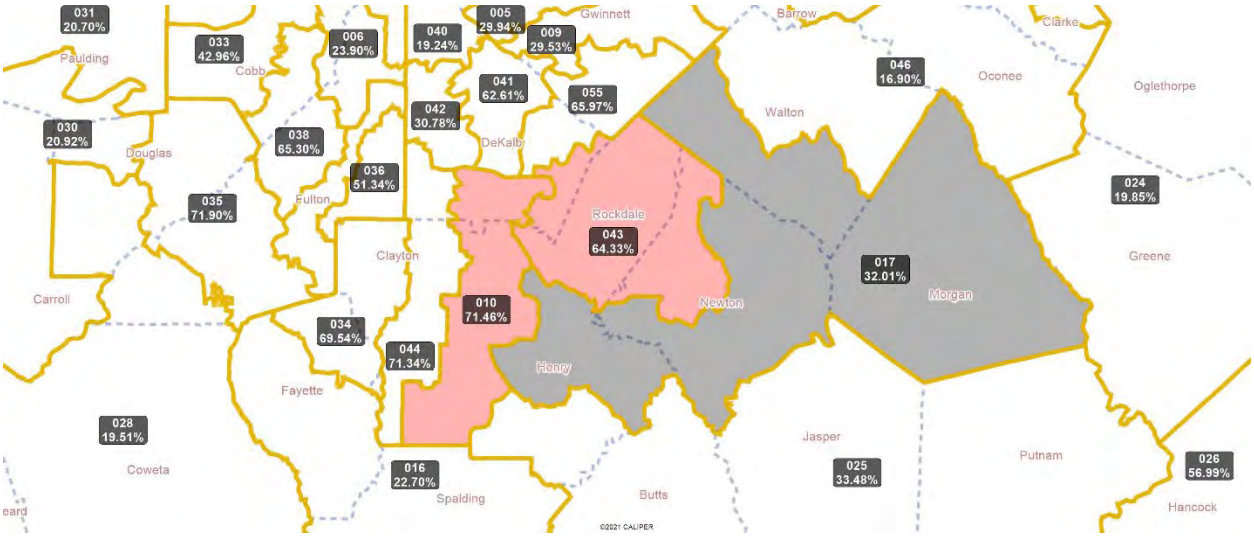
Southwest Georgia (Map Area 6) Voting is racially polarized in this area – in all 16 of the general elections, Black and White voters supported different candidates. The Adopted State House Plan includes one district that offers Black voters an opportunity to elect their preferred

candidates. The Illustrative Plan offers two Black opportunity districts in this area, as shown in Map 6 and Comparison Table 6.

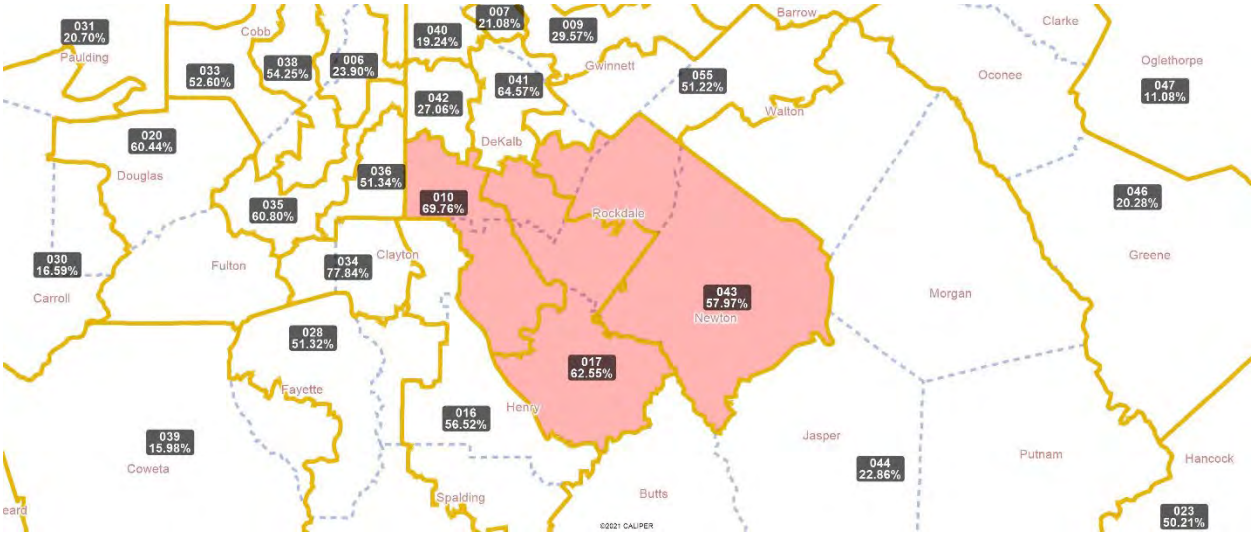
Macon Region (Map Area 7) Voting is racially polarized in this area – in all 16 of the general elections, Black and White voters supported different candidates. The Adopted State House Plan includes two districts that offers Black voters an opportunity to elect their preferred candidates. The Illustrative Plan offers three Black opportunity districts in this area, as shown in Map 7 and Comparison Table 7.

Map 1: Eastern Atlanta Metro Region

Map 1a: Adopted State Senate Districts 10, 17, and 43



Map 1b: Illustrative State Senate Districts 10, 17, and 43



Comparison Table for Map Area 1: Eastern Atlanta Metro Region

Comparison Table 1a: Adopted State Senate Districts

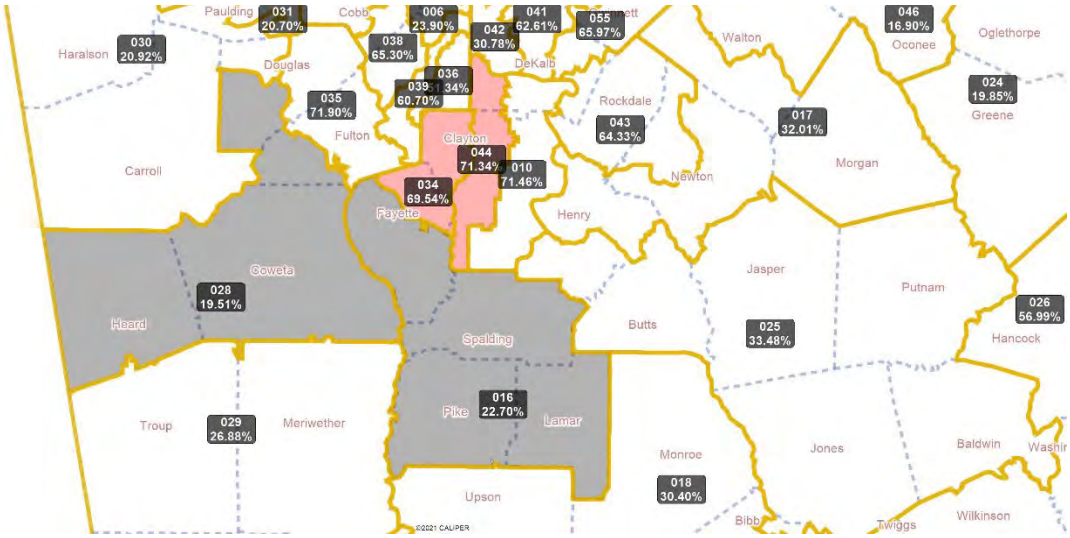
District	% BVAP	GE score	DPR score	Winner of 2022 General Election	Race	Party	Description of 2022 General Election
10	71.5	.775	.664	Emanuel Jones	B	D	No election contest
17	32.0	.366	.611	Brian Strickland	W	R	Racially polarized: White-preferred candidate defeated Black Democrat with 61.6% of vote
43	64.3	.706	.650	Tonya Anderson	B	D	Racially polarized: Black-preferred candidate defeated Black Republican with 75.1% of vote

Comparison Table 1b: Illustrative State Senate Districts

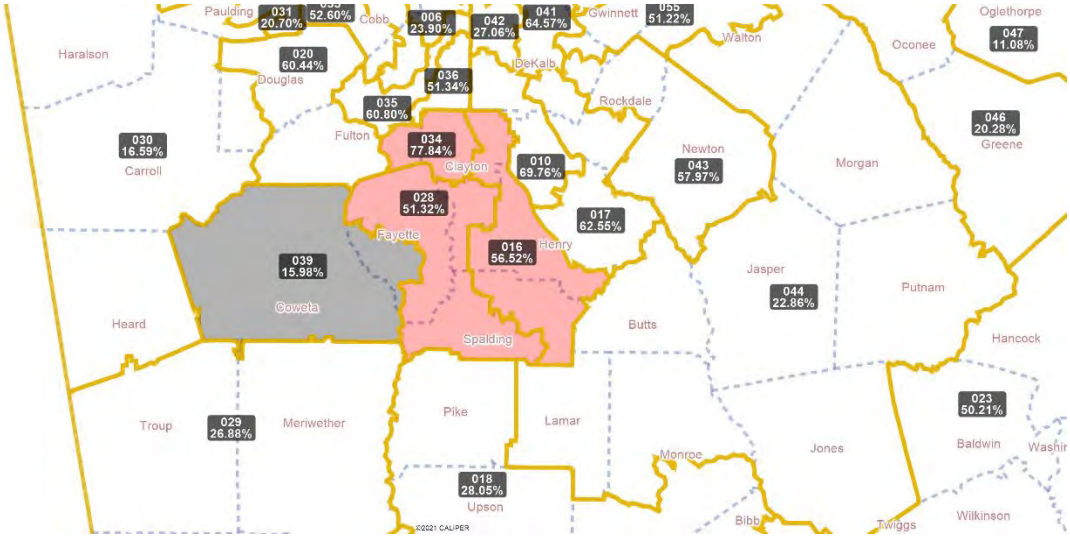
District	% BVAP	GE score	DPR score	Comments
10	69.8	.824	.630	District that would provide Black voters with an opportunity to elect candidates of choice
17	62.5	.654	.659	District that would provide Black voters with an opportunity to elect candidates of choice
43	58.0	.631	.641	District that would provide Black voters with an opportunity to elect candidates of choice

Map 2: Southern Atlanta Metro Region

Map 2a: Adopted State Senate Districts 16, 28, 34, and 44



Map 2b: Illustrative State Senate Districts 16, 28, 34, and 39



Comparison Table for Map Area 2: Southern Atlanta Metro Region

Comparison Table 2a: Adopted State Senate Districts

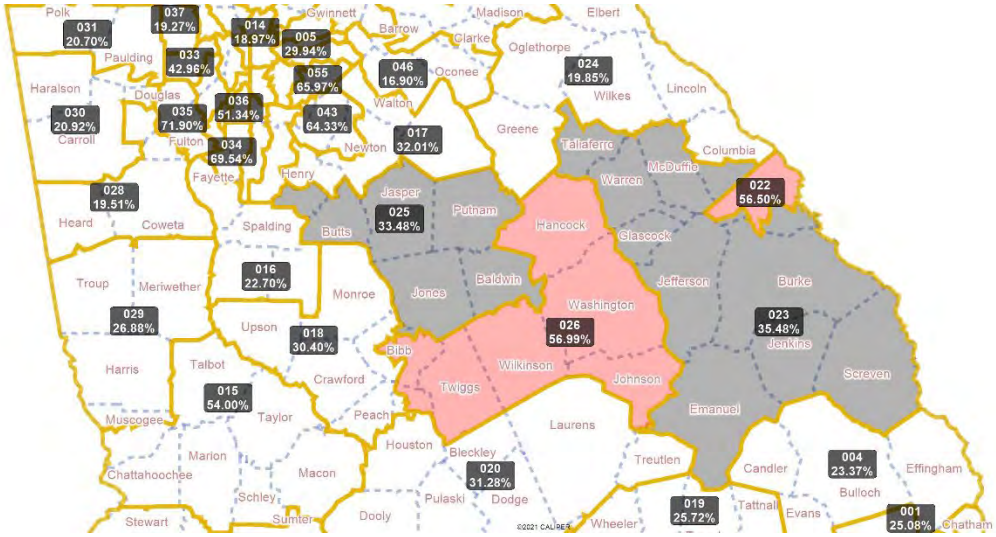
District	% BVAP	GE score	DPR score	Winner of 2022 General Election	Race	Party	Description of 2022 General Election
16	22.7	.325	.550	Marty Harbin	W	R	Racially polarized: White-preferred candidate defeated Black Democrat with 68.2% of vote
28	19.5	.295	.546	Matt Brass	W	R	No election contest
34	69.5	.808	.638	Valencia Seay	B	D	Racially polarized: Black-preferred candidate defeated White Republican with 83.7% of vote
44	71.3	.805	.620	Gail Davenport	B	D	No election contest

Comparison Table 2b: Illustrative State Senate Districts

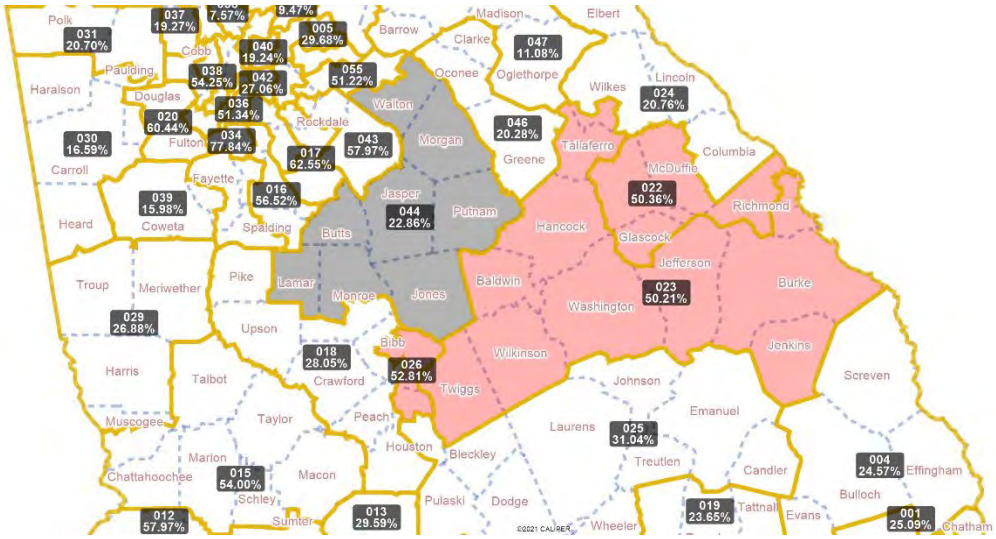
District	% BVAP	GE score	DPR score	Comments
16	56.5	.662	.637	District that would provide Black voters with an opportunity to elect candidates of choice
28	51.3	.588	.626	District that would provide Black voters with an opportunity to elect candidates of choice
34	77.8	.881	.641	District that would provide Black voters with an opportunity to elect candidates of choice
39	16.0	.292	.527	

Map 3: East Central Georgia

Map 3a: Adopted State Senate Districts 22, 23, 25, and 26



Map 3b: Illustrative State Senate Districts 22, 23, 26, and 44



Comparison Table for Map Area 3: East Central Georgia, with Augusta

Comparison Table 3a: Adopted State Senate Districts

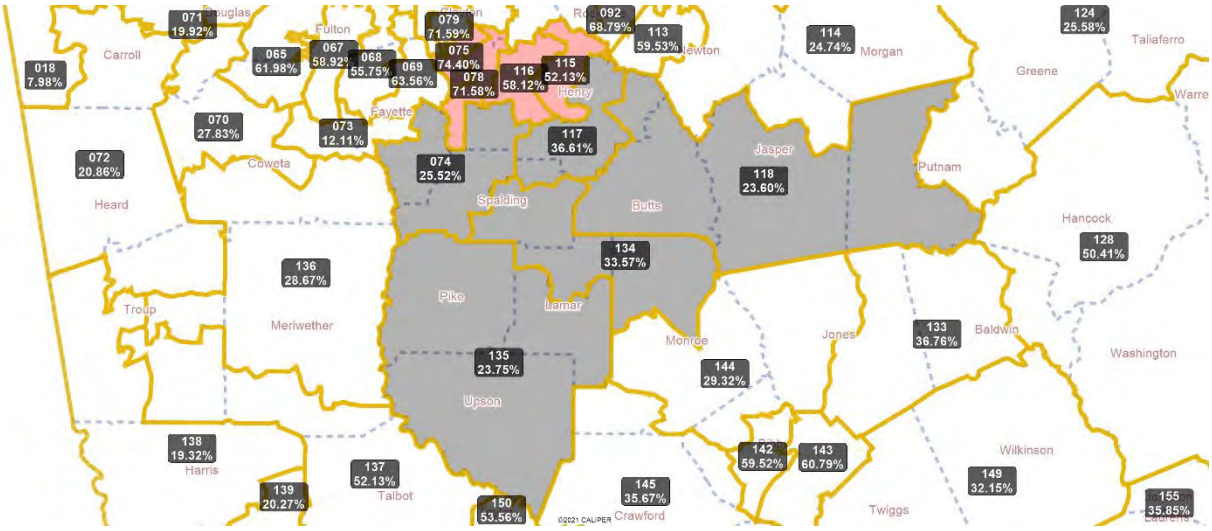
District	% BVAP	GE score	DPR score	Winner of 2022 General Election	Race	Party	Description of 2022 General Election
22	56.5	.668	.631	Harold Jones II	B	D	Racially polarized: Black-preferred candidate defeated White Republican with 70.4% of vote
23	35.5	.392	.601	Max Burns	W	R	No election contest
25	33.5	.385	.608	Rick Williams	W	R	Racially polarized: White-preferred candidate defeated Black Democrat with 61.7% of vote
26	57.0	.620	.613	David Lucas Sr	B	D	No election contest

Comparison Table 3b: Illustrative State Senate Districts

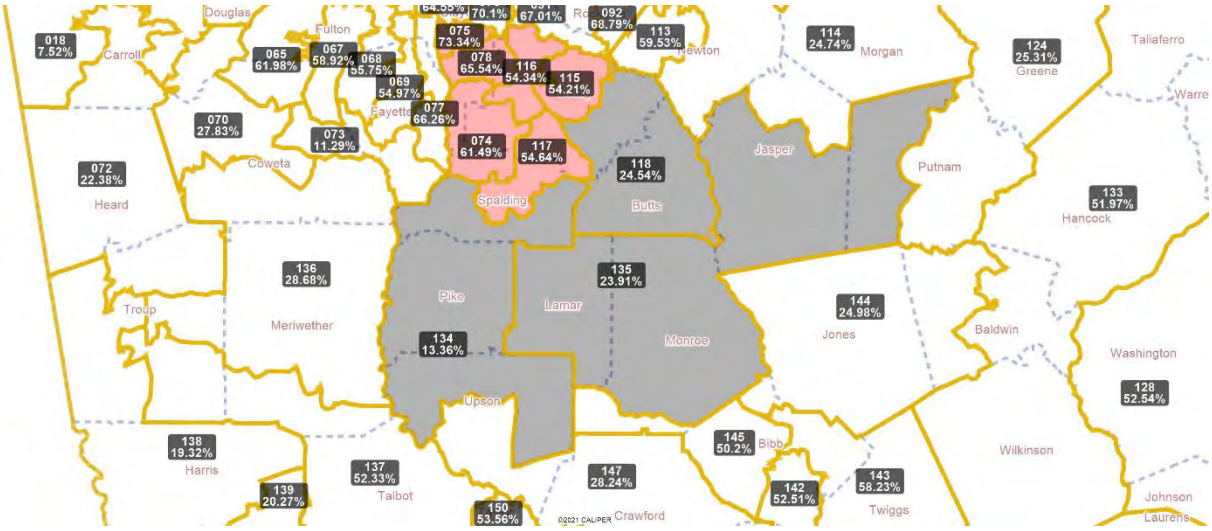
District	% BVAP	GE score	DPR score	Comments
22	50.4	.591	.625	District that would provide Black voters with an opportunity to elect candidates of choice
23	50.2	.524	.608	District that would provide Black voters with an opportunity to elect candidates of choice
26	52.8	.613	.630	District that would provide Black voters with an opportunity to elect candidates of choice
44	22.9	.261	.560	

Map 4: Southeastern Atlanta Metro Area

Map 4a: Adopted State House Districts 74, 75, 78, 115, 116, 117, 118, 134, 135



Map 4b: Illustrative State House Districts 74, 75, 78, 115, 116, 117, 118, 134, 135



Comparison Table for Map Area 4: Southeastern Atlanta Metro Region

Comparison Table 4a: Adopted State House Districts

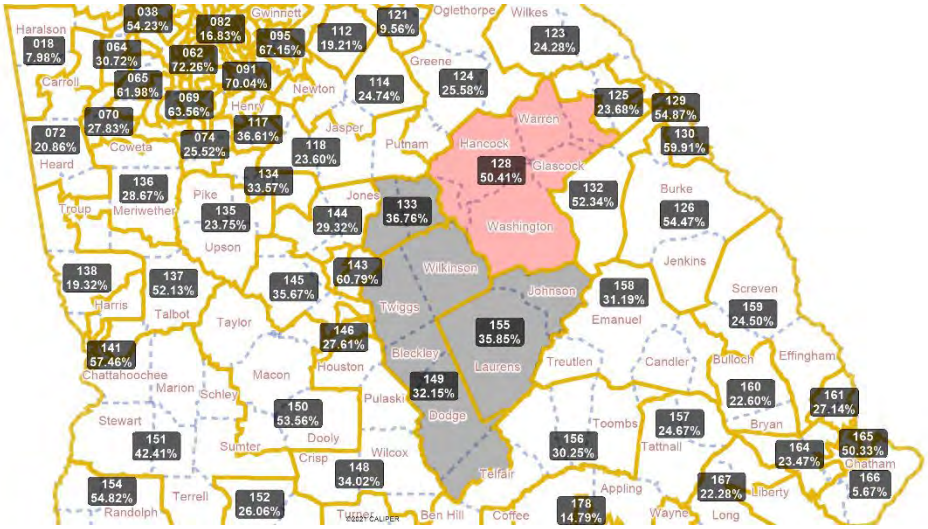
District	% BVAP	GE score	DPR score	Winner of 2022 General Election	Race	Party	Description of 2022 General Election
74	25.5	.351	.609	Karen Mathiak	W	R	Racially polarized: White-preferred candidate defeated White Democrat with 63.7% of vote
75	74.4	.849	.632	Mike Glanton	B	D	Racially polarized: Black-preferred candidate defeated White Republican with 88.6% of vote
78	71.6	.793	.624	Demetrius Douglas	B	D	No election contest
115	52.1	.568	.655	Regina Lewis-Ward	B	D	No election contest
116	58.1	.672	.657	El-Mahdi Holly	B	D	Racially polarized: Black-preferred candidate defeated White Republican with 73.3% of the vote
117	36.6	.436	.630	Lauren Daniel	W	R	Racially polarized: White-preferred candidate defeated Black Democrat with 50.7% of the vote
118	23.6	.257	.576	Clint Crowe	W	R	Racially polarized: White-preferred candidate won with 74.7% of the vote
134	33.6	.350	.555	David Knight	W	R	Racially polarized: White-preferred candidate defeated Black Democrat with 66.5% of the vote
135	23.8	.253	.558	Beth Camp	W	R	No election contest

Comparison Table 4b: Illustrative State House Districts

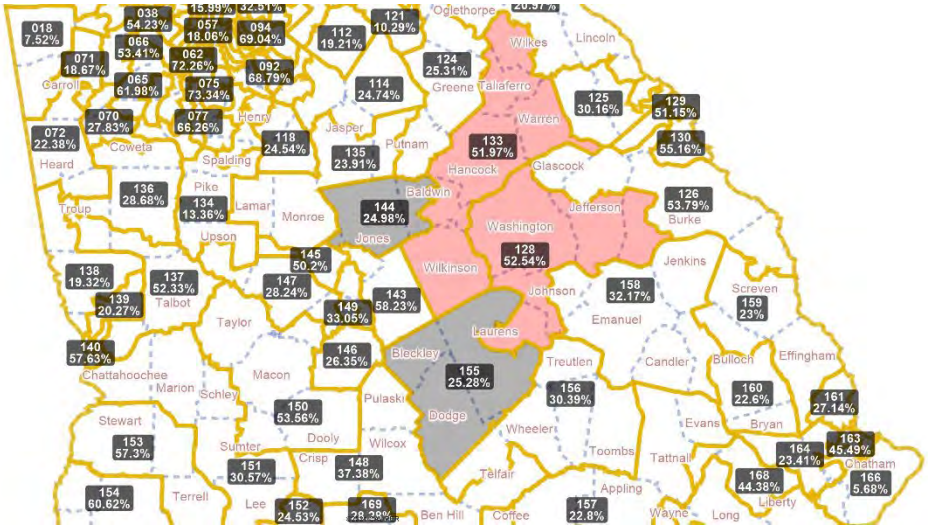
District	% BVAP	GE score	DPR score	Comments
74	61.5	.684	.654	District that would provide Black voters with an opportunity to elect candidates of choice
75	73.3	.854	.628	District that would provide Black voters with an opportunity to elect candidates of choice
78	65.5	.768	.620	District that would provide Black voters with an opportunity to elect candidates of choice
115	54.2	.579	.653	District that would provide Black voters with an opportunity to elect candidates of choice
116	54.3	.653	.653	District that would provide Black voters with an opportunity to elect candidates of choice
117	54.6	.593	.625	District that would provide Black voters with an opportunity to elect candidates of choice
118	24.5	.271	.594	
134	13.4	.193	.529	
135	23.9	.268	.548	

Map 5: Central Georgia

Map 5a: Adopted State House Districts 128, 133, 149, and 155



Map 5b: Illustrative State House Districts 128, 133, 144, 155



Comparison Table for Map Area 5: Central Georgia

Comparison Table 5a: Adopted State House Districts

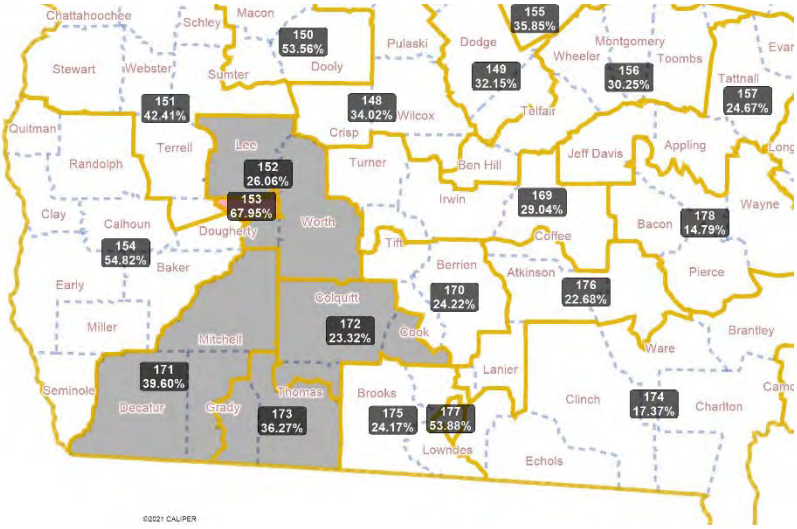
District	% BVAP	GE score	DPR score	Winner of 2022 General Election	Race	Party	Description of 2022 General Election
128	50.4	.476	.598	Mack Jackson	B	D	No election contest
133	36.8	.434	.620	Kenneth Vance	W	R	Racially polarized: White-preferred candidate defeated Black Democrat with 57.5% of vote
149	32.1	.318	.559	Danny Mathis	W	R	No election contest
155	35.9	.323	.598	Matt Hatchett	W	R	No election contest

Comparison Table 5b: Illustrative State House Districts

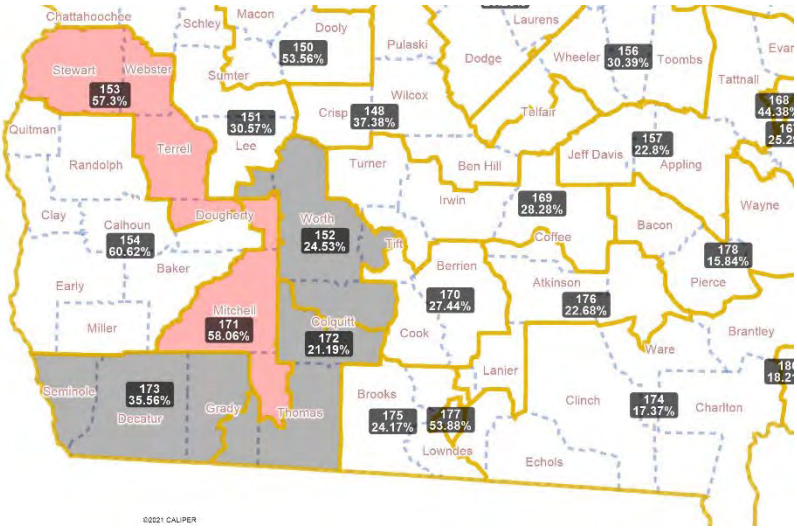
District	% BVAP	GE score	DPR score	Comments
128	52.5	.478	.585	District that would provide Black voters with an opportunity to elect candidates of choice
133	52.0	.543	.607	District that would provide Black voters with an opportunity to elect candidates of choice
144	25.0	.343	.586	
155	25.3	.241	.585	

Map 6: Southwest Georgia

Map 6a: Adopted State House Districts 152, 153, 171, 172, and 173



Map 6b: Illustrative State House Districts 152, 153, 171, 172, and 173



Comparison Table for Map Area 6: Southwest Georgia

Comparison Table 6a: Adopted State House Districts

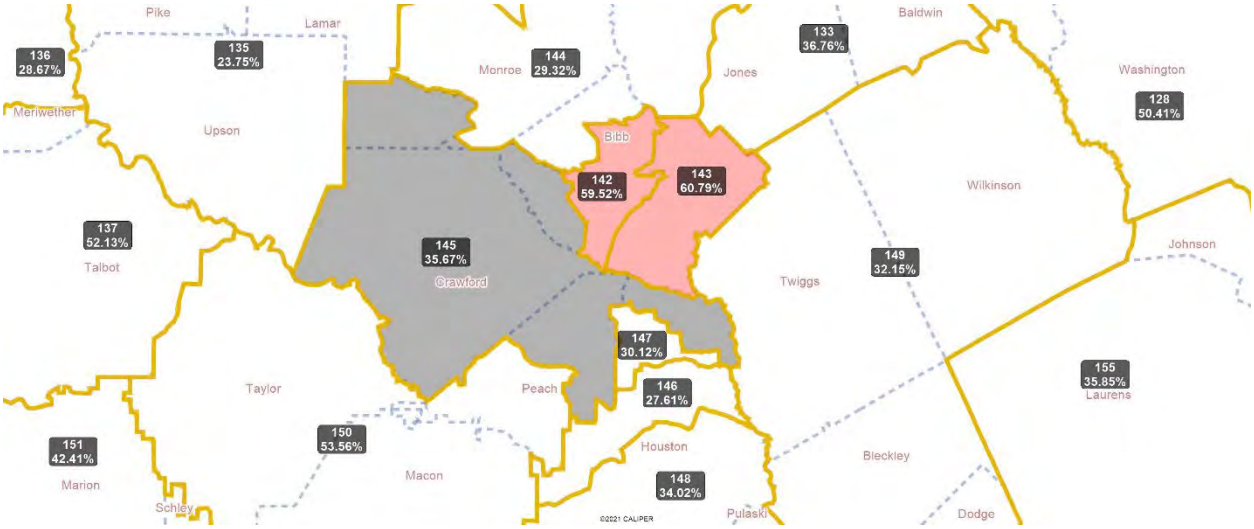
District	% BVAP	GE score	DPR score	Winner of 2022 General Election	Race	Party	Description of 2022 General Election
152	26.1	.281	.628	Bill Yearta	W	R	No election contest
153	67.9	.651	.657	David Sampson	B	D	Racially polarized: Black-preferred candidate defeated Black Republican with 65.1% of vote
171	39.6	.361	.606	Joe Campbell	W	R	No election contest
172	23.3	.248	.596	Sam Watson	W	R	No election contest
173	36.3	.373	.635	Darlene Taylor	W	R	Racially polarized: White-preferred candidate defeated Black Democrat with 64.0% of vote

Comparison Table 6b: Illustrative State House Districts

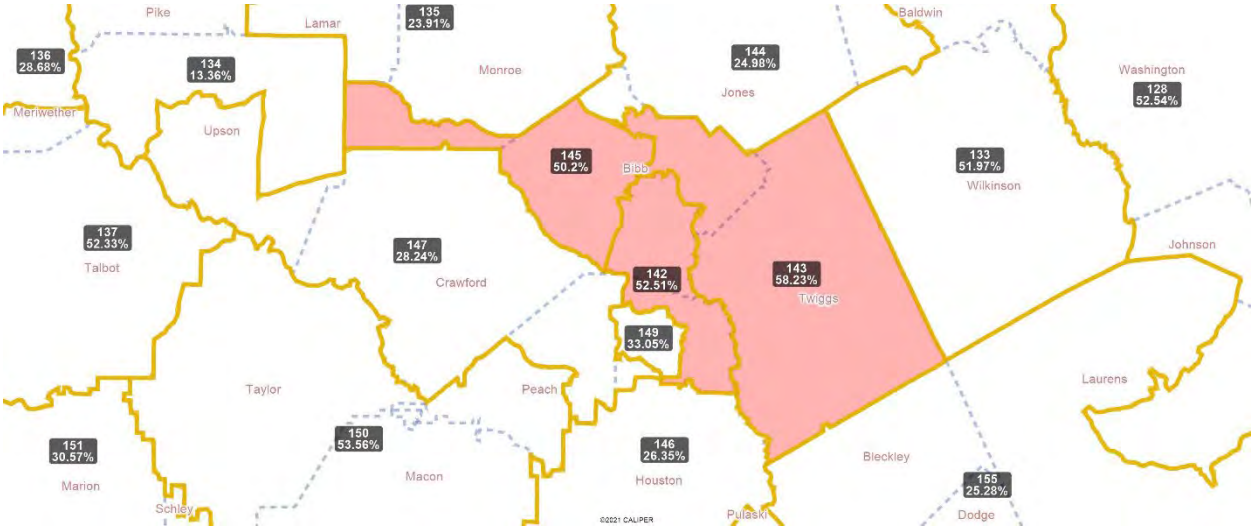
District	% BVAP	GE score	DPR score	Comments
152	24.5	.250	.610	
153	57.3	.548	.645	District that would provide Black voters with an opportunity to elect candidates of choice
171	58.1	.549	.645	District that would provide Black voters with an opportunity to elect candidates of choice
172	21.2	.250	.582	
173	35.6	.338	.604	

Map 7: Macon Region

Map 7a: Adopted State House Districts 142, 143, and 145



Map 7b: Illustrative State House Districts 142, 143, and 145



Comparison Table for Map Area 7: Macon Region

Comparison Table 7a: Adopted State House Districts

District	% BVAP	GE score	DPR score	Winner of 2022 General Election	Race	Party	Description of 2022 General Election
142	59.5	.638	.616	Miriam Paris	B	D	No election contest
143	60.8	.689	.627	James Beverly	B	D	No election contest
145	35.7	.398	.632	Robert Dickey	W	R	No election contest

Comparison Table 7b: Illustrative State House Districts

District	% BVAP	GE score	DPR score	Comments
142	52.5	.578	.647	District that would provide Black voters with an opportunity to elect candidates of choice
143	58.2	.668	.603	District that would provide Black voters with an opportunity to elect candidates of choice
145	50.2	.538	.619	District that would provide Black voters with an opportunity to elect candidates of choice

VI. Conclusion

My analysis of voting patterns by race determined that voting in all seven areas of Georgia that I examined is racially polarized. The Black community is quite cohesive in supporting their preferred candidates in all of these areas, and White voters in these areas consistently bloc vote to defeat the candidates supported by Black voters. These seven areas are all areas where additional Black opportunity districts could have been created but were not, as demonstrated by a comparison of the Adopted Plans to the Illustrative Plans.

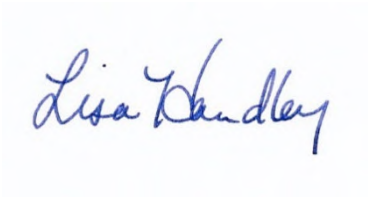
Racially polarized voting substantially impedes the ability of Black voters to elect candidates of their choice in the seven areas examined in this report unless districts are drawn to provide Black voters with this opportunity. The 2022 Adopted State Senate and House Plans dilute the voting strength of Black voters in Georgia by failing to create additional districts in these areas that offer Black voters an opportunity to elect their candidates of choice to the state legislature.

***

I reserve the right to modify and/or supplement my opinions, as well as to offer new opinions.

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 December 23, 2022.



Dr. Lisa Handley

APPENDIX A

APPENDIX A1
Eastern Atlanta Metro Region
Map Area 1
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

2022 General	Race	Party	Black Voters EI rxc	95% confidence interval	EI	ER	HP	White Voters EI rxc	95% confidence interval	EI	ER	HP
US Senate												
Raphael Warnock	B	D	98.4	95.2, 99.0	99.4	102.3	-	40.0	38.6, 43.6	37.0	38.6	-
Herschel Walker	B	R	1.2	.6, 4.2	0.5	-2.9	-	59.3	55.6, 60.6	61.7	58.5	-
Chase Oliver	W	L	0.4	.3, .6	0.9	0.7	-	0.7	.5, .9	3.2	2.8	-
Governor												
Stacey Abrams	B	D	96.9	86.1, 99.0	99.3	102.5	-	37.4	34.5, 49.2	34.4	32.7	-
Brian Kemp	W	R	2.8	.8, 13.4	0.5	-2.9	-	62.3	50.3, 65.2	65.3	66.4	-
Shane Hazel	W	L	0.2	.2, .4	0.4	0.4	-	0.3	.2, .5	0.7	0.9	-
Commissioner of Agriculture												
Nakita Hemingway	B	D	98.6	94.5, 99.1	99.3	101.9	-	34.2	32.9, 40.2	32.3	30.3	-
Tyler Harper	W	R	1.0	.5, 5.0	0.5	-3.5	-	65.3	59.3, 66.7	66.5	67.0	-
David Raudabaugh	W	L	0.4	.3, .5	1.4	1.5	-	0.5	.4, .6	3.1	2.9	-
Commissioner of Insurance												
Janice Laws Robinson	B	D	98.7	98.1, 99.1	99.3	103.0	-	33.2	32.0, 34.5	32.9	31.6	-
John King	W	R	1.3	.9, 1.9	0.6	-2.8	-	66.8	65.5, 68.0	67.1	68.5	-
Commissioner of Labor												
William Boddie	B	D	98.5	97.1, 99.1	99.3	101.1	-	35.8	34.5, 39.6	33.5	32.1	-
Bruce Thompson	W	R	1.0	.5, 2.3	0.5	-3.3	-	63.7	59.8, 64.9	65.1	64.9	-
Emily Anderson	W	L	0.5	.3, .7	2.3	2.4	-	0.6	.4, .7	3.0	3.0	-
School Superintendent												
Alisha Thomas Searcy	B	D	98.7	98.1, 99.1	99.3	103.2	-	32.9	31.7, 34.2	32.7	31.0	-
Richard Woods	W	R	1.3	.9, 1.9	0.6	-3.1	-	67.1	65.8, 68.3	67.3	69.0	-

APPENDIX A1
Eastern Atlanta Metro Region
Map Area 1
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2021 Runoffs												
US Special Senate												
Raphael Warnock	B	D	98.9	98.5, 99.3	99.6	103.7	-	34.6	33.9, 35.4	33.7	37.2	-
Kelly Loeffler	W	R	1.1	.7, 1.5	0.4	-3.7	-	65.4	64.5, 66.1	66.4	62.7	-
US Senate												
Jon Ossoff	W	D	98.9	98.5, 99.3	99.5	103.7	-	33.8	33.1, 34.6	32.9	36.3	-
David Perdue	W	R	1.1	.7, 1.5	0.5	-3.7	-	66.2	65.4, 66.9	67.0	63.7	-
Public Service Commission 4												
Daniel Blackman	B	D	98.9	98.4, 99.2	99.2	103.7	-	32.4	31.6, 33.3	32.7	34.7	-
Lauren McDonald Jr	W	R	1.1	.8, 1.6	0.5	-3.7	-	67.6	66.7, 68.4	67.4	65.3	-
2020 General												
US Senate												
Jon Ossoff	W	D	98.6	98.1, 98.8	99.3	100.6	-	34.1	32.9, 35.3	31.6	34.7	-
David Perdue	W	R	0.9	.6, 1.3	0.6	-2.6	-	65.3	64.1, 66.4	68.8	63.2	-
Shane Hazel	W	L	0.6	.4, .8	2.0	2.0	-	0.6	.5, .8	2.1	2.1	-
US Special Senate												
Raphael Warnock	B	D	74.9	74.0, 75.8	75.3	71.5	-	36.7	35.8, 37.6	27.2	30.1	-
Doug Collins	W	R	0.6	.4, .9	0.6	-1.1	-	22.6	21.9, 23.1	23.8	22.2	-
Kelly Loeffler	W	R	0.6	.4, .9	0.7	-2.6	-	38.9	38.2, 39.4	40.0	37.5	-
Others			23.8	23.0, 24.7	31.8	32.2	-	1.8	1.4, 2.3	8.7	10.3	-
Public Service Commission 1												
Robert Bryant	B	D	98.0	92.1, 98.8	99.3	100.0	-	33.8	32.1, 43.5	29.5	31.6	-
Jason Shaw	W	R	1.5	.7, 7.1	0.5	-2.9	-	65.4	55.5, 67.1	69.7	63.9	-
Elizabeth Melton	W	L	0.5	.4, .8	2.7	2.9	-	0.8	.7, 1.0	4.3	4.3	-

APPENDIX A1
Eastern Atlanta Metro Region
Map Area 1
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Public Service Commission 4												
Daniel Blackman	B	D	97.9	89.8, 99.0	99.4	101.1	-	33.8	32.0, 44.6	30.0	32.2	-
Lauren McDonald Jr	W	R	1.6	.6, 9.5	0.5	-3.0	-	65.5	54.6, 67.3	68.6	64.1	-
Nathan Wilson	W	L	0.5	.3, .7	1.8	1.9	-	0.8	.6, .9	3.9	3.9	-
2018 General												
Governor												
Stacey Abrams	B	D	99.1	98.8, 99.3	99.5	103.2	98.0	34.4	33.6, 35.2	34.3	33.8	-
Brian Kemp	W	R	0.6	.4, .9	0.4	-3.4	1.8	65.2	64.4, 66.0	64.7	64.6	-
Ted Metz	W	L	0.2	.2, .3	0.1	0.1	0.2	0.4	.3, .6	1.3	1.5	-
Commissioner of Insurance												
Janice Laws	B	D	98.9	98.6, 99.2	99.5	101.4	96.2	33.4	32.6, 34.4	31.2	30.8	-
Jim Beck	W	R	0.7	.4, .9	0.5	-3.0	2.3	65.8	64.9, 66.7	66.7	65.4	-
Donnie Foster	W	L	0.4	.3, .5	1.4	1.6	1.5	0.7	.6, .9	3.9	3.8	-
School Superintendent												
Otha Thornton	B	D	98.9	98.5, 99.3	99.4	102.9	96.9	30.6	29.6, 31.7	30.5	29.2	-
Richard Woods	W	R	1.1	.7, 1.5	0.5	-2.9	3.1	69.4	68.3, 70.4	69.4	70.7	-

APPENDIX A2
Southern Atlanta Metro Region
Map Area 2
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2022 General												
US Senate												
Raphael Warnock	B	D	98.5	98.2, 99.1	-	113.6	-	9.5	8.6, 10.4	7.5	6.2	-
Herschel Walker	B	R	1.0	.6, 1.3	-	-14.4	-	88.9	88.2, 89.7	89.6	90.8	-
Chase Oliver	W	L	0.4	.3, .7	-	0.7	-	1.6	1.0, 2.1	3.3	3.0	-
Governor												
Stacey Abrams	B	D	96.8	78.2, 99.2	99.1	113.2	-	6.6	3.0, 27.0	3.8	1.8	-
Brian Kemp	W	R	2.9	.5, 21.3	0.8	-13.5	-	93.1	72.5, 95.8	95.7	97.3	-
Shane Hazel	W	L	0.3	.2, .5	0.6	0.4	-	0.3	.2, .5	1.0	0.9	-
Commissioner of Agriculture												
Nakita Hemingway	B	D	98.3	97.0, 98.9	99.2	112.0	-	4.8	3.9, 6.6	3.0	1.0	-
Tyler Harper	W	R	1.2	.7, 2.4	0.8	-13.9	-	94.5	92.7, 95.5	95.1	96.6	-
David Raudabaugh	W	L	0.5	.3, .7	2.1	1.9	-	0.6	.4, .9	2.6	2.3	-
Commissioner of Insurance												
Janice Laws Robinson	B	D	98.8	98.3, 99.2	99.2	113.4	-	3.6	2.9, 4.3	3.8	2.0	-
John King	W	R	1.2	.8, 1.7	0.8	-13.4	-	96.4	95.7, 97.1	96.2	97.9	-
Commissioner of Labor												
William Boddie	B	D	98.4	97.9, 98.9	99.3	111.3	-	5.7	4.8, 6.4	3.5	2.1	-
Bruce Thompson	W	R	1.1	.6, 1.5	0.8	-14.1	-	93.7	93.0, 94.6	94.2	95.5	-
Emily Anderson	W	L	0.5	.4, .7	2.9	2.8	-	0.6	.5, .9	2.4	2.4	-
School Superintendent												
Alisha Thomas Searcy	B	D	98.8	98.3, 99.2	99.2	113.5	-	3.4	2.9, 4.1	3.7	1.9	-
Richard Woods	W	R	1.2	.8, 1.7	0.7	-13.5	-	96.6	95.9, 97.1	96.3	98.1	-

APPENDIX A2
Southern Atlanta Metro Region
Map Area 2
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2021 Runoffs												
US Special Senate												
Raphael Warnock	B	D	99.0	98.7, 99.3	99.3	114.4	-	8.5	8.0, 9.1	8.2	7.2	9.9
Kelly Loeffler	W	R	1.0	.6, 1.3	0.7	-14.4	-	91.5	90.9, 92.0	91.8	92.8	90.1
US Senate												
Jon Ossoff	W	D	98.9	98.5, 99.2	99.3	114.2	-	7.7	7.3, 8.3	7.5	6.6	9.6
David Perdue	W	R	1.1	.8, 1.5	0.7	-14.2	-	92.3	91.7, 92.7	92.5	93.4	90.4
Public Service Commission 4												
Daniel Blackman	B	D	98.9	98.5, 99.2	99.3	114.1	-	6.0	5.5, 6.6	6.2	5.2	8.9
Lauren McDonald Jr	W	R	1.1	.8, 1.5	0.7	-14.1	-	94.0	93.4, 94.5	94.1	94.8	91.1
2020 General												
US Senate												
Jon Ossoff	W	D	98.4	97.9, 98.8	99.3	110.7	-	9.1	8.3, 9.9	6.0	5.8	9.0
David Perdue	W	R	1.0	.7, 1.5	0.6	-12.9	-	90.2	89.4, 90.9	91.3	91.9	89.6
Shane Hazel	W	L	0.7	.5, .8	2.2	2.3	-	0.7	.6, 1.0	2.4	2.3	1.4
US Special Senate												
Raphael Warnock	B	D	70.4	67.0, 73.0	76.8	77.2	-	8.1	6.4, 9.8	5.2	5.5	7.0
Doug Collins	W	R	0.6	.4, .9	0.7	-5.4	-	33.7	33.2, 34.1	34.1	34.6	33.9
Kelly Loeffler	W	R	0.6	.4, .9	0.5	-8.7	-	51.9	51.5, 52.3	51.7	52.3	50.9
Others			28.4	25.7, 30.9	27.2	36.9	-	6.2	4.5, 7.9	7.5	7.6	8.2
Public Service Commission 1												
Robert Bryant	B	D	97.9	90.2, 98.8	99.4	110.0	-	8.1	6.7, 16.7	4.0	3.9	8.5
Jason Shaw	W	R	1.4	.6, 8.7	0.6	-13.1	-	90.5	82.3, 91.8	93.1	92.4	88.9
Elizabeth Melton	W	L	0.7	.5, 1.0	3.1	3.2	-	1.4	.9, 2.0	3.7	3.7	2.6

APPENDIX A2
Southern Atlanta Metro Region
Map Area 2
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Public Service Commission 4												
Daniel Blackman	B	D	97.5	83.3, 98.7	99.4	111.3	-	8.0	6.5, 20.1	4.2	4.2	8.6
Lauren McDonald Jr	W	R	1.9	.8, 15.9	0.7	-13.6	-	90.5	78.8, 91.8	92.9	92.5	88.8
Nathan Wilson	W	L	0.6	.4, .9	2.2	2.3	-	1.5	.9, 2.0	3.7	3.3	2.6
2018 General												
Governor												
Stacey Abrams	B	D	99.0	98.7, 99.2	99.2	112.5	-	5.7	5.2, 6.2	5.5	4.2	10.3
Brian Kemp	W	R	0.7	.5, 1.0	0.7	-12.7	-	93.7	93.2, 94.1	93.5	94.5	88.9
Ted Metz	W	L	0.3	.2, .4	0.4	0.2	-	0.6	.4, .8	1.4	1.4	0.7
Commissioner of Insurance												
Janice Laws	B	D	98.8	98.4, 99.0	99.4	110.2	-	6.2	5.6, 6.8	4.0	3.4	10.5
Jim Beck	W	R	0.7	.5, 1.1	0.7	-12.0	-	92.9	92.3, 93.5	93.4	93.7	87.7
Donnie Foster	W	L	0.5	.4, .7	1.8	1.9	-	0.8	.6, 1.2	3.2	2.9	1.8
School Superintendent												
Otha Thornton	B	D	98.9	98.5, 99.2	99.2	111.0	-	3.6	3.0, 4.3	3.8	2.9	10.2
Richard Woods	W	R	1.1	.8, 1.5	0.6	-11.0	-	96.4	95.7, 97.0	96.3	97.1	89.8

APPENDIX A3
East Central Region
Map Area 3
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2022 General												
US Senate												
Raphael Warnock	B	D	97.7	92.6, 98.8	99.1	108.8	-	9.5	8.5, 13.5	8.1	5.2	12.2
Herschel Walker	B	R	1.8	.7, 5.7	0.8	-9.6	-	90.0	86.0, 90.9	90.0	92.9	86.0
Chase Oliver	W	L	0.5	.4, .7	0.7	0.8	-	0.5	.4, .6	2.2	1.9	1.8
Governor												
Stacey Abrams	B	D	93.5	64.9, 99.0	99.1	108.1	-	9.4	5.3, 30.0	5.7	1.5	9.3
Brian Kemp	W	R	6.1	.7, 35.1	0.8	-8.6	-	90.3	69.7, 94.4	93.9	97.8	90.1
Shane Hazel	W	L	0.4	.3, .5	0.7	0.4	-	0.2	.2, .3	0.6	0.7	0.6
Commissioner of Agriculture												
Nakita Hemingway	B	D	97.7	92.2, 98.8	99.0	106.7	-	5.9	4.9, 10.5	5.0	1.3	9.1
Tyler Harper	W	R	1.6	.7, 6.0	0.8	-8.6	-	93.6	90.0, 94.6	93.7	96.9	89.3
David Raudabaugh	W	L	0.6	.4, .8	1.8	1.8	-	0.5	.4, .6	1.7	1.8	1.5
Commissioner of Insurance												
Janice Laws Robinson	B	D	98.6	98.1, 99.0	99.1	108.2	-	4.6	4.1, 5.0	5.6	1.9	10.0
John King	W	R	1.4	1.0, 1.9	0.8	-8.2	-	95.4	95.0, 95.9	94.4	98.1	90.0
Commissioner of Labor												
William Boddie	B	D	97.9	92.8, 98.8	99.1	106.8	-	6.2	5.4, 9.2	5.4	1.8	9.7
Bruce Thompson	W	R	1.5	.6, 6.4	0.7	-9.0	-	93.2	90.3, 94.1	92.9	96.3	88.8
Emily Anderson	W	L	0.7	.5, .9	2.8	2.3	-	0.5	.4, .7	1.6	1.9	1.5
School Superintendent												
Alisha Thomas Searcy	B	D	98.6	98.1, 99.0	99.3	107.9	-	4.4	3.9, 4.9	5.6	1.8	9.9
Richard Woods	W	R	1.4	1.0, 1.9	0.8	-7.8	-	95.7	95.1, 96.1	94.4	98.2	90.1

APPENDIX A3
East Central Region
Map Area 3
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2021 Runoffs												
US Special Senate												
Raphael Warnock	B	D	98.9	98.5, 99.2	99.3	109.5	97.0	8.3	8.0, 8.7	8.6	5.9	13.0
Kelly Loeffler	W	R	1.1	.8, 1.5	0.8	-9.5	3.0	91.7	91.3, 92.1	91.9	94.1	87.0
US Senate												
Jon Ossoff	W	D	98.9	98.5, 99.2	99.1	109.3	96.9	8.0	7.6, 8.4	8.3	5.8	12.7
David Perdue	W	R	1.1	.8, 1.5	0.8	-9.3	3.1	92.0	91.6, 92.4	91.7	94.2	87.3
Public Service Commission 4												
Daniel Blackman	B	D	98.9	98.5, 99.2	99.1	109.0	96.7	6.5	6.1, 6.9	7.1	4.6	11.9
Lauren McDonald Jr	W	R	1.1	.8, 1.5	0.7	-9.0	3.3	93.5	93.1, 93.9	92.9	95.4	88.1
2020 General												
US Senate												
Jon Ossoff	W	D	97.6	97.0, 98.1	99.0	105.0	-	7.8	7.3, 8.4	6.4	5.2	12.0
David Perdue	W	R	1.4	.9, 1.9	0.8	-7.4	-	91.6	91.0, 92.0	91.9	93.0	86.4
Shane Hazel	W	L	1.0	.8, 1.3	2.4	2.4	-	0.6	.5, .8	1.9	1.8	1.6
US Special Senate												
Raphael Warnock	B	D	66.4	65.2, 67.6	72.3	70.3	-	7.4	6.5, 8.3	4.0	4.2	8.7
Doug Collins	W	R	0.6	.5, .9	0.5	-3.4	-	34.3	34.0, 34.5	32.0	35.8	35.3
Kelly Loeffler	W	R	0.7	.5, .9	0.9	-6.0	-	51.5	51.1, 51.8	51.4	52.8	46.7
Others			32.3	31.0, 33.5	30.1	39.1	-	6.9	6.0, 7.7	6.9	7.2	9.3
Public Service Commission 1												
Robert Bryant	B	D	96.7	76.0, 98.3	99.1	105.4	-	7.9	6.4, 23.5	5.0	3.4	10.9
Jason Shaw	W	R	2.3	.8, 22.6	0.9	-8.3	-	91.3	75.7, 92.7	92.4	93.8	86.7
Elizabeth Melton	W	L	1.0	.7, 1.4	3.0	2.9	-	0.9	.7, 1.1	2.9	2.9	2.4

APPENDIX A3
East Central Region
Map Area 3
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Public Service Commission 4												
Daniel Blackman	B	D	96.2	73.8, 98.4	99.3	106.4	-	8.7	6.8, 26.7	5.4	3.6	11.1
Lauren McDonald Jr	W	R	3.0	.9, 25.2	0.9	-8.5	-	90.5	72.7, 92.4	92.1	93.8	86.7
Nathan Wilson	W	L	0.8	.6, 1.0	2.3	2.3	-	0.8	.7, .9	2.7	2.6	2.2
2018 General												
Governor												
Stacey Abrams	B	D	99.0	98.7, 99.2	99.3	107.8	96.0	6.7	6.3, 7.2	6.9	3.5	10.7
Brian Kemp	W	R	0.7	.5, .9	0.7	-8.2	3.7	92.9	92.5, 93.4	92.3	95.6	88.7
Ted Metz	W	L	0.4	.3, .5	0.5	0.3	0.3	0.3	.2, .4	0.8	0.9	0.6
Commissioner of Insurance												
Janice Laws	B	D	98.6	98.2, 98.9	99.0	105.3	94.2	6.5	6.1, 7.0	5.5	3.0	10.8
Jim Beck	W	R	0.9	.6, 1.2	0.8	-6.8	4.7	92.8	92.3, 93.3	92.8	94.8	87.6
Donnie Foster	W	L	0.6	.4, .7	1.5	1.5	1.1	0.7	.5, .8	2.2	2.2	1.6
School Superintendent												
Otha Thornton	B	D	98.8	98.4, 99.2	99.2	106.1	94.8	4.8	4.4, 5.4	5.6	2.8	10.6
Richard Woods	W	R	1.2	.8, 1.6	0.8	-6.1	5.2	95.2	94.6, 95.6	94.5	97.2	89.4

APPENDIX A4
Southeastern Atlanta Metro Region
Map Area 4
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
2022 General	**Race**	**Party**	**EI rxc**	**95% confidence interval**	**EI**	**ER**	**HP**	**EI rxc**	**95% confidence interval**	**EI**	**ER**	**HP**
US Senate												
Raphael Warnock	B	D	98.4	97.9, 99.0	99.2	113.2	-	9.1	8.2, 10.0	7.5	6.9	16.4
Herschel Walker	B	R	1.1	.6, 1.5	0.8	-14.0	-	89.3	88.6, 90.1	89.9	90.3	81.1
Chase Oliver	W	L	0.4	.3, .7	0.8	0.8	-	1.6	1.1, 2.1	3.1	2.8	2.5
Governor												
Stacey Abrams	B	D	97.4	81.2, 99.1	99.2	112.8	-	6.1	4.3, 21.0	4.3	2.6	12.6
Brian Kemp	W	R	2.4	.6, 18.5	0.7	-13.1	-	93.5	78.7, 95.3	95.3	96.6	86.6
Shane Hazel	W	L	0.3	.2, .4	0.5	0.4	-	0.3	.3, .5	0.8	0.8	0.8
Commissioner of Agriculture												
Nakita Hemingway	B	D	98.6	98.0, 99.1	99.2	111.5	-	5.0	4.2, 5.6	3.8	2.1	12.3
Tyler Harper	W	R	0.9	.5, 1.4	0.7	-13.4	-	94.3	93.7, 95.1	95.0	95.8	85.9
David Raudabaugh	W	L	0.5	.3, .7	1.9	0.4	-	0.7	.5, .9	2.1	2.1	1.9
Commissioner of Insurance												
Janice Laws Robinson	B	D	98.8	98.3, 99.2	99.2	112.9	-	4.4	3.8, 5.1	4.5	3.1	13.4
John King	W	R	1.2	.8, 1.7	0.7	-12.9	-	95.6	94.9, 96.2	95.6	96.9	86.6
Commissioner of Labor												
William Boddie	B	D	98.4	97.8, 98.9	99.4	110.8	-	5.9	5.2, 6.5	4.3	3.2	13.1
Bruce Thompson	W	R	1.1	.6, 1.6	0.8	-13.6	-	93.5	92.9, 94.2	94.1	94.7	85.0
Emily Anderson	W	L	0.5	.4, .7	3.0	2.9	-	0.6	.4, .8	2.0	2.1	1.8
School Superintendent												
Alisha Thomas Searcy	B	D	98.8	98.2, 99.2	99.2	113.0	-	4.3	3.7, 5.0	4.3	3.0	13.3
Richard Woods	W	R	1.2	.8, 1.7	0.7	-13.0	-	95.7	95.0, 96.3	95.7	97.0	86.7

APPENDIX A4
Southeastern Atlanta Metro Region
Map Area 4
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2021 Runoffs												
US Special Senate												
Raphael Warnock	B	D	98.9	98.5, 99.2	99.2	113.7	-	8.1	7.6, 8.7	7.9	7.9	16.1
Kelly Loeffler	W	R	1.1	.8, 1.5	0.7	-13.7	-	91.9	91.3, 92.4	92.1	92.1	83.9
US Senate												
Jon Ossoff	W	D	98.9	98.4, 99.2	99.2	113.5	-	7.4	6.9, 8.0	7.4	7.5	15.9
David Perdue	W	R	1.1	.8 1.6	0.8	-13.6	-	92.6	92.0, 93.1	92.8	92.5	84.1
Public Service Commission 4												
Daniel Blackman	B	D	98.8	98.4, 99.2	99.3	113.4	-	6.0	5.5, 6.6	6.0	6.2	14.9
Lauren McDonald Jr	W	R	1.2	.8, 1.6	0.8	-13.5	-	94.0	93.4, 94.5	94.0	93.8	85.1
2020 General												
US Senate												
Jon Ossoff	W	D	98.3	97.8, 98.9	99.3	109.9	-	8.8	8.1, 9.5	6.6	6.9	15.0
David Perdue	W	R	1.0	.7, 1.5	0.6	-12.2	-	90.5	89.7, 91.2	91.2	91.0	83.1
Shane Hazel	W	L	0.6	.5, .9	2.3	2.3	-	0.7	.5, 1.0	2.0	2.1	2.0
US Special Senate												
Raphael Warnock	B	D	71.5	68.8, 74.0	76.9	76.9	-	8.7	7.3, 9.9	5.9	6.2	11.0
Doug Collins	W	R	0.7	.5, .9	0.1	-7.6	-	36.3	35.9, 36.7	37.1	38.7	45.3
Kelly Loeffler	W	R	0.7	.5, 1.0	0.6	-6.1	-	49.7	49.3, 50.2	48.4	48.0	34.7
Others			27.1	24.7, 29.9	27.1	36.9	-	5.3	4.1, 6.6	7.2	7.1	9.0
Public Service Commission 1												
Robert Bryant	B	D	97.8	90.5, 98.7	99.3	109.1	-	7.9	6.8, 15.8	5.2	5.3	13.9
Jason Shaw	W	R	1.5	.7, 8.6	0.6	-12.5	-	90.6	83.2, 91.6	91.7	91.4	83.4
Elizabeth Melton	W	L	0.7	.5, 1.1	3.2	3.3	-	1.5	1.0, 2.0	3.3	3.3	2.7

APPENDIX A4
Southeastern Atlanta Metro Region
Map Area 4
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Public Service Commission 4												
Daniel Blackman	B	D	97.9	89.3, 98.8	99.4	110.5	-	7.9	6.7, 15.5	5.3	5.5	14.3
Lauren McDonald Jr	W	R	1.6	.7, 9.9	0.6	-13.0	-	90.6	83.3, 91.8	91.8	91.4	83.2
Nathan Wilson	W	L	0.6	.4, .9	2.3	2.3	-	1.5	1.1, 2.0	3.1	3.0	2.5
2018 General												
Governor												
Stacey Abrams	B	D	98.9	98.6, 99.2	99.3	112.0	-	5.6	5.1, 6.1	5.5	5.0	14.0
Brian Kemp	W	R	0.8	.5, 1.1	0.7	-12.1	-	93.9	93.3, 94.4	93.6	93.8	85.2
Ted Metz	W	L	0.3	.2, .4	0.3	0.2	-	0.6	.4, .8	1.1	1.2	0.9
Commissioner of Insurance												
Janice Laws	B	D	98.7	98.3, 99.1	99.4	109.3	-	6.3	5.7, 6.9	4.6	4.7	14.5
Jim Beck	W	R	0.8	.5, 1.2	0.7	-11.3	-	92.9	92.3, 93.5	93.4	92.8	83.7
Donnie Foster	W	L	0.5	.3, .7	1.9	2.0	-	0.8	.6, 1.1	2.7	2.5	1.8
School Superintendent												
Otha Thornton	B	D	99.0	98.6, 99.3	99.4	110.4	-	4.4	3.8, 5.0	4.3	4.0	13.8
Richard Woods	W	R	1.0	.7, 1.4	0.5	-10.4	-	95.6	95.0, 96.2	95.7	96.0	86.2

APPENDIX A5
Central Georgia Region
Map Area 5
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2022 General												
US Senate												
Raphael Warnock	B	D	96.9	92.5, 98.8	99.2	108.1	-	11.2	9.6, 15.7	9.4	3.8	8.8
Herschel Walker	B	R	2.6	.7, 13.8	0.8	-8.8	-	88.4	83.9, 89.9	89.1	94.9	90.1
Chase Oliver	W	L	0.5	.3, .8	0.9	0.8	-	0.5	.3, .6	1.7	1.3	1.1
Governor												
Stacey Abrams	B	D	92.9	63.6, 98.9	99.1	107.1	-	9.5	5.2, 32.6	6.8	1.1	7.1
Brian Kemp	W	R	6.8	.7, 36.0	0.9	-7.6	-	90.2	67.2, 94.5	92.8	98.4	92.5
Shane Hazel	W	L	0.3	.2, .5	0.5	0.5	-	0.2	.1, .3	0.5	0.5	0.4
Commissioner of Agriculture												
Nakita Hemingway	B	D	97.6	85.6, 99.0	98.1	105.4	-	6.4	5.2, 15.0	6.2	1.2	7.4
Tyler Harper	W	R	1.8	.5, 13.7	2.0	-7.4	-	93.2	84.5, 94.4	92.2	97.5	91.5
David Raudabaugh	W	L	0.6	.4, .9	2.0	1.9	-	0.4	.3, .6	1.3	1.3	1.1
Commissioner of Insurance												
Janice Laws Robinson	B	D	98.5	97.7, 99.1	98.2	106.8	-	5.5	4.9, 6.2	7.0	1.5	7.7
John King	W	R	1.5	.9, 2.3	1.9	-6.8	-	94.5	93.8, 95.1	93.0	98.5	92.3
Commissioner of Labor												
William Boddie	B	D	97.4	84.7, 98.8	98.7	105.7	-	7.3	6.0, 16.3	6.8	1.5	7.4
Bruce Thompson	W	R	2.0	.6, 14.6	1.0	-7.9	-	92.2	83.2, 93.5	91.4	97.4	91.7
Emily Anderson	W	L	0.7	.4, 1.0	2.2	2.1	-	0.5	.3, .7	1.4	1.2	0.9
School Superintendent												
Alisha Thomas Searcy	B	D	98.3	97.4, 99.0	99.0	106.4	-	5.2	4.6, 6.0	6.7	1.4	7.7
Richard Woods	W	R	1.7	1.0, 2.6	0.9	-6.4	-	94.8	94.0, 95.4	93.3	98.7	92.3

APPENDIX A5
Central Georgia Region
Map Area 5
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2021 Runoffs												
US Special Senate												
Raphael Warnock	B	D	98.7	97.9, 99.2	99.2	108.0	-	10.3	9.6, 11.1	10.3	4.7	9.5
Kelly Loeffler	W	R	1.3	.8, 2.1	0.8	-8.1	-	89.7	88.9, 90.4	89.6	95.3	90.5
US Senate												
Jon Ossoff	W	D	98.7	97.9, 99.2	99.2	107.8	-	9.9	9.2, 10.6	9.9	4.7	9.6
David Perdue	W	R	1.3	.8, 2.1	0.8	-7.8	-	90.1	89.4, 90.8	90.2	95.3	90.4
Public Service Commission 4												
Daniel Blackman	B	D	98.8	98.2, 99.3	99.1	107.2	-	8.0	7.4, 8.7	8.5	3.6	8.9
Lauren McDonald Jr	W	R	1.2	.7, 1.8	0.8	-7.2	-	92.0	91.3, 92.6	91.5	96.3	91.1
2020 General												
US Senate												
Jon Ossoff	W	D	97.7	96.9, 98.3	98.7	103.0	-	9.3	8.5, 10.2	7.9	4.4	9.9
David Perdue	W	R	1.4	.9, 2.2	0.8	-5.3	-	90.1	89.2, 90.9	90.3	94.1	88.6
Shane Hazel	W	L	0.9	.6, 1.2	2.7	2.2	-	0.6	.4, .8	1.7	1.6	1.4
US Special Senate												
Raphael Warnock	B	D	68.2	66.2, 70.2	74.3	73.5	-	7.2	5.3, 9.3	3.4	3.1	6.8
Doug Collins	W	R	0.7	.4, 1.2	0.8	-3.5	-	36.9	36.4, 37.4	37.2	39.5	36.1
Kelly Loeffler	W	R	0.9	.5, 1.4	0.8	-3.9	-	47.3	46.7, 47.8	47.6	50.1	48.2
Others			30.2	28.1, 32.2	35.2	33.9	-	8.6	6.5, 10.5	6.9	7.2	9.0
Public Service Commission 1												
Robert Bryant	B	D	95.5	70.5, 98.5	98.8	103.8	-	10.4	7.8, 28.8	6.4	3.1	9.1
Jason Shaw	W	R	3.7	.7, 28.7	0.8	-6.5	-	88.9	70.5, 91.6	90.7	94.8	88.8
Elizabeth Melton	W	L	0.8	.6, 1.2	2.9	2.8	-	0.7	.4, .9	2.4	2.1	2.2

APPENDIX A5
Central Georgia Region
Map Area 5
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Public Service Commission 4												
Daniel Blackman	B	D	95.7	70.7, 98.6	98.8	104.3	-	10.5	8.1, 29.6	6.9	3.3	9.2
Lauren McDonald Jr	W	R	3.7	.8, 28.5	0.8	-6.7	-	88.8	67.7, 91.3	90.5	94.8	88.8
Nathan Wilson	W	L	0.7	.4, 1.0	2.5	2.2	-	0.7	.5, .9	2.4	2.0	2.0
2018 General												
Governor												
Stacey Abrams	B	D	98.9	98.4, 99.2	99.1	106.1	95.7	7.7	7.2, 8.3	8.2	3.1	8.7
Brian Kemp	W	R	0.8	.5, 1.2	0.9	-6.4	4.0	92.0	91.5, 92.5	91.2	96.4	90.8
Ted Metz	W	L	0.3	.2, .5	0.3	0.3	0.3	0.3	.2, .4	0.5	0.6	0.4
Commissioner of Insurance												
Janice Laws	B	D	98.5	97.9, 99.0	97.1	103.0	94.0	7.7	7.1, 8.4	6.9	3.3	9.0
Jim Beck	W	R	1.0	.6, 1.5	1.0	-4.7	4.9	91.8	91.1, 92.3	91.4	95.2	89.6
Donnie Foster	W	L	0.5	.4, .8	1.8	1.6	1.1	0.5	.4, .7	1.6	1.5	1.4
School Superintendent												
Otha Thornton	B	D	98.7	98.0, 99.2	98.8	103.8	94.6	5.8	5.3, 6.5	6.6	3.1	9.1
Richard Woods	W	R	1.3	.8, 2.0	1.1	-3.8	5.4	94.2	93.5, 94.7	93.3	96.7	90.9

APPENDIX A6
Southwest Georgia Region
Map Area 6
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2022 General												
US Senate												
Raphael Warnock	B	D	97.5	94.0, 98.9	99.1	104.5	96.5	6.7	5.5, 9.8	5.5	2.4	9.8
Herschel Walker	B	R	2.0	.6, 5.2	0.6	-5.3	2.9	92.9	94.9, 94.1	92.8	96.2	88.9
Chase Oliver	W	L	0.6	.3, .8	1.0	0.8	0.6	0.4	.3, .6	1.7	1.4	1.3
Governor												
Stacey Abrams	B	D	95.6	68.5, 99.0	99.2	103.8	95.5	5.2	2.6, 22.3	3.2	-0.2	7.6
Brian Kemp	W	R	4.1	.6, 31.1	0.9	-4.1	4.2	94.6	77.4, 97.2	96.4	99.8	91.9
Shane Hazel	W	L	0.4	.2, .5	0.5	0.3	0.3	0.2	.1, .3	0.5	0.5	0.5
Commissioner of Agriculture												
Nakita Hemingway	B	D	97.4	90.3, 98.5	99.1	101.8	94.1	3.4	2.2, 8.5	2.4	-0.5	7.5
Tyler Harper	W	R	2.0	.9, 9.0	0.8	-3.5	4.2	96.3	91.1, 97.5	96.6	99.4	91.5
David Raudabaugh	W	L	0.6	.4, .9	1.9	1.7	1.7	0.3	.2, .4	0.8	1.1	1.1
Commissioner of Insurance												
Janice Laws Robinson	B	D	98.4	97.6, 99.0	99.2	103.1	95.1	2.8	2.2, 3.6	3.1	0.2	8.1
John King	W	R	1.6	1.0, 2.4	0.8	-3.2	4.9	97.2	96.4, 97.8	96.9	99.9	91.9
Commissioner of Labor												
William Boddie	B	D	97.5	92.5, 98.6	99.0	102.0	94.2	3.9	2.8, 7.4	3.0	0.2	8.1
Bruce Thompson	W	R	1.8	.7, 6.8	0.8	-3.9	3.9	95.7	92.2, 96.8	95.6	98.6	90.8
Emily Anderson	W	L	0.7	.5, 1.0	2.0	1.9	1.9	0.3	.2, .5	1.2	1.2	1.1
School Superintendent												
Alisha Thomas Searcy	B	D	98.5	97.7, 99.1	98.8	103.0	95.2	2.3	1.8, 2.9	2.9	0.0	7.8
Richard Woods	W	R	1.5	.9, 2.3	1.0	-3.0	4.8	97.7	97.1, 98.2	97.0	100.0	92.2

APPENDIX A6
Southwest Georgia Region
Map Area 6
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2021 Runoffs												
US Special Senate												
Raphael Warnock	B	D	98.9	98.3, 99.4	99.3	105.7	97.3	5.5	5.0, 6.1	6.2	3.1	10.3
Kelly Loeffler	W	R	1.1	.6, 1.7	0.9	-5.7	2.7	94.5	93.9, 95.0	93.9	96.9	89.7
US Senate												
Jon Ossoff	W	D	98.9	98.2, 99.4	99.4	105.4	97.1	5.6	5.0, 6.3	6.2	3.0	10.2
David Perdue	W	R	1.1	.6, 1.8	0.6	-5.4	2.9	94.4	93.7, 95.0	93.8	97.0	89.8
Public Service Commission 4												
Daniel Blackman	B	D	98.8	98.1, 99.3	99.3	104.7	96.7	4.4	3.9, 5.2	5.2	2.2	9.4
Lauren McDonald Jr	W	R	1.2	.7, 1.9	0.7	-4.8	3.3	95.6	94.9, 96.1	94.8	97.8	90.6
2020 General												
US Senate												
Jon Ossoff	W	D	97.3	96.4, 98.1	99.0	100.9	93.4	6.1	5.1, 7.2	4.1	2.9	10.7
David Perdue	W	R	2.0	1.2, 2.9	0.8	-2.7	5.3	93.5	92.3, 94.4	94.3	95.6	87.8
Shane Hazel	W	L	0.7	.5, 1.1	1.7	1.7	1.3	0.4	.3, .6	1.5	1.4	1.5
US Special Senate												
Raphael Warnock	B	D	63.5	61.8, 65.3	69.3	67.0	67.3	2.1	1.1, 3.3	0.8	-0.5	5.6
Doug Collins	W	R	1.0	.6, 1.6	0.8	-2.1	1.3	39.9	39.3, 40.4	40.6	42.2	38.3
Kelly Loeffler	W	R	1.2	.7, 1.7	0.4	-2.6	1.9	46.7	46.0, 47.3	47.3	47.8	44.7
Others			34.3	32.5, 36.1	39.7	37.7	29.6	11.3	10.0, 12.5	9.1	10.5	11.4
Public Service Commission 1												
Robert Bryant	B	D	95.6	73.9, 98.1	98.6	100.7	93.2	6.6	4.3, 23.1	3.0	1.8	9.7
Jason Shaw	W	R	3.4	.9, 25.1	0.8	-3.3	4.8	92.9	76.4, 95.2	94.8	96.2	88.3
Elizabeth Melton	W	L	1.0	.7, 1.4	2.9	2.7	2.0	0.5	.3, .7	1.6	1.9	2.0

APPENDIX A6
Southwest Georgia Region
Map Area 6
General and Runoff Elections

			Estimates of Voting Patterns by Race in Recent Statewide Elections									
			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Public Service Commission 4												
Daniel Blackman	B	D	95.4	69.5, 98.6	99.1	101.6	93.5	7.3	4.7, 24.9	3.3	2.2	10.1
Lauren McDonald Jr	W	R	3.8	.8, 29.7	0.7	-3.8	4.4	92.3	74.7, 94.9	94.4	96.1	88.3
Nathan Wilson	W	L	0.7	.5, 1.1	2.5	2.1	2.1	0.4	.3, .6	1.9	1.7	1.7
2018 General												
Governor												
Stacey Abrams	B	D	98.9	98.5, 99.2	99.3	104.3	97.2	3.8	3.4, 4.3	4.9	1.7	9.3
Brian Kemp	W	R	0.8	.5, 1.2	0.6	-4.6	2.6	95.9	95.4, 96.4	94.8	97.8	90.1
Ted Metz	W	L	0.3	.2, .5	0.0	0.3	0.2	0.3	.2, .4	0.6	0.5	0.5
Commissioner of Insurance												
Janice Laws	B	D	98.0	97.5, 98.5	98.7	101.5	95.2	4.5	3.9, 5.1	3.2	1.9	9.5
Jim Beck	W	R	1.1	.7, 1.6	0.9	-3.4	3.3	95.0	94.4, 95.6	94.6	96.9	89.2
Donnie Foster	W	L	0.9	.6, 1.2	1.7	1.9	1.5	0.5	.3, .7	1.5	1.2	1.3
School Superintendent												
Otha Thornton	B	D	98.3	97.7, 98.8	98.9	101.8	95.6	2.4	1.9, 3.0	2.8	1.3	8.8
Richard Woods	W	R	1.7	1.2, 2.3	1.1	-1.8	4.4	97.6	97.0, 98.1	96.9	98.7	91.2

APPENDIX A7
Macon Metro Region
Map Area 7
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2022 General												
US Senate												
Raphael Warnock	B	D	96.3	92.7, 98.8	99.2	106.4	-	14.9	12.5, 19.6	10.7	8.5	-
Herschel Walker	B	R	3.1	.7, 9.7	0.8	-7.0	-	84.6	78.7, 87.1	87.0	89.3	-
Chase Oliver	W	L	0.6	.3, 1.0	1.0	0.5	-	0.5	.2, .8	2.4	2.2	-
Governor												
Stacey Abrams	B	D	89.6	57.7, 97.9	98.9	105.8	-	15.7	7.4, 39.0	7.2	3.9	-
Brian Kemp	W	R	10.0	1.7, 41.9	0.9	-6.2	-	84.1	60.7, 92.4	92.3	95.1	-
Shane Hazel	W	L	0.3	.2, .6	0.6	0.3	-	0.2	.1, .4	0.7	0.9	-
Commissioner of Agriculture												
Nakita Hemingway	B	D	96.3	87.9, 98.6	99.1	104.8	-	9.3	6.8, 18.3	6.7	3.6	-
Tyler Harper	W	R	3.1	.8, 11.5	0.8	-6.6	-	90.2	83.2, 92.7	91.8	94.5	-
David Raudabaugh	W	L	0.6	.3, 1.1	1.9	1.7	-	0.5	.2, .8	1.9	1.9	-
Commissioner of Insurance												
Janice Laws Robinson	B	D	97.9	96.0, 99.1	99.0	106.0	-	7.1	5.8, 9.0	7.3	4.4	-
John King	W	R	2.1	.9, 4.0	0.9	-5.9	-	92.9	91.0, 94.2	92.8	95.6	-
Commissioner of Labor												
William Boddie	B	D	96.5	84.0, 98.5	99.1	104.0	-	10.2	7.9, 22.8	7.1	4.6	-
Bruce Thompson	W	R	2.7	.8, 15.2	1.0	-6.4	-	89.3	76.5, 91.6	90.9	93.4	-
Emily Anderson	W	L	0.8	.4, 1.4	3.7	2.2	-	0.5	.2, .9	2.1	1.9	-
School Superintendent												
Alisha Thomas Searcy	B	D	98.0	96.3, 99.1	99.1	105.9	-	6.6	5.4, 8.2	7.0	3.9	-
Richard Woods	W	R	2.0	.9, 3.7	1.0	-5.9	-	93.4	91.8, 94.6	92.9	95.9	-

APPENDIX A7
Macon Metro Region
Map Area 7
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2021 Runoffs												
US Special Senate												
Raphael Warnock	B	D	98.0	96.4, 99.1	99.1	107.7	-	12.9	11.7, 14.7	11.3	8.2	-
Kelly Loeffler	W	R	2.0	.9, 3.6	0.9	-7.7	-	87.1	85.3, 88.3	88.7	91.8	-
US Senate												
Jon Ossoff	W	D	98.1	96.5, 99.1	99.1	107.4	-	12.4	11.2, 14.0	11.0	8.0	-
David Perdue	W	R	1.9	.9, 3.5	0.9	-7.5	-	87.6	86.0, 88.8	89.1	92.1	-
Public Service Commission 4												
Daniel Blackman	B	D	98.1	96.6, 99.1	99.1	107.1	-	10.8	9.6, 12.3	9.5	6.6	-
Lauren McDonald Jr	W	R	1.9	.9, 3.4	0.9	-7.1	-	89.2	87.7, 90.4	90.6	93.3	-
2020 General												
US Senate												
Jon Ossoff	W	D	97.5	96.0, 98.5	99.2	102.6	-	12.7	10.7, 15.2	8.7	7.5	-
David Perdue	W	R	1.6	.8, 2.9	1.4	-5.0	-	86.8	84.2, 88.7	89.3	90.6	-
Shane Hazel	W	L	0.9	.5, 1.4	3.0	2.5	-	0.6	.3, .9	2.4	2.0	-
US Special Senate												
Raphael Warnock	B	D	70.2	66.9, 73.4	74.4	74.5	-	13.0	9.4, 16.1	5.5	5.8	-
Doug Collins	W	R	1.1	.6, 2.0	1.0	-3.2	-	33.6	32.3, 34.6	34.7	36.4	-
Kelly Loeffler	W	R	1.1	.5, 2.0	1.2	-3.8	-	47.4	45.9, 48.5	48.2	50.0	-
Others			27.5	24.4, 30.8	33.8	32.5	-	5.9	3.0, 9.6	7.2	7.8	-
Public Service Commission 1												
Robert Bryant	B	D	96.3	78.3, 98.5	99.1	103.4	-	12.2	9.3, 29.4	6.3	4.9	-
Jason Shaw	W	R	2.8	.8, 20.6	1.0	-6.2	-	87.1	70.0, 90.0	90.3	91.9	-
Elizabeth Melton	W	L	0.9	.5, 1.4	2.8	2.9	-	0.7	.4, 1.1	3.4	3.2	-

APPENDIX A7
Macon Metro Region
Map Area 7
General and Runoff Elections

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Public Service Commission 4												
Daniel Blackman	B	D	94.8	73.6, 98.4	99.0	104.1	-	14.3	10.3, 33.9	6.8	5.6	-
Lauren McDonald Jr	W	R	4.5	1.7, 25.7	0.6	-6.4	-	85.1	65.4, 89.1	89.9	91.5	-
Nathan Wilson	W	L	0.7	.4, 1.1	2.4	2.2	-	0.6	.3, .9	3.4	2.8	-
2018 General												
Governor												
Stacey Abrams	B	D	98.2	97.1, 99.0	99.2	105.9	95.7	10.1	9.1, 11.4	8.2	5.9	-
Brian Kemp	W	R	1.4	.7, 2.5	0.9	-6.2	4.0	89.6	88.3, 90.6	90.6	93.0	-
Ted Metz	W	L	0.4	.2, .6	0.3	0.3	0.3	0.3	.2, .5	0.8	1.1	-
Commissioner of Insurance												
Janice Laws	B	D	97.9	96.7, 98.7	99.0	103.2	94.0	10.3	9.0, 11.8	6.8	5.5	-
Jim Beck	W	R	1.5	.7, 2.5	0.9	-4.7	4.9	89.2	87.7, 90.4	90.5	92.2	-
Donnie Foster	W	L	0.7	.4, 1.1	1.5	1.5	1.1	0.5	.3, .8	2.7	2.4	-
School Superintendent												
Otha Thornton	B	D	98.1	96.8, 99.0	99.1	104.3	94.6	7.3	6.2, 8.7	6.7	4.9	-
Richard Woods	W	R	1.9	1.0, 3.2	0.9	-4.4	5.4	92.7	91.3, 93.8	93.3	95.0	-

APPENDIX B

APPENDIX B1
Recent State Senate Contests in Areas of Interest

Estimates of Voting Patterns by Race in Recent State Legislative Elections

				Black Voters					White Voters				
	Race	Party	Vote	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
General Elections 2022													
State Senate 16													
Pingke Dubignon	B	D	31.8	95.8	91.7, 98.3	98.8	104.4	-	6.0	4.6, 8.0	6.0	2.2	-
Marty Harbin	W	R	68.2	4.2	1.7, 8.3	0.8	-4.5	-	94.0	92.0, 95.4	94.0	97.8	-
State Senate 17													
Kacy Morgan	B	D	38.4	97.6	95.1, 99.1	99.7	116.7	-	3.4	2.3, 5.2	3.9	1.1	-
Brian Strickland	W	R	61.6	2.4	.9, 4.9	0.3	-16.7	-	96.6	94.8, 97.7	96.4	99.0	-
State Senate 22													
Harold Jones II	B	D	70.4	98.0	96.4, 99.1	99.1	105.0	-	22.2	18.8, 26.3	18.2	20.5	-
Andrew Danielson	W	R	29.6	2.0	.9, 3.6	0.1	-5.0	-	77.8	73.7, 81.2	81.7	79.7	-
State Senate 25													
Valerie Rodgers	B	D	38.3	96.8	93.4, 98.9	95.7	113.0	-	7.7	5.9, 10.1	7.4	2.5	12.1
Rick Williams	W	R	61.7	3.2	1.1, 6.6	4.3	-13.1	-	92.3	89.9, 94.1	92.5	97.7	87.9
State Senate 34													
Valencia Seay	B	D	83.7	98.8	97.9, 99.4	100.0	107.7	-	11.1	6.1, 18.2	8.6	7.7	-
Tommy Smith	W	R	16.3	1.2	.6, 2.1	0.0	-7.7	-	88.9	81.8, 93.9	91.2	92.3	-
State Senate 41													
Kim Jackson	B	D	82.2	98.4	97.0, 99.3	99.6	100.6	-	55.2	49.9, 61.9	50.2	54.5	-
Jayre Jones	W	R	17.9	1.6	.7, 3.0	0.1	-0.6	-	44.8	38.1, 50.1	49.9	45.5	-
State Senate 43													
Tonya Anderson	B	D	75.1	99.0	98.0, 99.6	99.5	110.4	-	7.1	4.3, 11.4	5.5	6.2	-
Melanie Williams	B	R	25.0	1.0	.4, 2.0	0.7	-10.3	-	92.9	88.6, 95.7	94.8	93.9	-
General Elections 2020													
State Senate 16													
Cinquez Jester	B	D	31.8	96.8	93.8, 98.6	99.0	102.9	-	6.2	5.3, 7.5	6.0	4.3	-
Marty Harbin	W	R	68.2	3.2	1.4, 6.2	1.1	-3.2	-	93.8	92.5, 94.7	93.9	95.7	-
State Senate 20													
Julius Johnson	B	D	35.0	96.7	93.1, 98.9	98.6	107.0	-	2.5	1.3, 4.4	2.6	1.4	-
Larry Walker	W	R	65.0	3.3	1.1, 6.9	1.1	-7.2	-	97.5	95.5, 98.7	97.8	98.6	-

APPENDIX B1
Recent State Senate Contests in Areas of Interest

Estimates of Voting Patterns by Race in Recent State Legislative Elections

				Black Voters					White Voters				
	Race	Party	Vote	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
State Senate 23													
Ceretta Smith	B	D	40.7	98.0	96.6, 99.0	98.7	101.3	-	4.3	3.4, 5.5	4.8	2.7	8.4
Max Burns	W	R	59.3	2.0	1.0, 3.4	1.5	-1.4	-	95.7	94.5, 96.5	95.0	97.3	91.6
State Senate 25													
Veronica Brinson	B	D	32.3	95.7	90.6, 98.5	98.9	110.9	-	8.6	7.0, 11.0	7.5	3.4	13.1
Burt Jones	W	R	67.7	4.3	1.5, 9.4	0.7	-10.9	-	91.4	89.0, 93.1	92.5	96.5	86.9
State Senate 30													
Monteria Edwards	B	D	32.5	94.9	87.6, 98.6	99.2	132.0	-	6.7	4.9, 9.7	5.3	2.9	-
Mike Dugan	W	R	67.5	5.1	1.4, 12.4	0.0	-32.2	-	93.3	90.3, 95.1	94.6	97.2	-
General Elections 2018													
State Senate 17													
Phyllis Hatcher	B	D	45.5	97.1	94.1, 98.9	99.1	115.5	-	3.4	1.8, 5.8	2.9	1.1	-
Brian Strickland	W	R	54.5	2.9	1.1, 5.9	1.0	-15.5	-	96.6	94.2, 98.2	97.2	98.8	-
State Senate 34													
Valencia Seay	B	D	82.9	99.3	98.7, 99.7	99.5	107.5	-	8.5	4.5, 13.9	6.5	7.2	-
Tommy Smith	W	R	17.1	0.7	.3, 1.3	0.4	-7.6	-	91.5	86.1, 95.5	90.1	92.8	-
General Elections 2016													
State Senate 17													
Bill Blackmon	B	D	40.4	97.0	93.7, 99.0	99.4	116.6	-	3.3	1.9, 5.6	3.0	2.0	-
Richard Jeffares	W	R	59.6	3.0	1.0, 6.3	1.1	-16.6	-	96.7	94.4, 98.1	96.9	98.0	-
State Senate 43													
Tonya Anderson	B	D	70.4	98.8	97.6, 99.6	99.2	104.8	96.0	5.8	2.9, 10.1	3.2	2.3	-
Janice Van Ness	W	R	29.6	1.2	.4, 2.4	0.8	-4.8	4.0	94.2	89.9, 97.1	96.8	97.6	-

APPENDIX B2
Recent State House Contests in Areas of Interest

Estimates of Voting Patterns by Race in Recent State Legislative Elections

				Black Voters					White Voters				
	Race	Party	Vote	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
General Elections 2022													
State House 74													
William Harris	W	D	36.3	89.0	75.0, 96.6	96.7	103.1	-	7.7	3.3, 16.2	4.5	3.1	-
Karen Mathiak	W	R	63.7	11.0	3.4, 25.0	3.3	-3.0	-	92.3	83.8, 96.7	95.5	97.1	-
State House 75													
Mike Glanton	B	D	88.6	98.3	95.8, 99.7	99.9	108.3	-	33.2	8.7, 71.3	9.4	11.8	-
Della Ashley	W	R	11.5	1.7	.3, 4.2	0.1	-8.1	-	66.8	28.7, 91.3	89.8	88.4	-
State House 116													
El-Mahdi Holly	B	D	73.3	95.2	84.2, 99.6	99.4	115.3	-	30.5	10.1, 48.2	11.2	8.8	-
Bruce Bennington	W	R	26.7	4.8	.4, 15.8	1.8	-15.5	-	69.5	51.8, 89.8	89.2	91.2	-
State House 117													
Demetrius Rucker	B	D	49.3	88.9	71.6, 98.3	97.7	113.7	-	14.7	4.4, 31.1	5.7	3.0	-
Lauren Daniel	W	R	50.7	11.2	1.7, 28.4	1.3	-13.5	-	85.3	68.9, 95.6	94.5	97.0	-
State House 118													
Sharonda Bell	B	D	25.3	82.1	50.4, 97.6	97.6	104.7	-	8.2	3.2, 17.3	3.7	1.8	-
Clint Crowe	W	R	74.7	17.9	2.4, 49.6	1.5	-4.7	-	91.8	82.7, 96.8	96.3	98.0	-
State House 133													
Hoganne Harrison Walton	B	D	42.5	93.9	85.2, 98.7	99.1	110.6	-	13.2	9.2, 18.8	7.9	6.2	-
Kenneth Vance	W	R	57.5	6.1	1.3, 14.8	1.4	-10.6	-	86.8	81.2, 90.8	91.9	93.6	-
State House 134													
Anthony Dickson	B	D	33.5	92.4	84.8, 97.2	89.2	108.5	-	6.6	4.1, 10.4	6.2	-2.3	-
David Knight	W	R	66.5	7.6	2.8, 15.2	10.3	-8.5	-	93.4	89.6, 95.9	93.7	102.3	-
State House 144													
Nettie Conner	B	D	34.3	89.7	72.0, 98.3	99.3	120.0	-	11.2	6.7, 18.8	6.7	0.0	-
Dale Washburn	W	R	65.7	10.3	1.8, 28.0	1.2	-19.7	-	88.8	81.2, 93.3	93.9	100.0	-
State House 151													
Joyce Barlow	B	D	45.1	97.5	94.3, 99.3	98.5	108.6	-	4.1	2.3, 7.0	7.9	1.3	-
Mike Cheokas	W	R	54.9	2.5	.7, 5.7	1.3	-8.8	-	95.9	93.0, 97.7	91.9	99.2	-

APPENDIX B2
Recent State House Contests in Areas of Interest

Estimates of Voting Patterns by Race in Recent State Legislative Elections

				Black Voters					White Voters				
	Race	Party	Vote	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
State House 153													
David Sampson	B	D	65.1	96.9	91.4, 99.5	98.7	99.5	93.9	16.1	8.4, 26.4	7.5	8.1	-
Tracy Taylor	B	R	34.9	3.1	.5, 8.6	1.1	0.5	6.1	83.9	73.6, 91.6	92.3	92.0	-
State House 154													
John Hayes	B	D	43.6	87.2	83.7, 90.2	89.4	89.6	88.3	3.0	1.3, 5.6	1.7	-1.2	-
Gerald Greene	W	R	56.5	12.8	9.8, 16.3	10.6	10.3	11.7	97.0	94.3, 98.7	98.3	101.2	-
State House 169													
Mickey Brockington	B	D	25.4	88.0	68.1, 97.8	99.1	101.8	-	7.0	4.1, 12.4	5.4	0.0	-
Clay Pirkle	W	R	74.6	12.0	2.2, 31.9	0.8	-1.8	-	93.0	87.6, 95.9	94.9	100.0	-
State House 173													
Keith Jenkins Sr	B	D	36.0	97.3	93.0, 99.4	99.2	103.6	-	5.4	3.2, 8.7	4.6	1.7	-
Darlene Taylor	W	R	64.0	2.7	.6, 7.0	0.4	-3.8	-	94.6	91.3, 96.8	95.4	98.3	-
General Elections 2020													
State House 33													
Kerry Dornell Hamm	B	D	26.1	90.0	77.6, 97.1	-	91.0	-	7.2	4.9, 10.8	6.7	5.4	14.4
Rob Leverett	W	R	73.9	10.0	2.9, 22.4	-	9.4	-	92.8	89.2, 95.1	93.3	94.6	85.6
State House 63													
Debra Bazemore	B	D	78.8	98.1	95.7, 99.5	99.4	101.0	-	23.4	15.3, 33.4	16.1	17.4	-
David Callahan	W	R	21.2	1.9	.5, 4.3	0.6	-1.2	-	76.6	66.6, 84.7	83.0	82.7	-
State House 109													
Regina Lewis-Ward	B	D	51.8	92.8	81.1, 98.5	97.6	118.2	-	9.9	2.5, 24.1	4.3	2.7	-
Dale Rutledge	W	R	48.2	7.2	1.5, 18.9	0.9	-18.1	-	90.1	75.9, 97.5	95.6	97.0	-
State House 110													
Ebony Carter	B	D	44.2	89.8	76.5, 96.5	95.5	116.4	-	8.0	1.4, 19.8	3.0	-2.9	-
Clint Crowe	W	R	55.8	10.2	3.5, 23.5	4.4	-16.5	-	92.0	80.2, 98.6	97.0	103.1	-
State House 129													
Sharonda Bell	B	D	26.3	77.3	57.6, 92.0	98.1	92.7	-	11.1	7.6, 15.6	3.9	1.3	-
Susan Holmes	W	R	69.6	15.6	2.4, 34.2	14.0	9.0	-	87.9	83.5, 91.3	92.6	94.1	-
Joe Reed	W	I	4.2	7.1	2.3, 13.2	1.2	-2.8	-	0.9	.2, 2.1	2.4	4.4	-

APPENDIX B2
Recent State House Contests in Areas of Interest

Estimates of Voting Patterns by Race in Recent State Legislative Elections

				Black Voters					White Voters				
	Race	Party	Vote	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
State House 130													
Sheila Henley	B	D	41.6	95.7	88.3, 99.3	99.3	106.5	-	8.4	4.9, 14.1	5.7	3.2	-
David Knight	W	R	58.4	4.3	.7, 11.7	0.7	-6.5	-	91.6	85.9, 95.1	94.4	96.7	-
State House 144													
Mary Whipple-Lue	B	D	30.9	93.7	86.8, 98.2	97.6	98.5	-	2.4	.7, 5.8	1.7	0.2	-
Danny Mathis	W	R	69.1	6.3	1.8, 13.2	1.3	1.5	-	97.6	94.2, 99.3	98.4	99.7	-
State House 145													
Quentin Howell	B	D	43.8	91.3	79.7, 98.2	97.6	109.9	-	17.0	11.7, 24.1	9.8	8.4	-
Ricky Williams	W	R	56.2	8.7	1.8, 20.3	1.5	-9.9	-	83.0	75.9, 88.3	90.0	91.8	-
State House 151													
Joyce Barlow	B	D	48.2	91.2	87.1, 94.4	90.2	89.8	-	4.2	1.9, 7.9	3.7	3.6	-
Gerald Greene	W	R	51.8	8.8	5.6, 12.9	9.7	10.2	-	95.8	92.1, 98.2	96.2	96.3	-
State House 155													
Lethia Jones Kittrell	B	D	27.8	89.4	69.2, 98.3	98.7	100.6	-	6.4	2.7, 13.3	3.1	2.1	-
Clay Pirkle	W	R	72.2	10.6	1.7, 30.8	1.8	-0.2	-	93.6	86.7, 97.3	96.9	97.9	-
State House 170													
Andre Oliver	B	D	24.2	86.7	74.9, 94.4	94.5	94.4	-	5.3	2.6, 9.4	2.6	2.9	11.0
Penny Houston	W	R	75.8	13.3	5.6, 25.1	5.5	5.5	-	94.7	90.6, 97.4	97.4	97.1	89.0
State House 173													
Booker Gainor	B	D	40.6	94.9	88.9, 98.2	97.0	103.0	-	10.9	7.8, 15.2	8.2	5.6	-
Darlene Taylor	W	R	59.4	5.1	1.8, 11.1	3.1	-3.1	-	89.1	84.8, 92.2	91.9	94.4	-
General Elections 2018													
State House 109													
Regina Lewis-Ward	B	D	48.5	92.4	79.7, 98.9	-	116.6	-	10.3	3.6, 22.1	5.0	1.3	-
Dale Rutledge	W	R	51.5	7.6	1.1, 20.3	-	-16.6	-	89.7	77.9, 96.4	95.2	98.5	-
State House 111													
El-Mahdi Holly	B	D	56.6	94.4	83.9, 98.8	96.8	123.8	-	9.4	2.2, 24.5	7.0	-8.0	-
Geoff Cauble	W	R	43.4	5.6	1.2, 16.0	3.2	-23.6	-	90.6	75.5, 97.8	92.9	107.9	-

APPENDIX B2
Recent State House Contests in Areas of Interest

Estimates of Voting Patterns by Race in Recent State Legislative Elections

				Black Voters					White Voters				
	Race	Party	Vote	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
State House 126													
Gloria Frazier	B	D	69.5	98.9	97.4, 99.7	98.9	107.9	-	4.6	2.3, 8.5	4.8	2.4	-
William Harris	W	R	30.5	1.1	.3, 2.6	0.8	-7.9	-	95.4	91.5, 97.7	95.1	97.6	-
State House 128													
Mack Jackson	B	D	57.0	97.4	93.1, 99.4	98.7	101.0	-	16.1	12.9, 20.7	14.9	9.6	8.8
Jackson Williams	W	R	43.0	2.6	.6, 6.9	1.0	-1.0	-	83.9	79.3, 87.1	85.0	90.5	91.2
State House 151													
Joyce Barlow	B	D	46.5	90.6	87.0, 93.4	91.2	88.8	-	3.3	1.5, 6.2	2.4	2.6	-
Gerald Greene	W	R	53.5	9.4	6.6, 13.0	8.8	11.2	-	96.7	93.8, 98.5	97.7	97.4	-
State House 152													
Marcus Batten	B	D	26.0	94.5	86.8, 98.5	98.7	102.7	-	4.0	2.0, 7.1	3.7	1.2	8.9
Ed Rynders	W	R	74.0	5.5	1.5, 13.2	0.7	-2.7	-	96.0	92.9, 98.0	96.2	98.9	91.1
State House 175													
Treva Gear	B	D	28.5	80.2	63.3, 87.3	74.9	93.0	-	6.5	3.1, 13.8	5.3	4.7	-
John Lahood	W	R	71.5	19.8	12.7, 36.7	25.1	7.4	-	93.5	86.2, 96.5	94.4	95.1	-
General Elections 2016													
State House 73													
Rahim Talley	B	D	35.5	93.1	83.9, 98.1	98.4	105.2	-	3.9	1.1, 9.4	2.2	1.5	-
Karen Mathiak	W	R	64.5	6.9	1.9, 16.1	1.6	-5.2	-	96.1	90.6, 98.9	97.7	98.5	-
State House 111													
Darryl Payton	B	D	48.3	91.0	76.3, 98.1	99.4	120.7	-	8.9	2.1, 23.1	5.7	-4.2	-
Brian Strickland	W	R	51.7	9.0	1.9, 23.7	0.8	-20.4	-	91.1	76.9, 97.9	94.4	104.5	-
State House 144													
Joyce Denson	B	D	32.3	93.5	84.4, 98.3	96.0	96.1	-	6.0	3.0, 10.4	4.1	4.4	13.1
James Bubber Epps	W	R	67.7	6.5	1.7, 15.6	4.1	4.0	-	94.0	89.6, 97.0	95.7	95.5	86.9
State House 145													
Floyd Griffin	B	D	43.4	97.3	95.1, 98.8	99.3	107.9	-	10.9	9.5, 12.7	8.7	6.6	14.6
Ricky Williams	W	R	56.6	2.7	1.2, 4.9	1.0	-8.1	-	89.1	87.3, 90.5	91.3	93.4	85.4

APPENDIX B2
Recent State House Contests in Areas of Interest

Estimates of Voting Patterns by Race in Recent State Legislative Elections

				Black Voters					White Voters				
	Race	Party	Vote	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
State House 151													
Kenneth Zachary	B	I	37.9	71.9	67.4, 75.1	76.0	72.7	-	4.1	1.5, 8.3	1.8	3.4	-
Gerald Greene	W	R	62.1	28.1	24.9, 32.6	24.0	27.3	-	95.9	91.7, 98.5	98.2	96.5	-
State House 173													
Tommy Hill	B	D	38.9	94.1	88.0, 97.8	97.1	99.7	-	9.3	6.3, 13.1	6.7	5.6	13.3
Darlene Taylor	W	R	61.1	5.9	2.2, 12.0	3.2	0.4	-	90.7	86.9, 93.7	93.3	94.5	86.7

APPENDIX C

APPENDIX C1
Eastern Atlanta Metro Region
Map Area 1
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2020 Democratic Primary												
US Senate												
James Knox	B	D	4.1	3.9, 4.3	4.1	4.3	3.3	0.5	.3, .6	0.6	-0.7	-
Jon Ossoff	W	D	60.0	59.0, 61.0	60.7	60.6	62.5	54.3	51.9, 56.1	53.4	53.9	-
Marckeith DeJesus	B	D	3.9	3.6, 4.1	4.3	4.5	3.3	0.6	.4, .8	0.7	0.7	-
Maya Dillard Smith	B	D	9.7	9.3, 10.1	10.9	10.8	8.5	0.9	.6, 1.4	1.3	1.3	-
Sarah Riggs Amico	W	D	11.9	11.3, 12.7	12.6	13.0	11.4	5.5	4.4, 7.6	6.1	5.8	-
Teresa Pike Tomlinson	W	D	7.4	6.8, 8.0	5.9	3.5	8.4	37.8	36.6, 39.0	37.0	38.1	-
Tricia Carpenter McCracken	W	D	3.0	2.8, 3.1	3.0	3.2	2.6	0.4	.3, .6	0.0	0.3	-
Public Service Commission 4												
Daniel Blackman	B	D	78.2	76.6, 80.3	79.6	79.2	77.5	59.3	55.9, 63.4	58.6	57.3	-
John Noel	W	D	21.8	19.7, 23.4	20.4	20.8	22.5	40.7	36.6, 44.1	41.4	42.6	-
2018 Democratic Primary												
Governor												
Stacey Abrams	B	D	90.3	88.9, 91.5	88.7	87.4	87.5	73.0	69.8, 76.0	64.0	62.5	-
Stacey Evans	W	D	9.7	8.5, 11.1	11.3	12.6	12.5	27.0	24.0, 30.2	36.0	37.5	-
Lieutenant Governor												
Sarah Riggs Amico	W	D	43.6	42.8, 44.4	38.8	38.3	43.0	97.6	96.8, 98.3	94.0	93.9	-
Triana Arnold James	B	D	56.4	55.5, 57.2	61.2	61.2	57.0	2.4	1.7, 3.2	6.0	6.1	-
Commissioner of Insurance												
Cindy Zeldin	W	D	25.8	24.5, 26.8	23.4	20.8	28.2	86.1	83.3, 88.3	83.7	82.5	-
Janice Laws	B	D	74.2	73.2, 75.5	76.6	79.2	71.8	13.9	11.7, 16.7	16.3	17.5	-
Commissioner of Labor												
Fred Quinn	B	D	53.5	51.8, 55.4	54.7	54.7	53.5	31.5	27.8, 35.8	31.7	32.3	-
Richard Keatley	W	D	46.5	44.6, 48.2	45.3	45.3	46.5	68.5	64.2, 72.2	68.3	67.7	-

APPENDIX C1
Eastern Atlanta Metro Region
Map Area 1
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Secretary of State												
Dee Dawkins-Haigler	B	D	41.8	40.8, 42.7	41.5	40.8	41.0	25.5	23.4, 27.3	22.4	21.4	-
John Barrow	W	D	38.9	38.0, 39.6	35.3	35.8	39.2	70.7	68.9, 72.3	67.3	68.0	-
Rakeim Hadley	B	D	19.3	18.5, 20.2	23.2	23.3	19.8	3.9	2.1, 5.7	10.2	10.6	-
School Superintendent												
Otha Thornton	B	D	50.4	49.3, 51.6	52.6	52.2	49.8	21.3	18.9, 24.0	23.0	22.8	-
Sam Mosteller	B	D	17.5	16.6, 18.3	17.3	18.0	17.7	21.5	19.4, 23.3	22.1	22.9	-
Sid Chapman	W	D	32.2	31.1, 33.1	30.3	29.7	32.6	57.2	54.7, 59.3	54.7	54.3	-
Public Service Commission 3												
Johnny White	B	D	18.6	18.0, 19.2	19.6	19.7	18.1	1.4	.9, 2.2	1.4	1.6	-
Lindy Miller	W	D	64.0	62.9, 65.0	62.2	62.2	63.3	83.4	81.1, 85.7	81.6	81.2	-
John Noel	W	D	17.4	16.4, 18.4	18.2	18.1	18.7	15.2	12.9, 17.4	17.1	17.2	-
2018 Democratic Runoff												
School Superintendent												
Otha Thornton	B	D	69.6	68.3, 71.0	71.9	71.3	68.3	28.1	25.9, 30.8	28.8	29.4	30.3
Sid Chapman	W	D	30.4	29.0, 31.7	28.2	28.7	31.7	71.9	69.2, 74.1	71.3	70.6	69.7
2016 Democratic Primary												
US Senate												
Cheryl Copeland	B	D	45.5	44.4, 46.6	46.9	47.6	45.1	23.8	21.9, 25.8	24.8	25.0	22.9
Jim Barksdale	W	D	52.8	51.6, 53.9	51.2	50.6	52.5	69.4	67.4, 71.3	67.5	67.6	69.8
John Coyne	W	D	1.7	1.3, 2.1	2.4	1.8	2.4	6.7	5.8, 7.6	8.1	7.5	7.3

APPENDIX C2
Southern Atlanta Metro Region
Map Area 2
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2020 Democratic Primary												
US Senate												
James Knox	B	D	3.9	3.4, 4.4	4.1	4.2	-	2.9	1.9, 4.0	1.5	2.5	-
Jon Ossoff	W	D	61.0	59.0, 62.5	57.7	57.5	-	59.0	55.5, 62.2	55.5	56.7	-
Marckeith DeJesus	B	D	3.6	3.0, 4.3	4.5	4.6	-	1.3	.8, 2.1	1.5	1.4	-
Maya Dillard Smith	B	D	10.1	9.3, 11.0	11.5	11.5	-	1.6	.9, 2.6	0.7	0.4	-
Sarah Riggs Amico	W	D	12.6	11.6, 13.6	12.3	12.6	-	13.3	11.1, 15.6	11.9	13.4	-
Teresa Pike Tomlinson	W	D	6.1	4.8, 7.4	6.6	6.6	-	20.5	17.9, 23.2	27.9	23.9	-
Tricia Carpenter McCracken	W	D	2.7	2.2, 3.1	3.0	3.0	-	1.5	.9, 2.3	2.0	1.6	-
Public Service Commission 4												
Daniel Blackman	B	D	79.2	76.5, 84.1	80.8	80.8	-	53.8	48.4, 61.0	54.5	52.8	-
John Noel	W	D	20.8	15.9, 23.5	19.1	19.2	-	46.2	39.0, 51.6	45.6	47.2	-
2018 Democratic Primary												
Governor												
Stacey Abrams	B	D	90.3	87.5, 92.7	88.6	88.6	84.7	53.0	47.9, 58.1	48.0	48.2	-
Stacey Evans	W	D	9.7	7.3, 12.6	11.4	11.4	15.3	47.0	41.9, 52.1	52.1	51.8	-
Lieutenant Governor												
Sarah Riggs Amico	W	D	41.4	38.8, 43.8	37.3	38.1	44.0	91.6	87.3, 95.1	89.1	90.8	-
Triana Arnold James	B	D	58.6	56.3, 61.2	62.7	62.0	56.0	8.4	4.9, 12.7	11.3	9.2	-
Commissioner of Insurance												
Cindy Zeldin	W	D	21.3	18.9, 24.6	23.2	23.5	26.7	56.0	50.7, 61.8	59.0	57.2	-
Janice Laws	B	D	78.7	75.4, 81.1	76.8	76.5	73.3	44.0	38.2, 49.3	41.0	42.7	-
Commissioner of Labor												
Fred Quinn	B	D	50.1	47.9, 52.4	51.4	51.3	50.0	41.4	35.8, 46.7	43.9	43.7	-
Richard Keatley	W	D	49.9	47.6, 52.1	48.5	48.7	50.0	58.6	53.3, 64.2	56.1	56.3	-

APPENDIX C2
Southern Atlanta Metro Region
Map Area 2
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Secretary of State												
Dee Dawkins-Haigler	B	D	31.1	29.1, 33.2	33.8	33.0	30.9	22.4	18.1, 26.8	26.6	26.0	-
John Barrow	W	D	42.7	41.0, 44.0	38.3	39.8	44.0	70.6	66.1, 74.9	66.0	66.5	-
Rakeim Hadley	B	D	26.2	24.4, 28.0	27.4	27.2	25.1	7.1	3.8, 10.5	7.8	7.6	-
School Superintendent												
Otha Thornton	B	D	48.3	47.0, 50.0	52.5	51.7	47.3	20.0	16.1, 24.2	25.2	21.8	-
Sam Mosteller	B	D	16.9	15.5, 18.0	15.8	16.4	18.1	29.5	25.0, 33.1	28.1	27.9	-
Sid Chapman	W	D	34.8	33.6, 35.9	32.4	32.0	34.6	50.4	46.5, 54.4	46.6	50.2	-
Public Service Commission 3												
Johnny White	B	D	16.0	14.4, 17.6	17.5	17.5	15.9	5.4	2.9, 8.2	7.5	7.1	-
Lindy Miller	W	D	69.4	67.3, 71.4	66.5	66.3	67.7	78.8	74.5, 82.9	74.7	75.4	-
John Noel	W	D	14.6	12.9, 16.3	16.1	16.1	16.4	15.8	12.2, 19.5	18.5	17.4	-
2018 Democratic Runoff												
School Superintendent												
Otha Thornton	B	D	68.1	66.3, 70.0	71.9	69.9	68.4	23.0	16.9, 29.6	25.9	23.9	24.5
Sid Chapman	W	D	31.9	30.0, 33.8	28.1	30.1	31.6	77.0	70.4, 83.1	74.2	76.2	75.5
2016 Democratic Primary												
US Senate												
Cheryl Copeland	B	D	49.6	47.9, 51.1	49.7	48.9	48.6	30.1	24.6, 35.8	31.3	32.4	-
Jim Barksdale	W	D	49.6	47.9, 51.2	48.0	49.4	49.3	65.7	59.9, 71.3	64.8	63.0	-
John Coyne	W	D	0.9	.6, 1.3	0.3	1.7	2.1	4.2	2.7, 5.9	6.7	4.8	-

APPENDIX C3
East Central Region
Map Area 3
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2020 Democratic Primary												
US Senate												
James Knox	B	D	6.6	6.2, 7.0	6.5	6.9	7.7	12.4	11.0, 13.7	10.8	12.4	-
Jon Ossoff	W	D	46.1	45.1, 47.1	46.8	46.3	40.8	38.4	36.0, 40.7	41.6	43.0	-
Marckeith DeJesus	B	D	4.6	4.2, 5.1	5.3	5.3	5.1	2.6	1.8, 3.6	2.9	3.3	-
Maya Dillard Smith	B	D	15.0	14.3, 15.5	15.1	14.5	16.8	5.2	3.8, 6.6	4.5	3.6	-
Sarah Riggs Amico	W	D	14.8	14.2, 15.4	14.1	14.7	14.5	15.7	13.8, 17.5	14.9	14.0	-
Teresa Pike Tomlinson	W	D	9.0	8.4, 9.7	8.2	8.4	11.0	21.3	19.7, 23.0	20.8	19.1	-
Tricia Carpenter McCracken	W	D	3.8	3.4, 4.3	3.8	3.9	4.0	4.5	3.5, 5.5	4.7	4.6	-
Public Service Commission 4												
Daniel Blackman	B	D	75.0	74.0, 76.0	76.3	74.5	74.6	53.2	50.5, 55.9	56.3	56.4	-
John Noel	W	D	25.0	24.0, 26.0	23.6	25.5	25.4	46.8	44.1, 49.5	44.1	43.6	-
2018 Democratic Primary												
Governor												
Stacey Abrams	B	D	80.9	80.0, 82.0	82.2	83.3	77.1	47.7	44.3, 51.2	48.2	41.6	30.9
Stacey Evans	W	D	19.1	18.0, 20.0	17.8	16.7	22.9	52.3	48.8, 55.7	51.7	58.4	69.1
Lieutenant Governor												
Sarah Riggs Amico	W	D	44.9	43.6, 46.1	42.7	44.2	47.7	84.6	80.8, 88.1	83.1	79.9	67.7
Triana Arnold James	B	D	55.1	53.9, 56.4	57.1	55.8	52.3	15.4	11.9, 19.2	17.0	20.1	32.3
Commissioner of Insurance												
Cindy Zeldin	W	D	19.4	18.1, 20.6	19.4	20.2	18.9	52.9	49.3, 56.5	54.2	50.9	38.9
Janice Laws	B	D	80.7	79.4, 81.9	80.7	79.9	81.1	47.1	43.5, 50.7	46.0	49.1	61.1
Commissioner of Labor												
Fred Quinn	B	D	55.7	54.2, 57.1	55.7	56.5	54.1	42.4	38.3, 46.6	40.3	40.5	40.9
Richard Keatley	W	D	44.3	42.9, 45.8	44.3	43.5	45.9	57.6	53.5, 61.7	60.0	59.5	59.1

APPENDIX C3
East Central Region
Map Area 3
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Secretary of State												
Dee Dawkins-Haigler	B	D	25.8	24.6, 26.9	27.0	24.4	21.3	14.1	10.7, 17.6	14.6	17.0	11.3
John Barrow	W	D	58.9	57.8, 59.9	55.6	60.1	66.3	81.0	77.2, 84.9	78.2	76.4	85.8
Rakeim Hadley	B	D	15.4	14.4, 16.4	17.8	15.6	12.3	4.9	2.9, 7.9	4.6	6.6	2.8
School Superintendent												
Otha Thornton	B	D	47.6	46.7, 48.6	50.0	49.2	45.6	20.7	17.6, 23.8	24.8	20.9	17.2
Sam Mosteller	B	D	18.6	17.9, 19.4	18.2	18.3	19.4	30.3	27.6, 33.1	29.0	29.4	31.2
Sid Chapman	W	D	33.7	32.8, 34.6	32.3	32.5	35.0	49.0	45.8, 52.2	46.4	49.6	51.6
Public Service Commission 3												
Johnny White	B	D	22.3	21.6, 23.0	23.0	23.7	22.1	9.7	7.4, 12.1	6.7	9.7	26.1
Lindy Miller	W	D	57.4	56.5, 58.4	57.7	56.7	57.5	69.4	66.1, 72.6	72.8	69.4	50.0
John Noel	W	D	20.3	19.4, 21.0	19.8	19.6	20.4	20.9	18.2, 23.7	20.4	20.9	23.9
2018 Democratic Runoff												
School Superintendent												
Otha Thornton	B	D	72.8	71.2, 74.3	75.1	73.8	70.6	26.3	21.5, 31.5	25.5	24.2	24.0
Sid Chapman	W	D	27.2	25.7, 28.8	25.0	26.2	29.4	73.7	68.5, 78.5	75.0	75.8	76.0
2016 Democratic Primary												
US Senate												
Cheryl Copeland	B	D	48.3	47.1, 49.6	49.8	49.0	48.0	23.2	21.6, 24.9	24.3	24.5	22.4
Jim Barksdale	W	D	48.2	46.9, 49.5	47.0	47.7	48.5	70.3	68.6, 71.9	69.2	70.2	71.7
John Coyne	W	D	3.4	3.0, 3.9	3.6	3.3	3.4	6.5	5.8, 7.2	5.4	5.2	5.9

APPENDIX C4
Southeastern Atlanta Metro Region
Map Area 4
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2020 Democratic Primary												
US Senate												
James Knox	B	D	3.8	3.3, 4.2	4.2	4.3	-	2.2	1.4, 3.2	2.3	2.3	2.6
Jon Ossoff	W	D	61.4	59.7, 62.9	58.1	57.4	-	59.4	56.5, 62.0	57.1	56.2	57.7
Marckeith DeJesus	B	D	3.3	2.8, 3.9	4.5	4.5	-	0.9	.5, 1.4	0.9	1.0	1.0
Maya Dillard Smith	B	D	9.7	8.8, 10.6	11.4	11.2	-	1.8	.9, 3.0	2.2	2.2	2.6
Sarah Riggs Amico	W	D	13.0	12.0, 13.8	12.5	13.0	-	13.2	11.3, 15.1	13.3	12.7	11.8
Teresa Pike Tomlinson	W	D	6.4	5.2, 7.6	6.7	6.6	-	20.9	18.7, 23.2	24.1	23.8	21.4
Tricia Carpenter McCracken	W	D	2.6	2.0, 2.9	3.0	2.9	-	1.6	.8, 2.3	1.8	1.8	2.9
Public Service Commission 4												
Daniel Blackman	B	D	78.9	76.2, 82.4	80.4	80.0	-	55.0	50.3, 60.3	54.6	55.1	58.7
John Noel	W	D	21.1	17.6, 23.8	19.6	20.0	-	45.0	39.7, 49.7	45.4	44.9	41.3
2018 Democratic Primary												
Governor												
Stacey Abrams	B	D	88.1	85.7, 90.6	88.5	87.7	84.2	49.2	44.5, 54.1	46.2	47.9	54.0
Stacey Evans	W	D	11.9	9.4, 14.3	11.6	12.3	15.8	50.8	45.9, 55.5	53.7	52.0	46.0
Lieutenant Governor												
Sarah Riggs Amico	W	D	42.7	40.2, 44.9	38.9	40.1	44.2	87.3	83.1, 91.2	86.2	87.8	82.1
Triana Arnold James	B	D	57.3	55.1, 59.9	61.0	59.9	55.8	12.7	8.8, 16.9	13.8	12.3	17.9
Commissioner of Insurance												
Cindy Zeldin	W	D	22.3	19.9, 25.2	23.5	23.6	26.8	54.7	49.5, 59.7	56.7	56.3	55.4
Janice Laws	B	D	77.7	75.1, 80.2	76.5	76.4	73.2	45.4	40.3, 50.5	43.4	43.8	44.6
Commissioner of Labor												
Fred Quinn	B	D	50.5	48.1, 53.1	52.0	52.2	50.3	43.1	38.2, 48.2	45.0	43.5	42.5
Richard Keatley	W	D	49.5	46.9, 51.9	48.0	47.8	49.7	56.9	51.8, 61.9	55.0	56.5	57.5

APPENDIX C4
Southeastern Atlanta Metro Region
Map Area 4
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Secretary of State												
Dee Dawkins-Haigler	B	D	31.2	29.2, 33.1	33.1	31.8	31.8	25.1	21.3, 29.0	28.4	28.4	33.2
John Barrow	W	D	44.8	43.4, 46.0	40.8	42.8	43.5	67.0	63.0, 70.8	62.9	62.9	54.2
Rakeim Hadley	B	D	24.0	22.2, 25.8	26.0	25.4	24.7	7.9	5.1, 10.9	8.1	8.7	12.6
School Superintendent												
Otha Thornton	B	D	47.1	45.9, 48.6	51.7	50.5	46.8	19.0	15.7, 22.5	23.8	21.5	24.4
Sam Mosteller	B	D	17.2	16.1, 18.2	16.5	16.4	18.3	31.5	28.2, 34.8	29.5	31.0	31.1
Sid Chapman	W	D	35.6	34.4, 36.6	33.0	33.2	34.9	49.6	45.8, 53.3	47.4	47.7	44.5
Public Service Commission 3												
Johnny White	B	D	15.6	14.1, 17.0	16.9	17.2	15.8	7.6	5.1, 10.2	9.2	8.6	11.0
Lindy Miller	W	D	69.7	67.8, 71.5	66.7	66.8	67.5	77.1	73.2, 80.8	73.4	74.7	71.0
John Noel	W	D	14.7	13.0, 16.4	16.2	16.0	16.7	15.4	12.2, 18.7	17.9	16.7	18.0
2018 Democratic Runoff												
School Superintendent												
Otha Thornton	B	D	68.0	65.8, 70.6	70.5	67.5	67.9	25.3	19.6, 31.1	27.6	29.1	32.7
Sid Chapman	W	D	32.0	29.4, 34.3	29.4	32.5	32.1	74.8	68.9, 80.4	72.2	70.9	67.3
2016 Democratic Primary												
US Senate												
Cheryl Copeland	B	D	48.1	46.1, 50.0	48.1	47.7	48.2	34.4	29.8, 39.4	36.7	36.4	39.5
Jim Barksdale	W	D	50.8	48.8, 52.7	49.4	50.7	49.4	60.5	55.5, 65.1	60.9	57.7	55.2
John Coyne	W	D	1.1	.8, 1.6	1.7	1.7	2.4	5.1	3.5, 6.8	6.0	5.9	5.3

APPENDIX C5
Central Georgia Region
Map Area 5
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2020 Democratic Primary												
US Senate												
James Knox	B	D	6.6	5.8, 7.5	5.9	5.7	6.7	17.3	14.9, 19.7	17.2	18.6	-
Jon Ossoff	W	D	42.5	41.1, 43.9	41.3	44.3	38.8	34.9	31.4, 38.5	35.7	36.2	-
Marckeith DeJesus	B	D	3.7	3.0, 4.5	4.2	4.2	4.2	3.6	2.1, 5.2	4.4	4.7	-
Maya Dillard Smith	B	D	17.1	16.1, 18.0	17.4	14.9	18.7	5.8	3.5, 8.0	6.2	5.3	-
Sarah Riggs Amico	W	D	16.2	15.1, 17.3	16.4	16.7	15.9	14.5	11.7, 17.5	13.2	15.5	-
Teresa Pike Tomlinson	W	D	11.2	10.2, 12.2	11.3	11.1	12.4	18.7	16.1, 21.2	17.9	13.8	-
Tricia Carpenter McCracken	W	D	2.7	2.0, 3.3	2.7	3.2	3.3	5.2	3.7, 6.8	6.4	5.9	-
Public Service Commission 4												
Daniel Blackman	B	D	75.1	73.0, 77.2	74.0	71.6	75.4	59.0	53.5, 64.5	60.8	63.0	-
John Noel	W	D	24.9	22.8, 27.1	25.9	28.4	24.6	41.0	35.5, 46.5	39.4	36.9	-
2018 Democratic Primary												
Governor												
Stacey Abrams	B	D	81.9	80.0, 83.7	81.4	83.7	78.7	45.7	39.7, 52.0	46.7	38.5	30.8
Stacey Evans	W	D	18.1	16.3, 19.9	18.6	16.2	21.3	54.3	48.0, 60.3	52.9	61.4	69.2
Lieutenant Governor												
Sarah Riggs Amico	W	D	47.3	45.4, 49.3	47.8	48.4	49.5	77.2	70.1, 83.8	73.7	76.5	69.5
Triana Arnold James	B	D	52.7	50.7, 54.6	52.2	51.6	50.5	22.8	16.3, 29.9	25.6	23.5	30.5
Commissioner of Insurance												
Cindy Zeldin	W	D	23.1	21.1, 25.0	23.9	25.5	23.5	46.8	40.1, 53.5	46.1	43.1	33.3
Janice Laws	B	D	76.9	75.0, 78.8	76.1	74.5	76.5	53.2	46.6, 59.9	54.0	56.9	66.7
Commissioner of Labor												
Fred Quinn	B	D	56.7	54.3, 59.0	57.0	59.0	55.6	36.7	28.8, 45.0	35.2	31.3	38.4
Richard Keatley	W	D	43.3	41.0, 45.7	43.0	40.8	44.4	63.3	55.0, 71.2	65.1	68.6	61.6

APPENDIX C5
Central Georgia Region
Map Area 5
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Secretary of State												
Dee Dawkins-Haigler	B	D	26.4	24.9, 27.8	26.7	25.9	26.6	12.8	8.3, 17.8	12.8	10.8	8.0
John Barrow	W	D	58.7	57.1, 60.4	57.6	59.3	57.8	80.1	74.6, 85.2	80.6	84.3	88.5
Rakeim Hadley	B	D	14.9	13.6, 16.1	17.9	14.9	15.5	7.1	3.7, 11.0	1.0	5.1	3.4
School Superintendent												
Otha Thornton	B	D	48.6	46.8, 50.2	48.8	48.6	46.9	19.9	14.5, 25.5	18.1	12.4	16.7
Sam Mosteller	B	D	19.2	17.7, 20.8	18.5	18.8	20.6	29.8	24.5, 35.1	32.7	31.3	30.8
Sid Chapman	W	D	32.2	30.5, 33.9	31.1	32.6	32.5	50.3	44.5, 56.1	46.8	56.6	52.6
Public Service Commission 3												
Johnny White	B	D	20.5	19.1, 21.9	20.7	20.4	20.2	14.4	9.8, 19.2	14.2	18.4	27.0
Lindy Miller	W	D	58.1	56.3, 60.0	59.1	58.4	57.8	65.0	59.0, 71.0	61.0	58.9	47.3
John Noel	W	D	21.4	19.9, 22.8	21.4	21.2	21.9	20.6	15.7, 25.6	20.5	22.8	25.7
2018 Democratic Runoff												
School Superintendent												
Otha Thornton	B	D	72.1	70.1, 73.9	73.8	75.7	69.8	23.4	14.8, 32.8	21.0	20.0	13.9
Sid Chapman	W	D	27.9	26.1, 29.9	26.2	24.4	30.2	76.6	67.2, 85.2	79.2	79.9	86.1
2016 Democratic Primary												
US Senate												
Cheryl Copeland	B	D	49.9	48.0, 51.8	50.2	50.6	46.7	23.1	21.1, 25.3	22.4	22.7	23.3
Jim Barksdale	W	D	47.2	45.3, 49.1	46.6	46.6	50.2	71.2	69.0, 73.2	71.0	70.9	71.0
John Coyne	W	D	2.9	2.1, 3.7	3.8	2.7	3.0	5.7	4.8, 6.7	5.5	6.3	5.7

APPENDIX C6
Southwest Georgia Region
Map Area 6
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2020 Democratic Primary												
US Senate												
James Knox	B	D	8.4	7.5, 9.4	8.5	8.2	8.2	15.4	12.0, 18.7	13.9	15.7	-
Jon Ossoff	W	D	49.6	48.2, 50.9	48.8	47.4	53.3	22.7	18.4, 26.9	24.4	23.8	-
Marckeith DeJesus	B	D	4.8	3.9, 5.6	7.2	6.4	4.6	3.6	1.9, 5.9	0.0	3.2	-
Maya Dillard Smith	B	D	12.8	11.7, 13.8	10.4	12.8	11.1	7.2	4.2, 10.6	5.2	6.0	-
Sarah Riggs Amico	W	D	11.6	10.6, 12.6	11.0	12.5	11.0	15.8	12.3, 19.3	15.8	17.6	-
Teresa Pike Tomlinson	W	D	10.0	9.0, 11.1	8.8	9.6	8.2	29.0	25.1, 32.7	30.6	25.3	-
Tricia Carpenter McCracken	W	D	2.8	2.1, 3.5	1.9	3.2	3.6	6.4	4.3, 8.5	7.3	8.5	-
Public Service Commission 4												
Daniel Blackman	B	D	73.5	71.6, 75.4	73.8	74.3	70.9	69.0	63.0, 75.1	64.3	64.4	-
John Noel	W	D	26.5	24.6, 28.4	26.2	25.8	29.1	31.0	24.9, 37.0	36.4	35.6	-
2018 Democratic Primary												
Governor												
Stacey Abrams	B	D	83.5	82.0, 85.0	83.0	83.5	81.1	49.1	41.9, 56.3	50.7	46.6	-
Stacey Evans	W	D	16.5	15.0, 18.0	16.9	16.4	18.9	50.9	43.7, 58.1	49.1	53.4	-
Lieutenant Governor												
Sarah Riggs Amico	W	D	38.1	36.4, 39.8	38.1	39.6	39.2	75.3	67.4, 82.6	72.6	75.2	-
Triana Arnold James	B	D	61.9	60.3, 63.6	61.8	60.5	60.8	24.7	17.4, 32.6	27.2	24.8	-
Commissioner of Insurance												
Cindy Zeldin	W	D	18.9	17.3, 20.4	19.7	20.8	19.3	50.6	43.6, 57.5	45.7	49.8	-
Janice Laws	B	D	81.2	79.6, 82.7	80.3	79.2	80.7	49.4	42.6, 56.5	54.3	50.3	-
Commissioner of Labor												
Fred Quinn	B	D	57.0	55.3, 58.7	56.8	53.9	57.9	49.5	41.8, 57.2	48.9	50.1	-
Richard Keatley	W	D	43.0	41.4, 44.7	43.3	46.1	42.1	50.5	42.8, 58.2	52.5	49.7	-

APPENDIX C6
Southwest Georgia Region
Map Area 6
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Secretary of State												
Dee Dawkins-Haigler	B	D	28.4	27.0, 29.8	26.5	27.2	27.6	24.6	18.7, 30.9	26.6	22.5	-
John Barrow	W	D	49.1	47.6, 50.6	48.1	48.6	49.7	61.6	54.7, 68.1	61.0	66.0	-
Rakeim Hadley	B	D	22.5	22.0, 23.7	23.3	24.2	22.7	13.8	8.7, 19.1	10.2	11.5	-
School Superintendent												
Otha Thornton	B	D	50.2	48.7, 51.7	50.4	49.3	49.3	25.9	19.7, 32.3	24.5	18.9	-
Sam Mosteller	B	D	17.6	16.4, 18.9	17.4	18.8	17.5	24.7	19.1, 30.3	25.0	24.3	-
Sid Chapman	W	D	32.1	30.7, 33.6	32.0	32.0	33.1	49.3	42.9, 55.8	49.1	57.0	-
Public Service Commission 3												
Johnny White	B	D	36.1	34.7, 37.4	36.0	32.6	37.6	15.3	10.0, 21.0	16.2	16.8	-
Lindy Miller	W	D	45.8	44.2, 47.4	45.3	48.6	43.6	63.4	56.2, 70.3	63.6	60.0	-
John Noel	W	D	18.1	16.8, 19.4	16.7	18.8	18.8	21.3	15.6, 27.2	24.7	23.2	-
2018 Democratic Runoff												
School Superintendent												
Otha Thornton	B	D	65.6	63.6, 67.6	66.7	67.7	64.0	27.3	19.1, 35.7	24.7	23.3	25.6
Sid Chapman	W	D	34.4	32.4, 36.4	33.3	32.5	36.0	72.7	64.3, 81.0	75.0	77.0	74.4
2016 Democratic Primary												
US Senate												
Cheryl Copeland	B	D	47.9	45.5, 50.3	45.4	48.7	45.8	39.0	35.5, 42.7	42.4	39.9	36.5
Jim Barksdale	W	D	48.8	46.4, 51.3	50.3	47.8	50.5	53.6	49.8, 57.2	51.5	53.2	55.0
John Coyne	W	D	3.3	2.4, 4.4	2.9	3.5	3.7	7.4	5.8, 8.8	8.5	7.0	8.5

APPENDIX C7
Macon Metro Region
Map Area 7
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
2020 Democratic Primary												
US Senate												
James Knox	B	D	5.5	4.7, 6.3	6.3	5.7	6.1	6.8	4.5, 9.1	5.7	7.9	-
Jon Ossoff	W	D	42.2	40.5, 43.8	39.6	40.9	38.6	40.5	35.4, 45.8	42.0	40.2	-
Marckeith DeJesus	B	D	3.5	2.5, 4.4	4.3	4.4	4.1	3.6	1.8, 5.8	5.2	4.7	-
Maya Dillard Smith	B	D	20.3	19.2, 21.4	21.1	20.5	20.7	5.2	2.5, 8.3	3.5	1.3	-
Sarah Riggs Amico	W	D	16.1	14.7, 17.4	16.1	16.4	15.6	14.1	10.3, 18.0	14.0	15.2	-
Teresa Pike Tomlinson	W	D	10.2	9.0, 11.3	10.0	9.0	11.8	26.4	22.6, 30.0	25.6	26.1	-
Tricia Carpenter McCracken	W	D	2.3	1.5, 3.0	3.0	3.0	3.2	3.4	1.7, 5.4	4.6	4.6	-
Public Service Commission 4												
Daniel Blackman	B	D	80.6	77.5, 83.5	78.9	79.2	77.6	56.9	48.1, 65.6	57.0	55.9	-
John Noel	W	D	19.4	16.5, 22.5	21.1	20.8	22.4	43.1	34.4, 51.9	43.3	44.2	-
2018 Democratic Primary												
Governor												
Stacey Abrams	B	D	84.5	82.0, 86.9	83.2	84.2	80.2	51.3	41.5, 61.6	53.2	52.4	-
Stacey Evans	W	D	15.5	13.1, 18.0	16.7	15.9	19.8	48.7	38.4, 58.5	46.4	47.7	-
Lieutenant Governor												
Sarah Riggs Amico	W	D	46.8	44.1, 49.8	47.7	47.0	49.8	79.6	67.4, 90.0	74.7	76.2	-
Triana Arnold James	B	D	53.2	50.2, 55.9	52.4	53.1	50.2	20.4	10.0, 32.6	25.2	24.0	-
Commissioner of Insurance												
Cindy Zeldin	W	D	20.9	18.3, 23.6	21.6	21.6	22.3	56.9	46.5, 67.0	56.5	55.1	-
Janice Laws	B	D	79.1	76.4, 81.7	78.4	78.4	77.7	43.1	33.0, 53.6	43.7	44.9	-
Commissioner of Labor												
Fred Quinn	B	D	54.0	51.1, 57.0	53.1	54.0	53.1	39.8	28.1, 51.7	44.1	41.5	-
Richard Keatley	W	D	46.0	43.1, 48.9	47.0	46.1	46.9	60.2	48.3, 71.9	56.0	58.5	-

APPENDIX C7
Macon Metro Region
Map Area 7
Democratic Primaries and Runoffs

Estimates of Voting Patterns by Race in Recent Statewide Elections

			Black Voters					White Voters				
	Race	Party	EI rxc	95% confidence interval	EI	ER	HP	EI rxc	95% confidence interval	EI	ER	HP
Secretary of State												
Dee Dawkins-Haigler	B	D	30.7	28.5, 32.8	31.9	30.9	29.4	17.0	9.2, 25.3	15.5	17.0	-
John Barrow	W	D	50.2	47.9, 52.5	47.4	49.3	53.5	70.4	60.9, 79.5	76.8	70.5	-
Rakeim Hadley	B	D	19.1	17.1, 21.1	17.9	19.9	17.0	12.7	5.8, 20.2	11.0	12.5	-
School Superintendent												
Otha Thornton	B	D	54.4	51.9, 56.8	53.1	53.9	50.1	30.8	21.5, 40.3	33.9	33.5	-
Sam Mosteller	B	D	18.8	16.8, 20.8	19.6	19.7	20.0	27.6	19.7, 35.3	26.4	26.9	-
Sid Chapman	W	D	26.8	24.6, 29.0	27.7	26.5	29.9	41.6	33.0, 50.2	37.9	39.8	-
Public Service Commission 3												
Johnny White	B	D	20.5	18.8, 22.2	21.3	22.3	20.4	7.1	3.0, 12.8	8.2	6.5	-
Lindy Miller	W	D	59.0	57.0, 61.2	57.7	56.3	59.3	76.2	67.6, 84.1	74.4	76.9	-
John Noel	W	D	20.4	18.4, 22.3	21.0	21.4	20.3	16.7	9.8, 24.3	17.0	16.3	-
2018 Democratic Runoff												
School Superintendent												
Otha Thornton	B	D	71.5	69.0, 74.0	72.0	74.5	67.7	36.8	22.2, 51.2	35.8	30.2	-
Sid Chapman	W	D	28.5	26.0, 31.0	27.9	25.5	32.3	63.2	48.8, 77.8	64.3	69.8	-
2016 Democratic Primary												
US Senate												
Cheryl Copeland	B	D	51.5	49.0, 53.9	51.6	52.1	45.9	26.4	23.7, 29.3	26.0	26.4	-
Jim Barksdale	W	D	46.1	43.7, 48.7	45.5	45.2	51.5	68.3	65.4, 70.9	68.1	67.5	-
John Coyne	W	D	2.4	1.5, 3.4	2.8	2.7	2.6	5.3	4.1, 6.5	6.2	6.2	-

APPENDIX D

APPENDIX D

The eight additional majority Black Illustrative districts I focus on in this report were all drawn by pulling in population from at least one district in the Adopted Plan that fails to provide Black voters with an opportunity to elect their preferred candidates. The two tables below, Table A and Table B, identify all of the Adopted Plan districts that overlap with each of the additional Illustrative districts and the percent of the Illustrative district population that was drawn from each of the overlapping Adopted districts. The final three columns indicate which of the Adopted districts are Black opportunity districts and which are not by reporting the percent BVAP, and the GE and DPR scores of the overlapping Adopted districts.

Table A: Illustrative and Adopted State Senate District Overlaps

Illustrative State Senate District	Overlaps with Adopted State Senate Districts	Percent of Illustrative District Derived from Adopted District	Effectiveness of Adopted Districts		
			% BVAP	GE score	DPR score
17	010	20.2%	71.5%	0.775	0.664
	017	37.8%	32.0%	0.366	0.611
	025	6.1%	33.5%	0.385	0.608
	041	3.3%	62.6%	0.796	0.576
	043	30.7%	64.3%	0.706	0.650
	055	2.0%	66.0%	0.764	0.655
28	016	44.4%	22.7%	0.325	0.550
	034	26.0%	69.5%	0.808	0.638
	044	29.6%	71.3%	0.850	0.620
23	022	18.6%	56.5%	0.668	0.631
	023	32.6%	35.5%	0.392	0.601
	024	1.7%	19.9%	0.288	0.600
	025	23.0%	33.5%	0.385	0.608
	026	24.0%	57.0%	0.620	0.613

Table B: Illustrative and Adopted State House District Overlaps

Illustrative State House District	Overlaps with Adopted State House Districts	Percent of Illustrative District Derived from Adopted District	Effectiveness of Adopted Districts		
			% BVAP	GE score	DPR score
074	074	42.2%	25.5%	0.351	0.609
	075	8.8%	74.4%	0.849	0.632
	078	46.4%	71.6%	0.793	0.624
	116	2.5%	58.1%	0.672	0.657
117	074	7.7%	25.5%	0.351	0.609
	116	8.9%	58.1%	0.672	0.657
	117	40.7%	36.6%	0.436	0.630
	134	42.8%	33.6%	0.350	0.555
133	123	10.9%	24.3%	0.293	0.643
	124	2.7%	25.6%	0.368	0.552
	128	32.5%	50.4%	0.476	0.598
	133	38.8%	36.8%	0.434	0.620
	149	15.1%	32.1%	0.318	0.559
171	152	3.4%	26.1%	0.281	0.628
	153	31.2%	67.9%	0.651	0.657
	171	36.1%	39.6%	0.361	0.606
	172	2.4%	23.3%	0.248	0.596
	173	26.8%	36.3%	0.373	0.635
145	142	65.2%	59.5%	0.638	0.616
	144	26.3%	29.3%	0.356	0.583
	145	8.4%	35.7%	0.398	0.632

APPENDIX E

Lisa R. Handley

CURRICULUM VITAE

Professional Experience

Dr. Handley has over thirty years of experience in the areas of redistricting and voting rights, both as a practitioner and an academician, and is recognized nationally and internationally as an expert on these subjects. She has advised numerous clients on redistricting and has served as an expert in dozens of redistricting and voting rights court cases. Her clients have included the U.S. Department of Justice, civil rights organizations, independent redistricting commissions and scores of state and local jurisdictions. Internationally, Dr. Handley has provided electoral assistance in more than a dozen countries, serving as a consultant on electoral system design and redistricting for the United Nations, UNDP, IFES, and International IDEA. In addition, Dr. Handley served as Chairman of the Electoral Boundaries Commission in the Cayman Islands.

Dr. Handley has been actively involved in research, writing and teaching on the subjects of redistricting and voting rights. She has co-written a book, Minority Representation and the Quest for Voting Equality (Cambridge University Press, 1992) and co-edited a volume (Redistricting in Comparative Perspective, Oxford University Press, 2008) on these subjects. Her research has also appeared in peer-reviewed journals such as *Journal of Politics*, *Legislative Studies Quarterly*, *American Politics Quarterly*, *Journal of Law and Politics*, and *Law and Policy,* as well as law reviews and edited books. She has taught political science undergraduate and graduate courses related to these subjects at several universities including the University of Virginia and George Washington University. Dr. Handley is a Visiting Research Academic at Oxford Brookes University in the United Kingdom.

Dr. Handley is the President of Frontier International Consulting, a consulting firm that specializes in providing electoral assistance in transitional and post-conflict democracies. She also works as an independent election consultant both in the United States and internationally.

Education

Ph.D. The George Washington University, Political Science, 1991

Present Employment

President, Frontier International Electoral Consulting LLC (since co-founding company in 1998).

Senior International Electoral Consultant, Technical assistance for clients such as the UN, UNDP and IFES on electoral system design and boundary delimitation

Visiting Research Academic, Centre for Development and Emergency Practice (CENDEP), Oxford Brookes University

U.S. Clients since 2000

American Civil Liberties Union – expert testimony in Voting Right Act challenges in several states, expert testimony in Ohio partisan gerrymander challenge and challenge to Commerce Department inclusion of citizenship question on 2020 census form

Lawyers Committee for Civil Rights Under Law – expert testimony in challenges to statewide judicial elections in Texas and Alabama

US Department of Justice – expert witness testimony in several Section 2 and Section 5 cases

Alaska: Redistricting Board (2001 and 2011) – redistricting consultation, expert witness testimony

Arizona: Independent Redistricting Board (2001 and 2021) – redistricting consultation

Boston (2022): City Attorney General, redistricting consultation

Colorado: Redistricting Commission (2021), Redistricting Board (2001 and 2011) – redistricting consultation

Connecticut: State Senate and State House of Representatives (2001 and 2011) – redistricting consultation

Florida: State Senate (2000) – redistricting consultation

Kansas: State Legislative Research Department (2001, 2011, 2021) – redistricting consultation

Louisiana: Louisiana Legislative Black Caucus (2001) – expert witness testimony

Massachusetts: State Senate (2001 and 2011) – redistricting consultation

Maryland: Attorney General (2001) – redistricting consultation

Michigan: Michigan Independent Citizens Redistricting Commission (2021) – redistricting consultation

Miami-Dade County, Florida: County Attorney (2001 and 2011) – redistricting consultation

Nassau County, New York: Redistricting Commission (2001) – redistricting consultation

New Mexico: State House (2001) – redistricting consultation, expert witness testimony

New York: State Assembly (2001), State Senate (2021) – redistricting consultation

New York City: Redistricting Commission and Charter Commission (2001, 2011, 2022) – redistricting consultation and Section 5 submission assistance

New York State Court: Expert to the Special Master (drew congressional lines for state court)

Rhode Island: State Senate and State House (2001 and 2021) – redistricting consultation

International Clients since 2000

United Nations

- Afghanistan – electoral system design and district delimitation expert
- Bangladesh (UNDP) – redistricting expert
- Sierra Leone (UNDP) – redistricting expert
- Liberia (UNMIL, UN peacekeeping mission) – redistricting expert
- Democratic Republic of the Congo (MONUC, UN peacekeeping mission) – election feasibility mission, electoral system design and redistricting expert
- Kenya (UN) – electoral system design and redistricting expert
- Haiti (UN) – election feasibility mission, electoral system design and redistricting expert
- Zimbabwe (UNDP) – redistricting expert
- Lead Writer on the topic of boundary delimitation (redistricting) for ACE (Joint UN, IFES and IDEA project on the Administration and Cost of Elections Project)

International Foundation for Election Systems (IFES)

- Afghanistan – district delimitation expert
- Sudan – redistricting expert
- Kosovo – electoral system design and redistricting expert
- Nigeria – redistricting expert
- Nepal – redistricting expert
- Georgia – electoral system design and district delimitation expert
- Yemen – redistricting expert
- Lebanon – electoral system design and redistricting expert
- Malaysia – electoral system design and redistricting expert
- Myanmar – electoral system design and redistricting expert
- Ukraine – electoral system design and redistricting expert
- Pakistan – consultant for developing redistricting software
- Principal consultant for the Delimitation Equity Project – conducted research, wrote reference manual and developed training curriculum
- Writer on electoral boundary delimitation (redistricting), Elections Standards Project
- Training – developed training curriculum and conducted training workshops on electoral boundary delimitation (redistricting) in Azerbaijan and Jamaica

International Institute for Democracy and Electoral Assistance (International IDEA):

- Consultant on electoral dispute resolution systems
- Technology consultant on use of GIS for electoral district delimitation
- Training – developed training material and conducted training workshop on electoral boundary delimitation (redistricting) for African election officials (Mauritius)
- Curriculum development – boundary delimitation curriculum for the BRIDGE Project

Other international clients have included The Cayman Islands; the Australian Election Commission; the Boundary Commission of British Columbia, Canada; and the Global Justice Project for Iraq.

Publications

***Books**:*

Does Torture Prevention Work? Liverpool University Press, 2016 (served as editor and author, with Richard Carver)

Comparative Redistricting in Perspective, Oxford University Press, 2008 (first editor, with Bernard Grofman).

Delimitation Equity Project: Resource Guide, Center for Transitional and Post-Conflict Governance at IFES and USAID publication, 2006 (lead author).

Minority Representation and the Quest for Voting Equality, Cambridge University Press, 1992 (with Bernard Grofman and Richard Niemi).

***Academic Journal Articles**:*

"Drawing Electoral Districts to Promote Minority Representation" Representation, forthcoming, published online DOI:10.1080/00344893.2020.1815076.

"Evaluating national preventive mechanisms: a conceptual model," Journal of Human Rights Practice, Volume 12 (2), July 2020 (with Richard Carver).

"Minority Success in Non-Majority Minority Districts: Finding the 'Sweet Spot'," Journal of Race, Ethnicity and Politics, forthcoming (with David Lublin, Thomas Brunell and Bernard Grofman).

"Has the Voting Rights Act Outlived its Usefulness: In a Word, "No," Legislative Studies Quarterly, volume 34 (4), November 2009 (with David Lublin, Thomas Brunell and Bernard Grofman).

"Delimitation Consulting in the US and Elsewhere," Zeitschrift für Politikberatung, volume 1 (3/4), 2008 (with Peter Schrott).

"Drawing Effective Minority Districts: A Conceptual Framework and Some Empirical Evidence," North Carolina Law Review, volume 79 (5), June 2001 (with Bernard Grofman and David Lublin).

"A Guide to 2000 Redistricting Tools and Technology" in The Real Y2K Problem: Census 2000 Data and Redistricting Technology, edited by Nathaniel Persily, New York: Brennan Center, 2000.

"1990s Issues in Voting Rights," Mississippi Law Journal, 65 (2), Winter 1995 (with Bernard Grofman).

"Minority Turnout and the Creation of Majority-Minority Districts," American Politics Quarterly, 23 (2), April 1995 (with Kimball Brace, Richard Niemi and Harold Stanley).

"Identifying and Remedying Racial Gerrymandering," Journal of Law and Politics, 8 (2), Winter 1992 (with Bernard Grofman).

"The Impact of the Voting Rights Act on Minority Representation in Southern State Legislatures," Legislative Studies Quarterly, 16 (1), February 1991 (with Bernard Grofman).

"Minority Population Proportion and Black and Hispanic Congressional Success in the 1970s and 1980s," American Politics Quarterly, 17 (4), October 1989 (with Bernard Grofman).

"Black Representation: Making Sense of Electoral Geography at Different Levels of Government," Legislative Studies Quarterly, 14 (2), May 1989 (with Bernard Grofman).

"Minority Voting Equality: The 65 Percent Rule in Theory and Practice," Law and Policy, 10 (1), January 1988 (with Kimball Brace, Bernard Grofman and Richard Niemi).

"Does Redistricting Aimed to Help Blacks Necessarily Help Republicans?" Journal of Politics, 49 (1), February 1987 (with Kimball Brace and Bernard Grofman).

***Chapters in Edited Volumes**:*

“Effective torture prevention,” Research Handbook on Torture, Sir Malcolm Evans and Jens Modvig (eds), Cheltenham: Edward Elgar, 2020 (with Richard Carver).

“Redistricting” in Oxford Handbook of Electoral Systems, Erik Herron Robert Pekkanen and Matthew Shugart (eds), Oxford: Oxford University Press, 2018.

“Role of the Courts in the Electoral Boundary Delimitation Process,” in International Election Remedies, John Hardin Young (ed.), Chicago: American Bar Association Press, 2017.

“One Person, One Vote, Different Values: Comparing Delimitation Practices in India, Canada, the United Kingdom, and the United States,” in Fixing Electoral Boundaries in India, edited by Mohd. Sanjeer Alam and K.C. Sivaramakrishman, New Delhi: Oxford University Press, 2015.

“Delimiting Electoral Boundaries in Post-Conflict Settings,” in Comparative Redistricting in Perspective, edited by Lisa Handley and Bernard Grofman, Oxford: Oxford University Press, 2008.

“A Comparative Survey of Structures and Criteria for Boundary Delimitation,” in Comparative Redistricting in Perspective, edited by Lisa Handley and Bernard Grofman, Oxford: Oxford University Press, 2008.

“Drawing Effective Minority Districts: A Conceptual Model,” in Voting Rights and Minority Representation, edited by David Bositis, published by the Joint Center for Political and Economic Studies, Washington DC, and University Press of America, New York, 2006.

"Electing Minority-Preferred Candidates to Legislative Office: The Relationship Between Minority Percentages in Districts and the Election of Minority-Preferred Candidates," in Race and Redistricting in the 1990s, edited by Bernard Grofman; New York: Agathon Press, 1998 (with Bernard Grofman and Wayne Arden).

"Estimating the Impact of Voting-Rights-Related Districting on Democratic Strength in the U.S. House of Representatives," in Race and Redistricting in the 1990s, edited by Bernard Grofman; New York: Agathon Press, 1998 (with Bernard Grofman).

"Voting Rights in the 1990s: An Overview," in Race and Redistricting in the 1990s, edited by Bernard Grofman; New York: Agathon Press, 1998 (with Bernard Grofman and Wayne Arden).

"Racial Context, the 1968 Wallace Vote and Southern Presidential Dealignment: Evidence from North Carolina and Elsewhere," in Spatial and Contextual Models in Political Research, edited by Munroe Eagles; Taylor and Francis Publishing Co., 1995 (with Bernard Grofman).

"The Impact of the Voting Rights Act on Minority Representation: Black Officeholding in Southern State Legislatures and Congressional Delegations," in The Quiet Revolution: The Impact of the Voting Rights Act in the South, 1965-1990, eds. Chandler Davidson and Bernard Grofman, Princeton University Press, 1994 (with Bernard Grofman).

"Preconditions for Black and Hispanic Congressional Success," in United States Electoral Systems: Their Impact on Women and Minorities, eds. Wilma Rule and Joseph Zimmerman, Greenwood Press, 1992 (with Bernard Grofman).

***Electronic Publication**:*

"Boundary Delimitation" Topic Area for the Administration and Cost of Elections (ACE) Project, 1998. Published by the ACE Project on the ACE website (www.aceproject.org).

***Additional Writings of Note**:*

Amicus brief presented to the US Supreme Court in Gill v. Whitford, Brief of Political Science Professors as Amici Curiae, 2017 (one of many social scientists to sign brief)

Amicus brief presented to the US Supreme Court in Shelby County v. Holder, Brief of Historians and Social Scientists as Amici Curiae, 2013 (one of several dozen historians and social scientists to sign brief)

Amicus brief presented to the US Supreme Court in Bartlett v. Strickland, 2008 (with Nathaniel Persily, Bernard Grofman, Bruce Cain, and Theodore Arrington).

Recent Court Cases

Pending cases:

- Louisiana: *Nairne, et al., v. Ardoin* (Docket Number: 3:22-cv-00178-SDD-SDJ) (Middle District of Louisiana)

- Louisiana: *Robinson, et al., v. Ardoin* (Docket Number: 3:22-cv-0211-SDD-SDJ) (Middle District of Louisiana)

- Georgia: *Alpha Phi Alpha Fraternity, Inc., et al., v. Raffensperger, et al*. (Docket Number: 1:21-CV-05337-SCJ) (Northern District of Georgia)

- Arkansas: *Arkansas State Conference NAACP, et al., v. Arkansas Board of Apportionment, et al.* (Case Number: 4:21-cv-01239-LPR) (Eastern District of Arkansas, Eighth Circuit Court of Appeals)

- Ohio: *League of Women Voters of Ohio, et al., v. Ohio Redistricting Commission, et al.* (Case Number: 2021-1193) (Supreme Court of Ohio); *League of Women Voters of Ohio, et al., v. Governor DeWine* (Case Number: 2021-1449) (Supreme Court of Ohio)

Ohio Philip Randolph Institute v. Larry Householder (2019) – partisan gerrymander challenge to Ohio congressional districts; testifying expert for private plaintiffs on minority voting patterns

State of New York v. U.S. Department of Commerce (2018-2019) – challenge to inclusion of citizenship question on 2020 census form; testifying expert on behalf of private plaintiffs

U.S. v. City of Eastpointe (settled 2019) – minority vote dilution challenge to City of Eastpointe, Michigan, at-large city council election system; testifying expert on behalf of U.S. Department of Justice

Alabama NAACP v. State of Alabama (decided 2020) – minority vote dilution challenge to Alabama statewide judicial election system; testifying expert on behalf of private plaintiffs

Lopez v. Abbott (2017-2018) – minority vote dilution challenge to Texas statewide judicial election system; testifying expert on behalf of private plaintiffs

Personhuballuah v. Alcorn (2015-2017) – racial gerrymandering challenge to Virginia congressional districts; expert for the Attorney General and Governor of the State of Virginia

Perry v. Perez (2014) – Section 2 case challenging Texas congressional and state house districts; testifying expert for the U.S. Department of Justice

Jeffers v. Beebe (2012) – Arkansas state house districts; testifying expert for the Plaintiffs

State of Texas v. U.S. (2011-2012) – Section 5 case challenging Texas congressional and state house districts; testifying expert for the U.S. Department of Justice

Table 3. *Turnout in the 1964 and 1968 presidential elections in southern states covered by the Voting Rights Act (percent)*

	1964	1968
Alabama	35.9	52.7
Georgia	43.3	43.4
Louisiana	47.3	54.8
Mississippi	33.9	53.2
North Carolina	52.3	54.3
South Carolina	39.4	46.7
Virginia	41.1	50.1
United States	61.8	60.7

Note: Percentages are of the voting-age population.

Source: Abstract of the United States, 1974, Table 704.

tion and voting. Straightforward, obvious efforts to nullify, in effect, the votes of large numbers of blacks – "a dilution of voting power" in Chief Justice Warren's words (*Allen v. State Board of Education*, 1969, p. 569) – were ruled out.

It turns out, however, that the question of what constitutes vote dilution is not easily answered. Indeed, efforts to define, operationalize, and eradicate vote dilution have been the largest source of "districting" litigation since the 1960s, surpassing even that involving the equal population requirement.

At its most general level, vote dilution refers to "the practice of reducing the potential effectiveness of a group's voting strength by limiting its ability to translate that strength into the control of (or at least influence with) elected public officials" (Engstrom, 1980, p. 197). In the context of minority voting rights, the operative definition comes from the revised language of Section 2 of the Voting Rights Act:[24] that members of racial or language minorities "have less opportunity than other members of the electorate to participate in the political process and to elect representatives of their choice."[25]

It is clear from these definitions that an essential ingredient for identifying vote dilution is the rate of election of candidates chosen by minority voters. Indeed, the Voting Rights Act makes that point (immediately after the preceding quotation): "The extent to which members of a protected class have been elected to office in the State or political subdivision is one circumstance which may be considered." Beyond that general point, however, lies considerable ambiguity, and it is in response to this ambiguity that courts have been heavily involved

Exhibit
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is nondilutionary. It has been left to the courts, with some help from the Senate Report accompanying the most recent (1982) revisions of the Voting Rights Act, to determine what evidence is sufficient to determine when minorities have been given less opportunity to elect candidates of their choice. Given the difficulties of this task, the courts have typically focused on mechanisms that tend to dilute the vote, requiring specific information about their applicability in the jurisdiction in question.[30]

But even focusing on specific electoral devices leaves important questions unanswered: (1) What does it mean to be a candidate "of choice"? Surely it cannot simply mean the candidate who obtains the highest number of minority votes; if only whites/Anglos were allowed to run, it could hardly be said (at least as a general rule) that the one with the most minority votes was the candidate of choice for minority voters. But does this mean that only minorities can represent minorities? (2) Does an election law have to have been adopted for discriminatory purposes? Certainly some election laws – including at-large elections in some cities – were adopted for "good government" reasons. Is it illegal vote dilution if under such circumstances these laws make it extemely difficult for minorities to be elected? (3) How does one design an electoral system, or a specific district, so that it does not dilute the minority vote (a question that usually arises at the remedy stage of a court case)? Just how certain does one have to be that a minority-preferred candidate will win the election? (4) And going back to the most fundamental point, how many minority victories are enough, or what is the standard against which to compare the number of minority victories? Should the standard be the number of minorities who are likely to win with "neutral" districting? The number likely to win with race-conscious districting? The number who could win if a "semiproportional" system were used?

These are the sorts of questions with which Congress, the courts, minority groups, civil rights lawyers, and political scientists have been wrestling for the past two decades. Some answers have been found, particularly in regard to at-large elections and multimember districts. We will describe these in some detail as we relate the evolution of a vote dilution standard in Congress and the courts. But numerous questions remain, especially pertaining to the single-member district context, which we see as the battleground for voting rights litigation in the 1990s. On these matters, we will offer perspectives that we hope will shape the ongoing arguments and, ultimately, lead to fair and equitable arrangements.

We are aware, however, that we provide more in the way of problems than solutions. We do this in order to avoid the strident tone exhibited in many writings on the subject, even some that we have contributed. If political science has taught us anything, it is that there are no perfect solutions, even in the abstract. Knowing that, the task is to arrive at compromises that offer a reason-

added that in order to sustain their claim, plaintiffs would also have to produce sufficient evidence that minority "residents had less opportunity than did other . . . residents to participate in the political process and to elect legislators of their choice" (p. 149). However, the Court neglected to state explicitly what evidence would have been necessary to meet this standard.

Although the Court declined to find multimember districts dilutive of minority voting rights in its initial exposure to the issue, its reasoning in subsequent cases indicated that the constitutionality of such schemes was more suspect in the South. Indeed, a series of rulings in the early 1970s, at both the lower court and Supreme Court levels, established that multimember districts in the South, given that area's long history of racial disfranchisement, had less chance of withstanding a legal assault from blacks.

White v. Regester (1973), decided two years after *Whitcomb*, was the first case in which the Supreme Court sustained an attack on the use of multimember districts.[8] In this case, the Supreme Court unanimously held that multimember state legislative districts in Dallas and Bexar (San Antonio) counties, Texas, diluted the voting power of African-American and Mexican-American voters in violation of the Equal Protection Clause. After reiterating the *Whitcomb* holding that multimember districts are not unconstitutional per se and that the plaintiff must show more than a mere lack of proportional representation, the Court indicated that a lack of equal access to the political process is necessary to establish a constitutional violation and, for the first time, established relatively formal guidelines for the evaluation of equal opportunity.

In attempting to ascertain the political access of the two minority groups, the Court deferred to the district court's "intensely local appraisal" (p. 769) of the situation. In doing so, the Court reviewed factors that supported plaintiffs in their claim that multimember districts were being used to unconstitutionally dilute minority voting power: the history of official racial discrimination in Texas's election process (i.e., the white primary system and the use of a poll tax), multimember districts combined with a majority vote requirement and a place system not tied to residency, slating organizations that were controlled by whites, election campaigns that employed racial tactics, a lack of minority elected officials in the community, and the election of candidates who were "insufficiently responsive" (p. 769) to minority group interests. Although the Court noted that these characteristics viewed by themselves were not necessarily invidious or improper, they were enough to sustain the judgment based on the "totality of the circumstances" (p. 769).

In *Zimmer v. McKeithen* (1973), the Fifth Circuit Court relied on the "totality of circumstances" standard handed down by the Court in *White* to rule that at-large elections for police jurors and school board members in East Carroll Parish, Louisiana, diluted the voting strength of black residents in violation of the

Fourteenth and Fifteenth amendments. In establishing the standards according to which minority vote dilution might be judged, the Fifth Circuit relied heavily on a list of factors gleaned from the Supreme Court's opinion. The circuit court, however, in attempting to bring some order to the "panoply of factors" identified in *White*, offered a more systematic and comprehensive set of dilution guidelines than Justice Byron R. White had presented. According to *Zimmer*, unconstitutional dilution exists

> where a minority can demonstrate a lack of access to the process of slating candidates, the unresponsiveness of legislators to their particularized interest, a tenuous state policy underlying the preference for multimember or at-large districting, or the existence of past discrimination in general precludes the effective participation in the election system. . . . Such proof is enhanced by a showing of the existence of large districts, majority vote requirements, anti-single shot voting provisions and the lack of provision for at-large candidates running from particular geographic subdistricts. (p. 1305)

The *Zimmer* Court went on to explain that not all of the criteria need be satisfied in a successful dilution claim; "the fact of dilution is established upon proof of the existence of an aggregate of these factors" (p. 1305).

This formula for testing multimember districts for their possible dilutive effect became known as the *Zimmer* test, or the "totality of the circumstances doctrine."[9] From 1973 until 1980, the growing number of legal challenges to multimember or at-large election systems in the South were decided primarily on the basis of this dilution standard, particularly in the Fifth Circuit, where the vast majority of such cases were tried.

As minority vote dilution litigation progressed during the decade, the court refined its standards of proof under the *Zimmer* analysis. For example, evidence of racial bloc voting became necessary to a successful dilution challenge in the Fifth Circuit because of the logical presumption that black voters were not disadvantaged if whites were not voting against the minority's candidate of choice (see *Nevett v. Sides*, 1978). As thus refined, the *Whitcomb–White–Zimmer* approach continued to be utilized by the courts, with its supporters asserting that it provided a "flexible, fact-specific, precise and workable" standard (Parker, 1983, p. 725). However, in 1980 this approach to vote dilution was dramatically altered by the Supreme Court in *City of Mobile v. Bolden*. In this decision, the Court rejected the evidentiary standards developed in Zimmer and declared that proof of discriminatory intent was required for plaintiffs to prevail in a constitutional vote dilution claim.

The Supreme Court establishes the need to prove discriminatory purpose in Mobile v. Bolden

City of Mobile v. Bolden (1980) was a classic *Zimmer* type of suit. Mobile operated under a commission form of government in which three city commis-

lined in the Senate Report. The court reviewed the evidence it found persuasive in concluding that Lubbock's electoral system violated Section 2: the history of official discrimination against blacks and Hispanics and evidence of its lingering effects in Lubbock in the socioeconomic disparities between Anglos and minorities and in depressed minority political participation; an electoral system that featured every structural impediment ''that courts have identified as aggravating the impact of an at-large election system'' (p. 385); and evidence of persistent racial polarization, such that it was unnecessary for candidates and elected public officials to seek minority political support.

Indicating that there was no requirement that any specific number of factors be proven in order to establish a violation of Section 2, the Fifth Circuit nevertheless stressed the importance of a finding of racial polarization, stating that ''the legislative discussion of polarized voting requires that we weigh more carefully the effect that polarization has on the political scheme challenged'' (p. 385). Furthermore, the appellate court rejected the city's argument that the responsiveness of city officials to the needs of minorities undercuts a finding of racially polarized voting: ''The absence of unresponsiveness does not negate other inferences that flow from polarization. Whether or not city officials do ignore minority interests, polarization nevertheless frees them of political reprisal for disadvantaging the minority community'' (p. 381).

In *United States v. Marengo County Commission* (1984), the Eleventh Circuit Court of Appeals devised a Section 2 vote dilution standard very similar to the one outlined by the Fifth Circuit in *Jones*, emphasizing the importance of racial polarization even more than the Fifth Circuit had in *Jones*. In *Marengo County*, the court reviewed a vote dilution challenge to an at-large scheme for electing county commissioners and school board members in Marengo County, Alabama. The district court, ruling before Congress amended Section 2, upheld the at-large scheme because plaintiffs had failed to prove discriminatory purpose. On appeal, the Eleventh Circuit held that the newly revised Section 2 applied to the case, found compelling evidence that the at-large election system violated Section 2, and remanded the case to the district court for an update of the record. Accompanying the remand was an explanation of how the Section 2 results test should be applied to an allegation that an at-large election system unlawfully dilutes minority votes.

Judge John Minor Wisdom, writing for a unanimous three-judge panel of the Eleventh Circuit, reviewed the legislative history of Section 2 and determined that racially polarized voting ''will ordinarily be the keystone of a dilution case'' (p. 1566). He reasoned that Section 2 is intended ''to remedy it [race-conscious politics] where it already exists'' and that ''the surest indication of race-conscious politics is a pattern of racially polarized voting'' (p. 1567). Although stressing the importance of racial bloc voting, the Eleventh Circuit also discussed

at some length the evidence presented with regard to each of the other "typical" factors identified in the Senate Report: an undisputed record of past discrimination; considerable social and economic differences between blacks and whites; structural elements, in addition to at-large elections, that were suggestive of vote dilution (staggered terms, numbered posts, and a majority vote requirement in the Democratic primary); and the fact that no black had ever been elected to the county commission or the school board, even though approximately half of the county's population was black.

The Eleventh Circuit also briefly discussed the two "additional" factors listed in the Senate Report. After finding that the state policy underlying the at-large requirement was tenuous (the state enacted the at-large system in 1955 "in direct response to the prospect of increased black political participation" [p. 1571]), the court explained that the "tenuousness" factor, although less important under the results test than under the intent standard, is still relevant because "evidence that a voting device was intended to discriminate is circumstantial evidence that the device has a discriminatory result" (p. 1571). The second "additional" factor – the issue of responsiveness – was also deemed less important. "Unresponsiveness would be relevant only if the plaintiff chose to make it so," because "although a showing of unresponsiveness might have some probative value a showing of responsiveness would have very little" (p. 1572). The court found that although the Marengo County Commission may be responsive to the minority group's material needs (roads, sewers, etc.), the evidence indicated that it was not responsive to the group's political needs – the desire to elect candidates of its choice – which is, of course, the focus of the Voting Rights Act.

Reiterating the reasoning articulated in *Marengo County*, the Eleventh Circuit Court in *United States v. Dallas County Commission* (1984), and later the Fifth Circuit Court in *McMillan v. Escambia County* (1984), utilized a hierarchy of factors in which racially polarized voting was preeminent. In *Dallas County*, a Section 2 challenge to the at-large election system for the county commission and the county school board in Dallas County, Alabama, the Eleventh Circuit discussed all nine factors listed in the Senate Report but stressed the importance of racial polarization as the keystone of a dilution case. The appellate court determined that the district court had erred in its assessment of racially polarized voting in Dallas County. Although the district court had found evidence of racial polarization,[18] it discounted its effect, emphasizing several factors it contended counteracted a finding of racial bloc voting: Some of the blacks who ran were fringe-party candidates; blacks did not actively seek the votes of whites; whites often supported white incumbents over black candidates; and there was apathy among black voters. The appeals court, however, concluded that none of these factors was sufficient to override a finding of racial polarization. The case was remanded to the district court for further consideration.

In *McMillan*, plaintiffs challenged the at-large system for electing county com-

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missioners in Escambia County, Florida. The Fifth Circuit Court of Appeals, in an opinion that relies heavily on *Marengo County*, affirmed the district court's finding of a violation of Section 2. This conclusion was based on a finding of racial polarization combined with evidence of a history of past discrimination and indications of its lingering effects as well as such structural impediments as staggered terms, numbered posts, and a majority vote requirement in the Democratic primary. According to the Fifth Circuit, racial polarization occurs "whenever a black challenges a white for countywide office, a consistent majority of the whites who vote . . . consistently vote for the black's opponent" (p. 1043). Statistical evidence pointing to a "consistent pattern of racially polarized voting" (p. 1040) and the fact that no black had ever been elected to office – despite the fact that blacks comprised 17 percent of the registered voters in the county – led the court to conclude that voting in Escambia County was polarized.

The Eleventh Circuit adopted a somewhat different approach to racial bloc voting in *Lee County Branch of NAACP v. City of Opelika* (1984), a challenge to the at-large scheme for electing the city commission in Opelika, Alabama. The appellate court remanded the case to the district court for additional evidence regarding the question of racially polarized voting. Noting that under the *Marengo County* standard, racial bloc voting is a key consideration, the court found the evidence presented at trial insufficient to make a determination as to the existence of racially polarized voting in the Opelika city elections.

The *Opelika* decision parts company with the reasoning set forth in *Marengo County*, because the majority in *Opelika* argued that evidence of polarized voting requires more than a showing of divergent voting patterns between blacks and whites. Evidence that race is the motivating factor in disparate voting patterns is necessary, according to the *Opelika* court:

> It will often be necessary to examine factors other than race that may also correlate highly with election outcomes – campaign expenditures, party identification, income, media advertising, religion, name recognition, position on key issues, and so forth. Well-established statistical methods, such as step-wise multiple regressions, can test the relative importance of multiple factors. Such analysis can assist in the determination of whether race is the dominating factor in political outcomes (p. 1482).

Thus, the majority of the Eleventh Circuit in this case rejected the use of a bivariate statistical analysis that simply regresses the racial composition of the precincts against the precinct votes for a given candidate in favor of a multivariate analysis that measures the relative importance of a number of factors in addition to the race of the voters.[19]

Other appeals court decisions emulated the *Opelika* approach to the question of racially polarized voting. The Court of Appeals for the Fourth Circuit in *Collins v. City of Norfolk* (1985) not only condoned the use of a multivariate statistical analysis to determine whether disparate voting patterns were "racially

tricts under Section 2 of the Voting Rights Act. Plaintiffs contended that the plan diluted minority voting strength by submerging concentrations of black voters sufficient in size to form a majority of the voters in a single-member district in majority-white multimember districts and by fragmenting into more than one state senate district "a concentration of black voters sufficient in numbers and contiguity to constitute a voting majority in at least one single-member district" (p. 350).

The district court relied heavily on the legislative history of the amendment, carefully examining each of the Senate Report factors as they applied to North Carolina and determining that most of them were present to one degree or another. The court recounted North Carolina's history of official racial discrimination and the lingering effects this history had on black registration and voting. Discrimination in other areas, such as education and employment, resulted in a lower socioeconomic status for blacks as a group, which in turn "operate[d] to hinder the group's ability to participate effectively in the political process" (p. 363). The majority vote requirement was viewed by the court as a "general, ongoing impediment" to the election of black candidates (p. 363). Racial appeals in election campaigns in North Carolina were found to be widespread, persistent, and as recent as the 1984 campaign for a U.S. Senate seat. Although blacks had been elected to office at most levels of government in North Carolina (with the exception of any statewide office, or to the U.S. Congress), the court determined that the overall results were minimal in relation to the percentage of blacks in the total population.

Finally, and most importantly, the court found evidence of "persistent and severe" racial polarization based on a statistical analysis of fifty-three elections involving black candidates in all of the challenged districts (p. 367). The court asserted that of the Senate Report factors, the "demonstrable unwillingness of substantial numbers of the racial majority to vote for any minority race candidate or any candidate identified with minority race interests is the linchpin of vote dilution by districting" (p. 355).

The district court concluded on the basis of the totality of the circumstances that blacks had less opportunity than others to participate in the political process and elect representatives of their choice in the challenged districts and unanimously upheld the plaintiffs' Section 2 challenge. The state of North Carolina appealed the district court's holding in regard to five of the multimember districts.[21]

On direct appeal to the Supreme Court, the state of North Carolina and the United States as amicus maintained that the lower court erred in concluding that there was a violation of Section 2. According to North Carolina, the lower court (1) had incorrectly defined legally significant racially polarized voting and had

adopted an erroneous standard for measuring the degree of polarization and (2) did not give sufficient weight to the electoral success of some black candidates.

On June 30, 1986, the Supreme Court unanimously upheld the findings of the district court for four of the five contested multimember state legislative districts involved in the suit. However, the Court was not in unanimous agreement on the legal analysis to be applied in vote dilution cases or in the evidentiary standard to be used by the court in measuring the degree of racially polarized voting, the "linchpin" of a vote dilution claim.

There were actually four separate opinions filed in *Gingles*. Justice Brennan wrote the five-part opinion of the Court, joined by Justices Blackmun, Marshall, Stevens, and White. There were three concurring opinions. Justice White disagreed with Justice Brennan with regard to a specific section of Part III-C of the opinion and filed a separate opinion on the point of contention. Justice O'Connor, joined by Chief Justice Burger and Justices Powell and Rehnquist, filed an opinion concurring only with the judgment of the Court and disagreeing with almost the entirety of Justice Brennan's opinion. Justice Stevens, joined by Justices Marshall and Blackmun, dissented from the part of the opinion that reversed the district court's finding of vote dilution in House District 23.

The majority opinion: a three-pronged test for vote dilution

The majority opinion affirmed the decision of the district court with respect to four of the five contested districts and established a three-pronged test for analyzing vote dilution claims involving multimember districts. The opinion also provided a definition of legally significant racially polarized voting.

Justice Brennan reviewed the nine factors outlined in the Senate Report accompanying the amendments to Section 2 and reasoned that although all of the factors listed may be relevant to a vote dilution claim challenging a multimember districting scheme, they will not be dispositive unless plaintiffs can first show a conjunction of three circumstances. The Court indicated:

> These circumstances are necessary preconditions for [a violation]. . . . First, the minority group must be . . . sufficiently large and geographically compact to constitute a majority of a single-member district. . . . Second, the minority group must be . . . politically cohesive. . . . Third, . . . the white majority votes sufficiently as a bloc to enable it . . . usually to defeat the minority's preferred candidate. (pp. 50–51)

If the minority group is not sufficiently large enough or geographically compact enough to form a majority in a single-member district, then the fact that the district is structured as multimember is irrelevant to the minority's lack of ability to elect candidates of choice. According to the Court: "Unless minority voters possess the *potential* to elect representatives in the absence of the chal-

noting first that the court must ascertain whether there is usually enough bloc voting by whites to defeat candidates preferred by the minority. This differs depending on the presence or absence of other potentially dilutive devices such as a majority-vote requirement or numbered posts, the size and racial composition of the challenged districts, and the percentage of the voters who are members of the minority group. Second, bloc voting is generally more significant if it occurs over a period of time. Thus, a pattern of voting along racial lines that has existed over several elections is more probative than are the results of a single election. On the other hand, the results of one election in which significant racial bloc voting has not occurred are insufficient to sustain the contention that the jurisdiction is now free from legally significant racial bloc voting.

In Part IV of the decision, the majority specifically rejected the argument raised by appellants and the United States that proportional or near proportional minority success in a single election precludes, as a matter of law, a finding of a Section 2 violation. The Court found that both the language of Section 2 and its legislative history indicated that the electoral success of some minority candidates does not foreclose a Section 2 claim. However, in the case of House District 23, in which blacks had achieved proportional representation in each of the last six elections, the majority did conclude that minority success had been substantial enough to reverse the holding of the district court.

The plurality opinion: an evidentiary standard for racial bloc voting

The extent of racial bloc voting present in a challenged jurisdiction is the "linchpin" of a vote dilution claim based on Section 2 according to the majority opinion. In Part III-C of his opinion, Justice Brennan outlined the standard of statistical evidence necessary to determine the degree of racially polarized voting. Because Justice White did not join this section, this part of the opinion does not command a majority (Part III-C was joined only by Justices Blackmun, Marshall, and Stevens). However, in his separate concurring opinion, Justice White expressed disagreement with only a small portion of Part III-C (Subpart four, which discusses the relevance of the candidate's race); he did not specifically object to the remainder of Part III-C.

Justice Brennan advanced his evidentiary standard regarding racially polarized voting by repudiating certain arguments made by the state of North Carolina (and the United States as amicus). The state argued that statistical evidence must demonstrate not only that there is a correlation between race of the voters and their choice of candidates but also that race (as opposed to other factors such as socioeconomic status or party affiliation) is the principal reason for the voters' selections. According to the plurality, however, the proper inquiry under Section 2 is to ask *whether* voters of different races favor different candidates, not *why*

they do so. Exploring the reasons for the relationship between race and votes cast interjects intent into the analysis, and "the legal concept of racially polarized voting incorporates neither causation nor intent," according to Justice Brennan (p. 62).

Central to this debate about the reasons that voters cast the votes that they do is whether a court should use a bivariate or multivariate statistical analysis to determine the presence of racially polarized voting. In *Jones*, *Marengo County*, and *Escambia County*, a bivariate analysis was the preferred method; but in *Opelika*, *Collins*, and *McCord*, the courts accepted a multivariate analysis.

Justice Brennan held that a bivariate statistical analysis is the proper method by which to determine racial bloc voting, because under Section 2 only the fact that the race of the voters correlates with the selection of certain candidates matters: "It is the *difference* between the choices made by black and white voters and not the reasons for the differences, that leads to blacks having less opportunity to elect their candidates of choice" (p. 63). In addition, Justice Brennan recognized that many of the other factors that North Carolina sought to introduce into the analysis as nonracial explanations are in fact highly correlated with race, and therefore polarized voting would virtually never be found "whenever the black and white populations could be described in terms of other socioeconomic characteristics" (p. 65).[23] Moreover, according to Justice Brennan:

> We can find no support in either logic or the legislative history for the anomalous conclusion to which the appellants' position leads – that Congress intended, on the one hand, that proof that a minority group is predominately poor, uneducated, and unhealthy should be considered a factor tending to prove a section 2 violation; but that Congress intended, on the other hand, that proof that the same socioeconomic characteristics greatly influence black voters' choice of candidates should destroy these voters' ability to establish one of the most important elements of a vote dilution claim. (p. 67)

Similarly, the plurality refused to accept North Carolina's argument that racially polarized voting should be defined as existing only when the white bloc voting is fueled by racial hostility. Plaintiffs do not have to demonstrate that racial animosity is the cause of differences in voting patterns, according to Justice Brennan, but only that the electorate does, as a matter of fact, divide along racial lines. The plurality recognized that the principal reason Congress amended Section 2 was because intent was so difficult to prove (not to mention irrelevant to the issue) – and proving racism on the part of the voters is likely to be an even more burdensome and racially divisive task than is proving racism on the part of legislators.

In Part III-C, the plurality also rejected North Carolina's contention that bloc

voting must be defined with reference to the candidate's race. Justice Brennan argued that the race of the candidate per se is irrelevant to the analysis:

> The fact that race of voter and race of candidate is often correlated is not directly pertinent to a Section 2 inquiry. Under Section 2, it is the *status* of the candidate as the *chosen representative of a particular racial group*, not the race of the candidate, that is important. (p. 68)

Thus, according to Justice Brennan, the appropriate inquiry is whether the preferred candidates of the minority group, be they black or white, are usually defeated.[24]

Justice O'Connor's concurrence: the inevitability of proportional representation as the guiding standard

Acquiescing only to the final judgment of the Court in *Gingles*, Justice O'Connor vehemently objected to the majority opinion – particularly the three-pronged test for vote dilution adopted by the Court. In a concurrence joined by the chief justice and Justices Powell and Rehnquist, she challenged the three-pronged test adopted by the Court as going beyond the legislature's intent in its enactment of Section 2 by, in effect, providing minorities with proportional representation.

Justice O'Connor argued that the Court has, in effect, created "the right to a form of proportional representation" for certain minority groups with its combination of an erroneous definition of minority voting strength and its three-pronged test. According to Justice O'Connor, the Court defined undiluted minority voting strength as "maximum feasible minority voting strength," calculating it as the maximum number of districts in which the minority group could constitute a majority in the most favorable single-member district plan (p. 90). The Court then proceeded to measure the degree of dilution by comparing the maximum feasible electoral success, given the number of minority-controlled districts possible, with the actual degree of minority electoral success. This definition is erroneous, she contended, both because it leads inevitably to proportional representation for minority groups and because it emphasizes only the ability of minorities to elect their preferred candidates and ignores other possible avenues by which minority groups might participate in the political process.

Adopting this definition, Justice O'Connor reasoned, would result in a mandatory finding of vote dilution in violation of Section 2 unless the minority's preferred candidates are elected in rough proportion to the minority population percentage. Thus Justice O'Connor challenged the Court's test for vote dilution as leaning too far in the direction of proportional representation, ignoring the

carefully negotiated compromise inserted in the amendment of Section 2 to curtail just such a development.

The impact of Gingles *on the "totality-of-circumstances" test*

In her concurrence in *Thornburg v. Gingles*, Justice O'Connor criticized the Court for adopting a standard that she perceived as essentially replacing the statutory test outlined in the legislative history of Section 2: "As shaped by the Court today, the basic contours of a vote dilution claim require no reference to most of the 'Zimmer factors' . . . which were highlighted in the Senate Report" (p. 92). She stated that she would adhere more to the approach outlined in *Whitcomb* and *White*, considering all of the relevant factors and making the decision as to whether the minority group has less opportunity than do other members of the electorate to participate in the political process and to elect representatives of their choice based on the totality of the circumstances.

Is the three-pronged *Gingles* test designed to replace the totality-of-circumstances test? Or is the three-pronged test a threshold requirement for further evaluation under the totality-of-circumstances test? Or does it simply offer a set of factors to be considered in addition to the list provided in the Senate Report? This uncertainty regarding the role of the three-pronged test relative to the totality-of-circumstances test is reflected in recent court opinions, which span the continuum from simply considering the three prongs as additional factors to be considered along with the Senate Report factors (e.g., see *Buckanaga v. Sisseton Independent School District*, 1986), to treating the three factors as preconditions to be met before considering the totality of the circumstances (e.g., see *Monroe v. City of Woodville*, 1989, and *McNeil v. Springfield Park District*, 1988), to approaching the three-pronged *Gingles* test as if it were the sole standard to be met in a vote dilution challenge (see, e.g., *Gomez v. City of Watsonville*, 1988).

The opinion produced by the Court in *Gingles* provides conflicting signals as to the role of the totality-of-circumstances test: On the one hand, the Court gives little attention to any of the Senate Report factors other than the degree of racial bloc voting and the extent of minority electoral success; in fact, in a footnote, the plurality explicitly states that the most important Senate Report factors to consider in a vote dilution challenge are the extent to which voting is racially polarized and the extent to which minority group members have been elected to office (pp. 48–49, n. 15). The other Senate Report factors are to play a role "supportive of, but *not essential to*, a minority voter's claim" (p. 49, n. 15). However, at several points in the decision the Court specifically refers to the three parts of the *Gingles* test as "necessary preconditions," suggesting that

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When is a minority group "politically cohesive"?

Of the three requirements put forth in *Gingles*, the requirement of politically cohesiveness was the least anticipated by interested observers – it was, in the words of one commentator, a "wild card" (Samuel Issacharoff, speech presented at the Lawyers Committee for Civil Rights Under Law, Conference on Voting Rights, New Orleans, April 20–21, 1990). There had been no previous case law indicating the possible importance of this factor (Lichtman and Hebert, 1986); in fact, the only basis for including it as a condition for establishing a Section 2 violation indicated in *Gingles* was a reference to two previously published law review articles: Blacksher and Menefee, 1982, and Carpeneti, 1972.[14] Nevertheless, this factor has emerged as one of critical importance in a number of cases, particularly those suits in which the minority community is composed of more than one racial or ethnic group.

How should "political cohesiveness" be measured?

The term *political cohesiveness* is not expressly defined by the Court in *Gingles*. The Court's comments concerning the requirement, however, indicate that plaintiffs must demonstrate that members vote sufficiently as a group to establish that (1) there is a distinct group interest and (2) enough members of the group can be expected to vote together to be able to elect candidates of their choice in a single-member district. Therefore an investigation into the question of political cohesiveness entails an examination of the minority community's voting patterns. In fact, according to the *Gingles* Court, the purpose of inquiring into the existence of racially polarized voting is not only to determine white voting patterns but also to "ascertain whether minority group members constitute a politically cohesive unit" (p. 56).[15]

Not all courts have taken political cohesiveness to be limited to an inquiry into voting patterns. For example, a district court found that the Hispanic community was not cohesive in *Gomez v. City of Watsonville*, despite the fact that according to the Ninth Circuit, "the district court found that 95% of the Hispanic voters in heavily Hispanic precincts support Hispanic candidates" (1988, p. 1414). In the district court's view, the issue of whether or not the minority community is politically cohesive must be analyzed in terms of "the community as a whole" and should not be based simply on voting patterns. Evidence cited by the court included the fact that there were some socioeconomic differences among Hispanics (e.g., not all Hispanics shared the same level of income or education) and many eligible Hispanics failed to register or vote, leading the lower court to conclude, in the words of the Ninth Circuit, that "the Hispanic community as a whole was too apathetic to be politically cohesive" (p. 1415).

be underrepresented (by any single-member district plan) as long as racially polarized voting persists, because there are not enough sufficiently large, geographically concentrated minority populations to make possible the creation of many more heavily minority single-member districts (Grofman and Handley, 1991).[7]

Moreover, from a normative perspective, fair representation would seem to require that numbers of representatives bear some relationship to the kinds of individuals represented. In fact, precisely this point was the basis for the pre-*Baker* controversy over rural malapportionment. Existing schemes were judged to be unfair because rural areas were represented in numbers all out of proportion to their populations. That the groups that are severely underrepresented at present are not exclusively geographic and are not a majority does not undercut this point.

Blacks and Hispanics cannot expect to have a number of representatives exactly equal to their numbers in the population, both for the technical reasons alluded to earlier and for the more important reason that ours is not a system of proportional representation. But that does not mean that *any* disproportionate results are acceptable or even that moderately disproportionate results are acceptable, whatever the cause. Blacks cannot be guaranteed 11 or 12 percent and Hispanics 8 percent of the representatives on each elective body (or comparable amounts based on their proportion in a particular area), but neither minorities nor whites/Anglos should be content with minority percentages far below their proportions of the population, let alone with no representatives whatsoever.[8]

Legal questions aside, reasonable individuals might differ on what degree of proportionality precludes corrective action. And in an ideal world, voting would not be sharply polarized, so that the relationship between representation and race, ethnicity, gender, religion, and other such characteristics would be far less important (and, in any event, degrees of nonproportionality would presumably be quite small). But when disproportionality is great and when attitudes and interests differ radically across groups – as with rural/urban differences of the 1950s or current racial/ethnic differences – corrective steps must be taken if our system is to be regarded as fair.

Moreover, if a lack of proportionality or a reasonable approximation thereof comes about because of discrimination, it surely cannot be tolerated. Yet the burden of proof should not rest entirely on the matter of intent. Even in the 1960s it was often difficult to prove intent to discriminate. Some electoral laws are of long standing, so the historical record is not well preserved. Few laws can be justified by only one rationale – whatever their true intent in the minds of legislators – so it often is possible, at least, to present alternative reasons for adopting electoral reforms. With contemporary reforms it is perhaps even more difficult to prove discriminatory intent. For one thing, supporters are not so

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Minority Success in Non-Majority Minority Districts: Finding the "Sweet Spot"

Exhibit
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Abstract: Though African-American and Latino electoral success in state legislative and congressional elections continues to occur almost entirely in majority-minority districts, minorities now have new opportunities in districts that are only 40–50% minority. This success can primarily be explained in terms of a curvilinear model that generates a "sweet spot" of maximum likelihood of minority candidate electoral success as a function of minority population share of the district and the proportion of the district that votes Republican. Past racial redistricting legal challenges often focused on cracking concentrated racial minorities to prevent the creation of majority-minority districts. Future lawsuits may also follow in the steps of recent successful court challenges against racially motivated packing that resulted in the reduction of minority population percentage in a previously majority-minority district in order to enhance minority opportunity in an adjacent non-majority-minority district.

Keywords: minority representation, African American, Latino, congressional elections, state legislative elections

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INTRODUCTION

Over the past 30 years, the number of African Americans and Latinos serving in state legislatures and Congress has grown relatively steadily. This increase is attributable primarily to the rise in the number of districts with substantial minority population concentrations and the increasing propensity of these districts to elect minority representatives—very few minority legislators were elected from overwhelmingly non-Hispanic White districts between 1992 and 2015. However, our data show that there has been a shift in the minority concentration required: prior to the 2010 round of redistricting, minority candidates had a better than equal chance of being elected only in majority-minority districts (e.g., Casellas 2011; Davidson and Grofman 1994; Lublin 1997a; Lublin et al. 2009; Tate 2003; Whitby and Gilliam 1998). More recently, districts falling in the 40–50% Black or Hispanic range have offered minority candidates a better than equal opportunity to be elected to legislative office.

We believe this increase in minority electoral success in districts that have a substantial but not a majority minority population concentration can be explained primarily by the rise of the Republican Party, particularly in the South, and the marked increase in political polarization nationwide. We propose a probability model of minority electoral success that conceptualizes it as a function of the percentage of minorities and the percentage of Republicans in the district. Heightened racial polarization in party primary participation, with White voters increasingly likely to vote in the Republican primary, results in the likelihood of minority candidates securing the Democratic nomination increasing along with the share of Republicans. Consequently, the likelihood of a minority candidate (Democrat) winning the general election also increases, until the percentage Republican reaches the point at which the Republican candidate (non-minority) is likely to win. The point at which the minority candidate has the greatest likelihood of success—the "sweet spot" on the curve—varies depending on the percentage Black and the percentage Republican in the district, with lower minority percentages required as the Republican percentage increases, so long as the Republican percentage is not high enough to win the general election.

In the section "Explaining the Increase in the Number of Minority Legislators," we document the increase in African-American and Latino state and congressional legislators over time and consider a variety of possible explanations for this rise in minority electoral success. We argue that the best explanation for the increase in the number of minority legislators

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is the rise in Republican voting strength, particularly in the South, and heightened partisan polarization. In the section "Modeling the Relationship between Minority Population and Republican Voting Percentages: Finding the "Sweet Spot" for Maximum Minority Electoral Success," we present a probability model depicting the relationship between the percentage Republican in the district and the likelihood of minority electoral success for a series of fixed minority population concentrations. This curvilinear model generates a "sweet spot" identifying the point at which the minority candidate has the maximum likelihood of success. "The Impact of Minority Population Concentrations on Electing Minority Legislators" section provides an updated examination of the relationship between minority population concentrations and provides evidence in support of our model. We find that, while the vast majority of African-American and Latino state and federal legislators are still elected from districts in which Blacks and Hispanics comprise a majority of the population, minority electoral success has increased in districts that have a substantial minority population but are less than majority-minority in composition. The "Multivariate Analysis of Minority Electoral Success" section presents additional evidence of the very strong relationship between minority population concentrations on electing minority candidates using a multivariate analysis. In the final section, we discuss our findings and what we believe are the possible ramifications of this increase in minority electoral success rates in districts with substantial but less than majority minority populations.

EXPLAINING THE INCREASE IN THE NUMBER OF MINORITY LEGISLATORS

As Table 1 indicates, there has been a relatively steady increase over time in the percentage of legislators elected who are African-American and Latino in states with substantial minority populations.[1] The increase in the percentage of African Americans elected over the 23 years between 1992 and 2015 is found in both the South and the non-South, and is evident at all three legislative levels—state house, state senate, and congressional.[2] The growth in the share of Latino legislators in states with Hispanic populations of at least 10% is more pronounced, and is in part a reflection of Hispanic population growth in these states.

Several explanations have been offered for the increased success of minority candidates. First, over the past 30 years, some scholars have

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Table 1. Percent African-American and Latino elected legislators in 1992, 2007, and 2015

	State House			State Senate			U.S. House			N
	1992	2007	2015	1992	2007	2015	1992	2007	2015	92/07/15
African Americans										
Southern states	15.3	18.4	19.9	14.2	16.8	17.8	13.6	13.7	13.8	125/131/138
Non-southern states >10% Black	11.5	13.9	15.1	10.2	13.8	13.4	12.8	13.4	16.3	117/112/104
U.S. House							8.7	9.4	10.1	435
Latinos										
States >10% Latino	10.3	15.2	17.2	9.8	13.0	14.2	9.1	13.0	14.8	186/192/196
U.S. House							3.9	5.7	7.1	435

Source: Data compiled by the authors. The race and ethnicity of legislators were identified using the National Association of Latino Elected and Appointed Officials (NALEO) directory, the National Black Caucus of State Legislators directory and data provided by the Joint Center for Political and Economic Studies, as well as personal knowledge and inquiries.

Note: The eleven states included in the tabulations for the South are: AL, AR, FL, GA, LA, MS, NC, SC, TN, TX, and VA. The eight non-South states with Black populations greater than 10% included in the tabulations are: DE, IL, MD, MI, MO, NJ, NY, and OH. The ten states with Hispanic populations greater that 10% included in the analysis are: AZ, CA, CO, FL, IL, NV, NJ, NM, NY, and TX.

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contended that, whatever the need for race conscious districting in 1965 when the Voting Right Act was first enacted, or in still earlier periods of American history, that need is now past (Cameron, Epstein, and O'Halloran 1996; Swain 1995; Thernstrom 1987; but see Canon 1999). Their view is that voting patterns are no longer as highly racially polarized as they once were and therefore minority candidates can be elected to office with non-Hispanic White support, even in districts where minorities are not a voting majority. The election of America's first African-American President in 2008 has been offered as evidence to support this argument.

We, however, are suspicious of the claim that racially polarized voting has substantially diminished. First, there is no evidence to support this claim—even the 2008 presidential election was, in fact, quite polarized (Ansolabehere, Persily, and Stewart 2010). Moreover, as our data below will show the vast majority of minority office holders are still elected from districts with substantial minority populations. If White voters were increasingly willing to vote for minority candidates, there would be an increase in the number of overwhelmingly White districts electing minorities and we do not see this in the data. Second, the marked increase in partisan polarization, especially in the South, with Whites supporting the Republican Party and minorities strongly supporting congressional and legislative candidates who are Democrats, is very likely to have produced an increase in racial polarization in general elections (Abrajano and Hajnal 2015; Hajnal 2007; McKee 2010; McKee and Springer 2015; McKee and Teigen 2009).

A second explanation focuses on the nature of candidate recruitment by parties and activist networks and highlights the importance of the growth in the pool of minorities who are business people, teachers, lawyers, or other highly educated professionals (Branton 2009; Juenke and Shah 2015; Maestas, Maisel, and Stone 2005; Maestas et al. 2006; Shah 2014). This work also highlights the importance of the growth in the pool of minority candidates who have achieved political positions at lower levels such as school boards and city councils and are thus both better positioned and more highly motivated to seek higher office (Shah 2015). While we recognize the importance of candidate recruitment and the size of the minority recruitment pool, we would emphasize the link between supply side and demand side factors. Only if minority candidates see themselves as having a realistic chance to win would we expect well-qualified candidates to run and, at least until very recently, the perception was that only majority-minority districts provided this opportunity, at least in the South.[3] As our data below demonstrates, this perception is not misplaced: the overwhelming

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majority of minority candidates win election from districts that are majority-minority in composition.

We believe the single best explanation for the increase in minority legislators continues to be the minority concentration in the districts, but that this must be considered in conjunction with the percentage of voters who support Republican candidates in these districts. Our data indicate that while minority candidates are still largely reliant on majority-minority districts for election to legislative office, a growing number of minority candidates are winning in districts with substantial, albeit not majority, minority populations (specifically, in districts that are between 40 and 50% minority in composition). We believe the reason for this increase in minority electoral success in districts with substantial but less than majority-minority population is, perhaps counterintuitively, the rise of the Republican Party, particularly in the South, and the increase in political polarization nationwide. As a growing number of Whites shift their primary votes to Republican primaries, the percentage of minority voters in Democratic primaries increases, making it easier for minority candidates to win the Democratic nomination. The increase in political polarization suggests that, while White voters in general are less likely to vote for minority candidates since these candidates are overwhelmingly associated with the Democratic Party and many White voters are Republican, White Democrats are more likely to vote for an African-American or Latino Democrat than a White Republican (McConnaughy et al. 2010).[4] As long as White Republicans do not constitute a majority of the voters in the general election, and enough White Democrats are willing to cast a vote for an African-American or Latino Democrat over a White Republican, these minority candidates can win the less than majority-minority seat. Below we propose a model conceptualizing the relationship between percentage minority in the district and the percentage of voters in the district who vote Republican and identifying the point on the curve that maximizes the likelihood of minority electoral success given a fixed percentage minority and shifting Republican percentages.

MODELING THE RELATIONSHIP BETWEEN MINORITY POPULATION AND REPUBLICAN VOTING PERCENTAGES: FINDING THE "SWEET SPOT" FOR MAXIMUM MINORITY ELECTORAL SUCCESS

This model is a formalization and extension of the ideas proposed in Grofman, Handley, and Lublin (2001), who show that, if we assume

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some White crossover voting in the general election for the minority candidates nominated by the party with which the White voter identifies, what can be critical for minority electoral success is the ability to win a given party's nomination in the primary.[5] Grofman (2006) refers to these districts as minority "opportunity" districts because, even though minorities do not comprise a majority of the voters, they have a realistic opportunity to elect candidates of their choice to office.[6] Minority voters affiliate disproportionately with the Democratic Party, and the vast majority of minority officeholders are Democrats.[7] A group of minority voters whose population is large enough to provide them with a realistic chance to elect their candidate of choice in a Democratic primary may be successful in the general election even if the group does not comprise a (citizen voting age) population majority. As the proportion of Whites who are Republicans rises, the size of the minority population needed to control the Democratic primary falls. On the other hand, if the proportion of White Republicans is too high, then the winner of the Democratic primary is unlikely to win the general election.

In the partisan election context, where we have a two stage electoral process involving first a primary and then a general election, the *Law of Conditional Probability* tells us that the probability of a minority-preferred (minority) candidate being elected is the product of the probability that the minority-preferred (minority) candidate wins the general election *if* that candidate is the nominee of a given political party, multiplied by the probability that a minority-preferred (minority) wins the primary of that party, summed over all parties.[8] We make the model more tractable by assuming that the only primary we have to be concerned about in the case of minority voters is the Democratic primary, and we posit a simple two parameter model in which there is a given proportion of Black Democrats (BD), and a variable proportion of Republicans (R), all of whom are White (WR), with White Democrats (WD) as the residual category, and the sum of BD and R ranging between 0 and 1. While we could allow for some fraction of African-American voters to be Republican, given the empirical realities, the 100% approximation is not unreasonable, and it dramatically simplifies the analytics without changing the qualitative features of the model.

Now, if we assume voting in the party *primary* is essentially polarized along racial lines, we can model the success likelihoods in the Democratic primary in terms of some function of the ratio BD/(BD + WD). Similarly, we can model the success likelihoods in the general election as some function of the ratio (BD + WD)/(BD + WD + R), if we

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assume that victory for the Democratic candidate in the general election is simply a function of the share of Democrats in the electorate. The result is a curvilinear probability function.

In the simulation we have carried out, using MS Excel, reported in Figure 1, we consider four values of BD: .30, .35, .40, and .45, and model the success function for a Black Democrat in the primary and in the general election using a normal distribution with a fixed standard deviation set arbitrarily at .03 to assure a level of probabilistic variation in outcomes. This is done to reflect the real world of uncertainty as to the results of districts that are reasonably competitive in partisan terms and primaries that are reasonably competitive in racial terms. While the standard deviation of .03 is quite arbitrary, simulations carried out with other values yield qualitatively identical patterns of curvilinearity. But the higher the standard deviation, the more likely it is that even majority Republican districts may occasionally elect a Democrat.

We see from the curvilinear graphs in Figure 1(a)–(d) that as the Black percentage in the district increases:

(1) the optimum proportion Republican to maximize the likelihood of minority electoral success in the general election falls,
(2) the likelihood of African-American success at that maximum rises to 100%, and
(3) the range of Republican share of the electorate over which the likelihood of success of an African-American candidate is above 50% (above 90%) grows considerably.

We could also posit a slightly more complex model in which WD and BD support levels in the general election were allowed to differ from one another and also to vary with the race of the nominated candidate so that we would not assume that both White Democrats and Black Democrats gave 100% support to the Black Democratic candidate in the general election. We might also allow for turnout differences across the races and parties. But we will not present the results of such simulations here because the main idea of how conditional probabilities yield a curvilinearity generating an electoral "sweet spot" is similar for the simple and more complex simulation models. The main difference is that the Black proportion needed to generate a greater than 50% chance of minority candidate victory in the general election will be higher.[9] (See the final section below for more discussion on the variables not included in the model presented here.)

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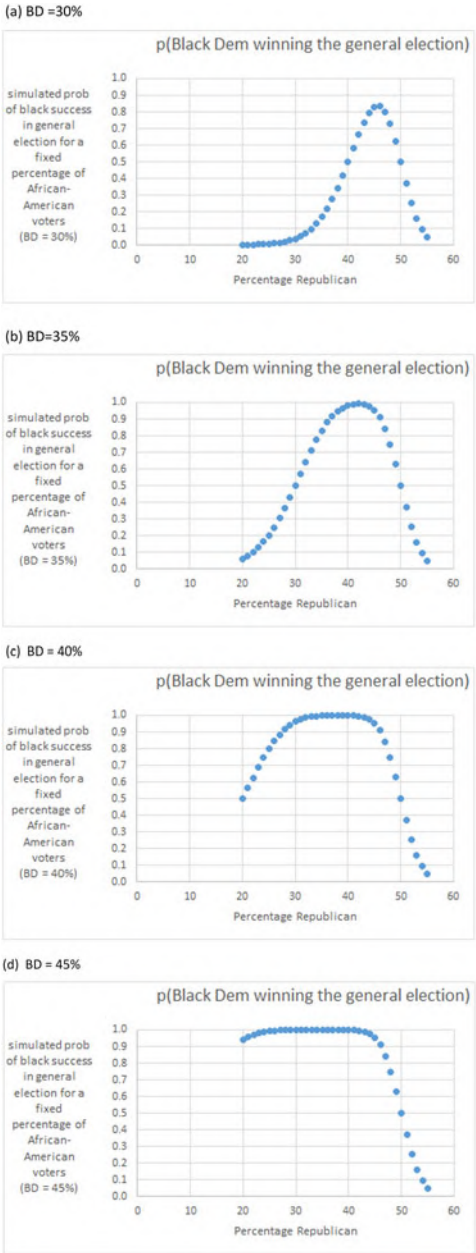

FIGURE 1. Simulation of Black Democrat's probability of winning the general elections as a function of the percentage Republicans in the District, for a fixed percentage of Black Democratic voters: (a) BD = 30%; (b) BD = 35%; (c) BD = 40%; and (d) BD = 45%.

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THE IMPACT OF MINORITY POPULATION CONCENTRATIONS ON ELECTING MINORITY LEGISLATORS

The relationship between the minority concentration of legislative districts and the election of minority legislators has been examined following each decennial census since at least as far back as 1980.[10] The consensus of this literature has been that, except for when there are other minorities in the district, it is very difficult for African-Americans to be elected from state legislative or congressional districts that are less than majority African-American in voting age population. It is even more difficult for Latino candidates to be elected from districts that are less than majority Hispanic in voting age.

This was still true following the 2010 round of redistricting: the overwhelming majority of African-American and Latino legislators were elected from majority-minority districts. As shown in Table 2, in 2015, 95% of all southern African-American state house representatives were elected from majority-minority districts and 96% of the state senators were from majority minority districts. In the U.S. House, every single African American elected from the South represented a district in which non-Hispanic Whites were in the minority. The percentages for states in the non-South with at least 10% Black population are only a little less stark: 82% of African-American state house representatives, 80% of African-American state senators, and 83% of African-American congressional representatives are elected from majority-minority districts. The percentages for Latino representatives are very similar: 82% of Latino state house representatives, 87% of Latino state senators, and 97% of Latino congressional representatives are elected from majority-minority districts.[11]

Table 3 examines the relationship between the minority composition of districts and the election of African Americans to legislative office. Table 3A divides legislative districts into categories based on the percent Black in the district and lists the percentage of African Americans representing the districts in each category in 2015. A very distinct pattern emerges, with the percentage of African Americans elected increasing as the Black population share rises. For example, less than 1% of state legislative districts with between 0 and 20% Black elect African Americans to state legislative office, but over 80% of the districts with Black populations falling in the range of 50–55% elect African Americans.

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Table 2. The percent of Black Democratic and Latino State House, State Senate, and U.S. representatives in 2015 by district racial composition

	State House			*State Senate*			*U.S. House*		
	Black population majority districts	B + L population majority districts	Other districts	Black population majority districts	B + L population majority districts	Other districts	Black population majority districts	B + L population majority districts	Other districts
African Americans									
Southern	85	10	5	85	11	4	74	26	0
Non-southern	73	9	18	76	4	20	77	6	18
>10% Black U.S. House							67	21	12
	Latino population majority districts	L + B population majority districts	Other districts	Latino population majority districts	L + B population majority districts	Other districts	Latino population majority districts	L + B population majority districts	Other districts
Latinos									
>10% Latino	74	8	18	78	9	13	76	21	3
U.S. House							82	14	5

Source: See Table 1.

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Table 3. Percent Black elected by district racial composition

	0–20%	20–30%	30–40%	40–45%	45–50%	50–55%	55–60%	60–70%	70–80%	80–100%
	A. Percent Black in total population									
Percent Black elected										
State House	.8	8.6	14.6	53.1	70.6	85.7	76.1	89.8	96.6	100.0
State Senate	.2	4.2	14.6	45.5	83.3	81.3	77.1	89.5	92.9	100.0
U.S. House	1.4	13.3	21.1	100.0	100.0	100.0	100.0	85.7	–	–
Number of cases										
State House	1,390	269	123	32	17	56	92	137	58	18
State Senate	482	120	48	11	6	32	35	38	14	3
U.S. House	354	30	19	2	1	8	14	7	0	0
	B. Percent Black plus Hispanic in total population									
Percent Black elected										
State House	.3	2.1	5.0	16.4	19.2	41.4	60.5	77.2	73.9	59.3
State Senate	0	1.1	3.4	7.1	25.0	40.0	71.4	73.9	70.5	47.1
U.S. House	.6	1.0	5.5	9.5	0	15.4	75.0	71.4	40.0	30.8
Number of cases										
State House	950	377	240	61	52	29	76	206	115	86
State Senate	305	180	88	28	20	10	28	69	44	17
U.S. House	177	99	55	21	5	13	4	28	20	13
	C. Percent non-Hispanic White in total population									
Percent Black elected										
State House	63.1	70.3	68.8	38.1	17.0	11.9	7.3	3.0	.2	.3
State Senate	52.9	69.8	64.5	50.0	15.0	0	12.5	.7	.6	0
U.S. House	29.6	45.2	52.0	20.0	0	6.3	9.5	2.7	1.1	0

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Number of cases										
State House	141	165	189	63	59	67	95	305	426	682
State Senate	34	63	62	30	20	26	32	135	181	206
U.S. House	27	31	25	15	13	16	21	75	89	123

Note: This table includes only states greater than 10% Black for state houses and senates but all of the U.S. for the U.S. House. The Black population share was calculated out of the total population and includes all people who checked Black on the U.S. Census alone or in combination with another race. For congressional districts, the Black plus Latino population share was calculated out of the total population and includes all people who responded positively to the question on Hispanic origin or checked Black on the separate racial question regardless of whether or not they also checked another race or said that they are Hispanic as well. However, for state legislative districts, the Black plus Latino population share does not include non-Hispanic Blacks who also checked another race, as those data were unavailable. The non-Hispanic White population share was calculated out of total population and includes all people who responded negatively to the question on Hispanic origin and checked only White in response to the separate racial question. For other source information see Table 1.

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Table 4 demonstrates that the relationship between the Hispanic composition of districts and the election of Latinos to office is comparable with what we find in Table 3 for Africans Americans. However, as Table 4A indicates, Latinos only have the same probability of winning in districts with higher percentages of Hispanics compared with the equivalent Black population share for African Americans. This can be explained by the lower percentage of the Hispanic population that is eligible to vote.

What is important to note about Table 3A (besides the low percentages in categories below 40%, and high percentages in categories about 50%) is that even districts between 40 and 50% Black are more likely than not to elect African Americans to legislative office—and actually far more likely than not in districts in the 45–50% range. This is a recent change: the percentage of districts in the 40–50% range electing African-American candidates was lower a decade ago.[12] There has been an increase in the share of Latino representatives elected from 40–50% Latino citizen population districts as well.[13] Unlike past decades, it is the increase in the percentage of minorities elected from districts with substantial but not majority minority populations, in conjunction with the increase in the number of such districts,[14] which accounts for much of the recent growth in minority representation.

While increases in African-American and Latino representation over past decades have largely come about through an increase in the number of majority-minority districts and the proportion of these districts that elect minorities,[15] following the 2010 redistricting round, the number of majority Black districts did not increase substantially, and these districts were only slightly more likely to elect African Americans.[16] The number of Latino citizen population majority districts actually decreased, and these districts were no more likely to elect Latinos to office than the previous decade.[17] On the other hand, districts with less than 40% were no more likely to elect minorities to office in 2015 than they were previously.

The finding that minority candidates have enjoyed increased success in districts that are between 40 and 50% minority, and not in districts with less than 40% minority, provides evidence for our contention that the rise of the Republican Party and the increase in political polarization have, rather counterintuitively, led to increased minority electoral success at the state legislative and congressional levels.

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Table 4. Percent Latino elected by district racial composition

	0–20%	20–30%	30–40%	40–45%	45–50%	50–55%	55–60%	60–70%	70–80%	80–100%
	A. Percent Hispanic in total population									
Percent Latino elected										
State House	1.9	8.2	15.1	22.6	19.1	36.4	64.5	75.9	86.2	90.9
State Senate	.5	1.6	10.0	18.8	33.3	55.6	61.5	74.1	83.3	100.0
U.S. House	.6	2.4	4.6	28.6	50.0	33.3	33.3	75.0	83.3	75.0
Number of cases										
State House	474	158	93	31	21	22	31	54	29	22
State Senate	202	62	40	16	9	9	13	27	6	7
U.S. House	326	42	22	7	6	3	3	16	6	4
	B. Percent citizen Hispanic in total population									
Percent Latino elected										
State House	2.6	13.2	34.6	42.9	69.4	85.2	81.3	100.0	80.0	–
State Senate	.4	5.2	34.2	50.0	73.3	64.3	80.0	100.0	100.0	–
U.S. House	.8	0	41.7	60.0	80.0	66.7	50.0	80.0	–	–
Number of cases										
State House	588	129	81	28	36	27	16	20	10	0
State Senate	239	58	38	12	15	14	5	9	1	0
U.S. House	356	34	12	10	10	6	2	5	0	0
	C. Percent non-Hispanic White in total population									
Percent Latino elected										
State House	54.9	45.2	23.2	9.5	20.9	9.1	12.1	4.1	2.0	2.6
State Senate	64.1	40.9	17.1	11.8	8.3	10.5	4.4	1.5	0	0
U.S. House	55.6	29.0	4.0	20.0	0	0	4.8	0	0	1.6
Number of cases										
State House	113	93	82	42	43	55	58	148	148	153
State Senate	39	44	35	17	24	19	23	66	67	57
U.S. House	27	31	25	15	13	16	21	75	89	123

Note: This table includes only states greater than 10% Latino for state houses and senates but all of the U.S. for the U.S. House. The Latino population share was calculated out of the total population and includes all people who responded positively to the question on Hispanic origin on the U.S. Census. The non-Hispanic White population share was calculated out of total population and includes all people who responded negatively to the question on Hispanic origin and checked only White in response to the separate racial question. For other source information see Table 1.

MULTIVARIATE ANALYSIS OF MINORITY ELECTORAL SUCCESS

To confirm our contention that voting remains racially polarized and the electoral success of African-American candidates continues to depend on districts with substantial minority population concentrations, we created multivariate models shown in Table 5 with seven nonracial controls included in addition to proportion Black and proportion Hispanic: median family income, proportion high school graduates, proportion urban, proportion foreign born, proportion 65 and over, proportion government workers, location in the South. None of the nonracial controls have a consistent statistically significant impact ($p < .05$) on the election of either African-American or Latino representatives in state house, state senate, or congressional elections. In contrast, the Black population share has a strongly dominant influence on the election of African-American representatives with the proportion of Hispanics playing a secondary role.

Replacing the single control for all southern states with two separate controls for the five Deep South states of AL, GA, LA, MS, and SC and the six Rim South states of AR, FL, NC, TN, TX, and VA confirms Hicks's et al. (2018) finding that it is more difficult for African Americans to win state legislative elections in the Deep South. In contrast, there is no statistically meaningful difference in their electoral success between the Rim South and non-South. These intra-South differences reflect especially high rates of White Republican support among Deep South Whites (Lublin 2004; McKee and Springer 2015). Models of U.S. House elections, however, do not support extension of this conclusion, as African Americans do not perform appreciably worse in either the Deep South or the Rim South in congressional contests.

The Hispanic population share overwhelms all other factors in explaining the election of Latino representatives, as shown in Table 6. Models that distinguish citizen and non-citizen Hispanics unsurprisingly show that the share of citizen Hispanics has much greater impact than the share of non-citizen Hispanics, as the latter cannot vote. The same analyses nonetheless indicate that increases in the share of non-citizen Hispanics aids the election of Latinos because citizen Hispanics comprise a larger share of the electorate when the population includes a large number of non-citizens. Figure 2 reveals the predicted relationship between the percentage of African Americans and Latinos and the election of African-American and Latino state representatives, respectively, based on the final simplified models in Tables 5 and 6.

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Table 5. Logit analysis of Black representatives

	U.S. House			State Senate			State House		
Proportion Black in total population	15.78 (3.23)	15.80 (3.26)	16.26 (2.01)	17.23 (1.94)	17.74 (1.96)	15.52 (1.27)	14.28 (.85)	14.55 (.87)	13.77 (.64)
Proportion Hispanic in total population	2.21 (4.59)	2.19 (4.61)	4.41 (1.36)	1.37 (3.68)	−1.36 (4.03)	3.39 (1.34)	3.30 (1.45)	1.99 (1.54)	4.09 (.64)
Median family income ($1,000)	−.01 (.03)	−.01 (.03)		**−.00** (.03)	.01 (.03)		.01 (.01)	**.00** (.01)	
Proportion high school graduates	−.87 (9.77)	−.92 (9.79)		7.51 (7.11)	2.14 (7.26)		2.34 (2.37)	1.02 (2.44)	
Proportion urban	4.95 (3.49)	4.85 (3.90)							
Proportion foreign born	−.82 (4.76)	−.80 (4.77)		3.35 (3.79)	3.94 (4.01)		**.88** (**.88**)	1.03 (.91)	
Proportion 65 and over				2.14 (8.45)	3.07 (8.47)		−4.28 (3.79)	−4.99 (3.85)	
Proportion government workers	−7.40 (21.32)	−7.57 (21.53)		−27.81 (12.10)	−31.77 (12.40)		−2.72 (5.19)	−2.59 (5.25)	
South	−.62 (.78)			−.08 (.47)			.01 (.25)		
Deep South		−.69 (1.35)			−.97 (.57)			−.61 (.30)	
Rim South		−.61 (.80)			.71 (.56)			.52 (.28)	
Constant	−8.61 (7.44)	−8.48 (7.77)	−6.92 (.79)	−10.68 (3.64)	−7.89 (3.77)	−7.62 (.65)	−8.08 (1.75)	−6.98 (1.81)	−6.73 (.32)
Number of observations	435	435	435	789	789	789	2192	2192	2192
Log likelihood	−45.7	193.7	−48.97	−100.5	501.5	−106.50	−333.1	1420.1	−337.46
Pseudo R^2	**.68**	.70	.56	.71	.72	.69	**.68**	.69	.67

Note: State legislative results include all states greater than 10% Black. The results are virtually the same if one excludes districts that elected Latinos. Different variables included for state legislative and congressional elections due to data availability.

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Table 6. Logit analysis of Latino representatives

	U.S. House			State Senate			State House		
Proportion Hispanic in total population	11.00 (4.02)	10.47 (1.32)		14.37 (3.10)	12.53 (1.47)		9.61 (1.18)	8.91 (.61)	
Proportion citizen Hispanic in total pop.			11.67 (2.38)			13.99 (1.90)			10.50 (.93)
Proportion non-citizen Hispanic in total pop.			7.16 (5.48)			8.15 (3.57)			4.58 (1.87)
Proportion Black in total population	−12.50 (5.56)			−.21 (3.03)			−3.17 (1.47)		
Median family income ($1,000)	−.15 (.05)			−.09 (.03)			−.02 (.01)		
Proportion high school graduates	15.01 (8.39)			19.48 (6.36)			4.29 (2.55)		
Proportion urban	.01 (3.90)								
Proportion foreign born	5.71 (4.38)			−1.52 (2.90)			−.75 (.71)		
Proportion 65 and over				−19.39 (9.97)			−3.69 (3.91)		
Proportion government workers	8.35 (28.85)			−11.41 (16.33)			−4.86 (7.77)		
South	−2.47 (1.03)			−.56 (.75)			−.36 (.29)		
Constant	−9.96 (6.19)	−6.00 (.65)	−6.03 (.66)	−9.42 (3.47)	−6.83 (.75)	−6.89 (.76)	−5.31 (1.66)	−4.86 (.29)	−4.95 (.30)
Number of observations	435	435	435	391	391	391	935	935	935
Log likelihood	−37.44	−49.16	−48.97	−62.66	−70.09	−69.22	−231.83	−240.58	−237.61
Pseudo R^2	.67	.56	.56	.61	.57	.57	.46	.44	.45

Note: State legislative results include all states greater than 10% Hispanic. The results are virtually the same if one excludes districts that elected African Americans. Different variables included for state legislative and congressional elections due to data availability.

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CONCLUSION

As in previous decades, minority legislators are still overwhelmingly elected from districts that are majority-minority in composition. In the past, the increase in the number of minority officeholders could be explained by an increase in the number of majority-minority districts and the propensity of these districts to elect minority representatives. While the increase after the 2010 round of redistricting can also be explained in part by the increase in the number of majority-minority districts, a new development is the substantial rise in the success rates of minority candidates in districts that fall in the 40–50% minority range.[18] This success is concomitant with (1) White voters in the South deserting the Democratic Party in large enough numbers to make it easier for minorities to win Democratic primaries and (2) an increase in political polarization nationally, making it more likely that at least some White Democrats will vote for an African-American or Latino Democrat over a White Republican, allowing the minority candidate to win the general election.

During the 2010 redistricting round, several states increased the number of districts that fell in the 40–50% minority range. However, at least three states drew majority-minority districts without determining whether their pre-established minority percentage target (50% or, in the case of VA, 55%, Black voting age population) was required to elect minority-preferred candidates.[19] As a result of litigation challenging these districts as drawn with a preponderant racial intent in violation of the Fourteenth Amendment, these states—AL, NC, and VA—had to redraw some of their districts.[20]

It is possible that the number of districts with substantial, but less than majority, minority populations will increase in the next round of redistricting—perhaps in an attempt to avoid the type of litigation faced by AL, NC, and VA.[21] But caution must be exercised: determining whether a minority candidate can win election in a given district requires a district-specific analysis. The conceptual model offered here relies solely on the minority and Republican percentages in the district to identify the "sweet spot" and some assumptions are made that may be unrealistic in a given district (e.g., 100% of the minority voters and 100% of the White Democrats support the minority Democrat in the general election). A district-specific analysis that includes an analysis of voting patterns would provide an indication of how to adjust the model to account for less than perfect minority voting cohesion, less than 100% White Democratic

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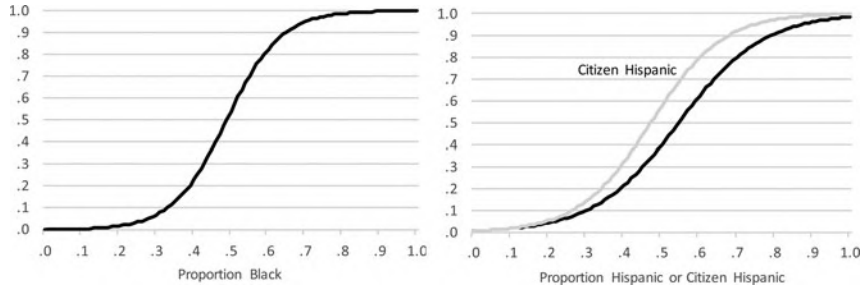

FIGURE 2. (a) Probability of Black state representatives. (b) Probability of Latino state representatives.

crossover voting for the minority candidate and less than equal minority and White voting age participation rates.[22]

NOTES

1. The eleven states included in the tabulations for the South are: AL, AR, FL, GA, LA, MS, NC, SC, TN, TX, and VA. The eight non-South states with Black populations greater than 10% included in the tabulations are: DE, IL, MD, MI, MO, NJ, NY, and OH. The ten states with Hispanic populations greater that 10% included in the analysis are: AZ, CA, CO, FL, IL, NV, NJ, NM, NY, and TX.

2. The years chosen as our points of comparison were based on the availability of information on the race and ethnicity of legislators at the time we undertook the data compilation. Ethnicity was identified using the National Association of Latino Elected and Appointed Officials (NALEO) directory and race was identified using the National Black Caucus of State Legislators directory and data provided by the Joint Center for Political and Economic Studies. Personal knowledge and inquiries supplemented the identification process.

3. In the 1960s and 1970s, some asserted that a 65% African-American population was required to provide minorities a realistic opportunity to elect candidates of choice in order to compensate for differentials in voting age eligibility, registration and turnout; see Parker (1990); discussion in Brace et al. (1988).

4. In 2018, seven new African-American Democrats won election to the U.S. House from districts less than 40% Black and Latino combined (Lublin 2018). Their elections provide further evidence that Black Democrats can retain sufficient White Democratic support to win outside of majority-Black districts, though it remains easier to win their nominations in districts where African Americans control the outcome of the Democratic primary.

5. Grofman, Handley, and Lublin (2001) is not the only work to highlight the importance of primaries for minority electoral success; see Branton (2009) and Grofman (2006).

6. Grofman (2006) provides an ordinal scaling of districts in which minorities could be said to have some degree of influence, from districts in which minorities control who will be elected by virtue of being a majority of the voters in both the Democratic primary and the general election (these are inevitably majority-minority districts, but not all majority-minority districts are necessarily control districts); to districts in which minorities do not comprise a majority of the voters but have a realistic opportunity to elect minority candidates of choice because of consistent White crossover voting; to, finally, districts in which minority voters have some electoral influence but not enough to be assured of electing candidates whom they prefer even with substantial White crossover voting (see also Engstrom 2012).

7. In some parts of the South, African Americans form a disproportionate share of Democratic officeholders (e.g., 100% of Georgia's congressional delegation and 72% of state legislators).

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8. We recognize that not all minority legislators are the choice of minority voters, and some White legislators are the minority-preferred candidate. An analysis of voting patterns is required to determine who the minority-preferred candidates are and whether they are usually successful. However, for the purposes of simplicity, this model assumes the Black Democrat is the candidate of choice for minority voters.

9. A similar model can be constructed for Latino voters but, because of lower voting age and citizenship rates for Hispanics than for African-Americans, for a fixed Republican vote share, the proportion of Hispanics needed to optimize Hispanic representation will be higher than what the simulation shows for African-Americans.

10. Examples of articles that have directly addressed the relationship between descriptive representation and minority population concentrations include Branton (2009); Bratton (2006); Engstrom and McDonald (1981); Epstein and O'Halloran (2006); Grofman and Handley (1989); Handley, Grofman, and Arden (1998); Juenke and Preuhs (2012); Lublin et al. (2009); Preuhs and Hero (2011); Preuhs and Juenke (2011); see also Brace et al. (1988); Bullock (2010); Grofman and Handley (1989); Hajnal (2009); Hicks et al. (2018); Lublin (1997a, 1997b); Marschall, Ruhil, and Shah (2010).

11. The overwhelming concentration of successful African-American and Latino candidates in majority-minority districts cannot be attributed to residential patterns: less than half of all African Americans live in majority Black districts, and less than half of all Latinos live in majority Hispanic districts (tabular data omitted for space reasons).

12. The percentage of 40 to 45% Black districts that elected African Americans increased between 2007 and 2015 from 36.7 to 53.1% in state house districts, 23.8 to 45.5% in state senate districts, and remained the same at 100% for congressional districts. The comparable percentages for the 45 to 50% Black range were an increase from 62.9 to 70.6% in state house districts, 36.4 to 83.3% in state senate districts, and 50 to 100% for congressional districts. (Compare data in Table 4 in Lublin et al. (2009) with Table 3.)

13. The share of 40–45% Latino citizen population districts that elected Latinos to office rose from 33.3 to 42.9% in state house districts, 37.5 to 50.0% in state senate districts, and 40 to 60% for congressional districts. The comparable percentages for the 45–50% Latino range were an increase from 57.9 to 69.4% in state house districts, 37.5 to 73.3% in state senate districts, and 50 to 80% for congressional districts. (Compare data in Table 5 in Lublin et al. (2009) with Table 4.)

14. The number of districts between 40 and 50% Black increased between 2007 and 2015 from 93 to 113 for state house districts, from 44 to 48 for state senate districts, and from 19 to 26 for congressional districts. The number of districts between 40 and 50% Latino also increased between 2007 and 2015: from 31 to 64 for state house districts, from 16 to 27 for state senate districts, and from 9 to 20 for congressional districts. (Compare data in Table 4 in Lublin et al. (2009) with Table 3.)

15. The increase over time in the percentage of majority-minority districts that elect minority legislators is likely to be at least in part due to increasing minority participation and more, and perhaps stronger, minority candidates willing to compete. See, for example, Baretto et al. (2004); Fraga (2016); Henderson, Sekhon, and Titiunik (2016); and Whitby (2007).

16. The number of majority Black state house districts increased from 351 to 361, majority Black state senate districts from 111 to 122, and majority Black congressional districts from 26 to 29 between 2007 and 2015. Only majority Black districts that fell in the 50–55% range and over 80% were consistently more likely to elect African-American legislators to office. (Compare data in Table 4 in Lublin et al. (2009) with Table 3.)

17. While the number of majority Latino population districts increased slightly, the number of majority Latino citizen population districts declined: from 109 to 73 for state house districts, 43 to 29 for state senate districts, and 20 to 13 for congressional districts. (Compare data in Tables 3 and 4 in Lublin et al. (2009) with Tables 2 and 3.) In none of the majority Latino district ranges were Latino legislators consistently more likely to be elected. (Compare data in Table 5 in Lublin et al. (2009) with Table 4.)

18. In 2018, seven new African-American Democratic U.S. House members gained election from districts with even fewer minorities (Lublin 2018).

19. This insistence on retaining majority-minority districts at or above a 50% minority voting age population may have been the result of misinformation about what was required to obtain preclearance under Section 5 of the Voting Rights Act or to have safe harbor from a Section 2 lawsuit. Alternatively (or additionally), drawing districts with minority populations above 50% may have stemmed from a

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desire by Republican legislators to pack Democratic districts (i.e., concentrate more minority voters than necessary to provide minority voters with a realistic opportunity to elect their preferred candidates) and retain higher non-Hispanic White population percentages in the surrounding districts. In any case, the Supreme Court held that the Voting Rights Act does not require the maintenance of a particular numerical minority percentage, rather it requires the jurisdiction to maintain the minority group's ability to elect its candidate of choice. See *Alabama Legislative Black Caucus versus Alabama*, 135 S. Ct. 1257, 1272 (2015).

20. Alabama (*Alabama Legislative Black Caucus versus Alabama*, 135 S. Ct. 1257, 2015), North Carolina (*Cooper versus Harris* 137 S. Ct. 1455, 2017), and Virginia (*Personhuballah versus Alcorn* 155 F.Supp.3d 552, 2016).

21. The results of lawsuits such the one decided in Virginia have shown that lowering minority population percentages in previously majority-minority districts, such as the Third Congressional District of Virginia, need not reduce minority representation. Indeed, under the first election following the court's adoption of a new plan, the African-American incumbent was easily re-elected In District 3, despite a reduction in the Black voting age population percentage by over ten percentage points to 45.3%. In addition, the newly drawn District 4, with a Black voting age population of approximately 40%, also elected an African-American after he succeeded in winning the Democratic primary.

22. Whether any specific candidate can win a given general election is also dependent on considerations that cannot be included in the model such as how well-qualified the candidates are and how much money the candidates are able to raise.

REFERENCES

Abrajano, Marisa, and Zoltan L. Hajnal. 2015. *White Backlash: Immigration, Race, and American Politics*. Princeton, NJ: Princeton University Press, 63–87.

Ansolabehere, Stephen, Nathaniel Persily, and Charles Stewart. 2010. "Race, Region, and Vote Choice in the 2008 Election: Implications for the Future of the Voting Rights Act." *Harvard Law Review* **123** (6): 1–52.

Barreto, Matthew A., Gary M. Segura, and Nathan D. Woods. 2004. "The Mobilizing Effect of Majority-Minority Districts on Latino Turnout." *American Political Science Review* **98** (1): 65–75.

Brace, Kimball, Bernard Grofman, Lisa Handley, and Richard Niemi. 1988. "Minority Voting Equality: The 65 Percent Rule in Theory and Practice." *Law and Policy* **10** (1):43-62.

Branton, Regina P. 2009. "The Importance of Race and Ethnicity in Congressional Primary Elections." *Political Research Quarterly* **62** (3): 459–73.

Bratton, Kathleen. 2006. "The Behavior and Success of Latino Legislators: Evidence From the States." *Social Science Quarterly* **87** (5): 1136–57.

Bullock, Charles S. III 2010. *Redistricting: The Most Political Activity in America*. Lanham, MD: Rowman and Littlefield.

Cameron, Charles, David Epstein, and Sharyn O'Halloran. 1996. "Do Majority-Minority Districts Maximize Substantive Black Representation in Congress?" *American Political Science Review* **90** (4): 794–812.

Canon, David T. 1999. *Race, Redistricting and Representation: The Unintended Consequences of Black Majority Districts*. Chicago: University of Chicago Press.

Casellas, Jason. 2011. *Latino Representation in State Houses and Congress*. New York: Cambridge University Press.

Davidson, Chandler, and Bernard Grofman, eds. 1994. *Quiet Revolution in the South* Princeton: Princeton University Press.

Engstrom, Richard L. 2012. "Influence Districts and the Courts: A Concept in Need of Clarity." In *The Most Fundamental Right: Contrasting Perspectives on the Voting Rights Act*, ed. Daniel McCool. Bloomington, IN: Indiana University Press, 67–119.

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Engstrom, Richard L., and Michael D. McDonald. 1981. "The Election of Blacks to City Councils: Clarifying the Impact of Electoral Arrangements." *American Political Science Review* **75** (2), 344–54.

Epstein, David, and Sharyn O'Halloran. 2006. "Trends in Minority Representation, 1974–2000." In *The Future of the Voting Rights Act*, eds. David Epstein, Richard Pildes, Rodolfo de la Garza, and Sharyn O'Halloran. New York: Russell Sage Foundation, 61–80.

Fraga, Bernard L. 2016. "Candidates or Districts? Reevaluating the Role of Race in Voter Turnout." *American Journal of Political Science* **60** (1), 97–122.

Grofman, Bernard. 2006. "Operationalizing the Section 5 Retrogression Standard of the Voting Rights Act in the Light of *Georgia v. Ashcroft*: Social Science Perspectives on Minority Influence, Opportunity and Control." *Election Law Journal* **5** (3): 250–82.

Grofman, Bernard, and Lisa Handley. 1989. "Black Representation: Making Sense of Electoral Geography at Different Levels of Government." *Legislative Studies Quarterly* **14** (2): 265-279.

Grofman, Bernard, Lisa Handley, and David Lublin. 2001. "Drawing Effective Minority Districts: A Conceptual Framework and Some Empirical Evidence." *North Carolina Law Review* **79** (5): 1383–430.

Hajnal, Zoltan L. 2007. *Changing White Attitudes Toward Black Political Leadership*. New York: Cambridge University Press.

Hajnal, Zoltan L. 2009. "Who Loses in American Democracy? A Count of Votes Demonstrates the Limited Representation of African Americans." *American Political Science Review* **103** (1): 37–57.

Handley, Lisa, Bernard Grofman, and Wayne Arden. 1998. "Electing Minority-Preferred Candidates to Legislative Office." In *Race and Redistricting in the 1990s*. ed. Bernard Grofman. New York: Agathon Press, 13–39.

Henderson, John A., Jasjeet S. Sekhon, and Rocío Titiunik. 2016. "Cause or Effect? Turnout in Hispanic Majority-Minority Districts." *Political Analysis* **24** (3): 404–12.

Hicks, William D., Carl E. Klarner, Seth C. McKee, and Daniel A. Smith. 2018. "Revisiting Majority-Minority Districts and Black Representation." *Political Research Quarterly* 7 (2), 408–23.

Juenke, Eric Gonzalez, and Robert R. Preuhs. 2012. "Irreplaceable Legislators? Rethinking Minority Representatives in the New Century." *American Journal of Political Science* **56** (3): 705–15.

Juenke, Eric Gonzalez, and Paru Shah. 2015. "Not the Usual Story: The Effect of Candidate Supply on Models of Latino Descriptive Representation." *Politics, Groups, and Identities* **3** (3): 438–53.

Lublin, David. 1997a. "The Election of Africans and Latinos to the U.S. House of Representatives, 1972–1994." *American Politics Research* **25** (3): 269–86.

Lublin, David. 1997b. *The Paradox of Representation: Racial Gerrymandering and Minority Interests in Congress*. Princeton: Princeton University Press.

Lublin, David. 2004. *The Republican South: Democratization and Partisan Change*. Princeton: Princeton University Press.

Lublin, David. 2018. "Eight white-majority districts elected black members of Congress this year. That's a breakthrough." Washington Post. 19 November 2018.

Lublin, David, Thomas Brunell, Bernard Grofman, and Lisa Handley. 2009. "Has the Voting Rights Act Outlived Its Usefulness? In a Word, 'No'." *Legislative Studies Quarterly* **34** (4): 525–53.

Maestas, Cherie D., Sarah Fulton, L. Sandy Maisel, and Walter J. Stone. 2006. "When to Risk It? Institutions, Ambitions, and the Decision to Run for the U.S. House." *American Political Science Review* **100** (2): 195–208.

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Maestas, Cherie D., L. Sandy Maisel, and Walter J. Stone. 2005. "National Party Efforts to Recruit State Legislators to Run for the U.S. House." *Legislative Studies Quarterly* **30** (2): 277–300.

Marschall, Melissa J., Anirudh V. S. Ruhil, and Paru R. Shah. 2010. "The New Racial Calculus: Electoral Institutions and Black Representation in Local Legislatures." *American Journal of Political Science* **54** (1): 107–24.

McConnaughy, Corrine M., Ismail K. White, David L. Leal, and Jason P. Casellas. 2010. "A Latino on the Ballot: Explaining Coethnic Voting Among Latinos and the Response of White Americans." *Journal of Politics* **72** (4), 1199–211.

McKee, Seth C. 2010. *Republican Ascendancy in Southern U.S. House Elections*. Boulder: Westview Press.

McKee, Seth C., and Jeremy M. Teigen. 2009. "Probing the Reds and the Blues: Sectionalism and Voter Location in the 2000 and 2004 U.S. Presidential Elections." *Political Geography* **28** (8): 484–95.

McKee, Seth C., and Melanie J. Springer. 2015. "A Tale of 'Two Souths': White Voting Behavior in Contemporary Southern Elections." *Social Science Quarterly* **96** (2): 588–607.

Parker, Frank R. 1990. *Black Votes Count*. Chapel Hill: University of North Carolina Press.

Preuhs, Robert R., and Rodney E. Hero. 2011. "A Different Kind of Representation: Black and Latino Descriptive Representation and the Role of Ideological Cuing." *Political Research Quarterly* **64** (1): 157–71.

Preuhs, Robert R., and Eric Gonzalez Juenke. 2011. "Latino US State Legislators in the 1990s: Majority-Minority Districts, Minority Incorporation, and Institutional Position." *State Politics and Policy* **11** (1): 48–75.

Shah, Paru. 2014. "It Takes a Black Candidate: A Supply-Side Theory of Minority Representation." *Political Research Quarterly* **67** (2): 266–79.

Shah, Paru. 2015. "Stepping Up: Black Political Ambition and Success." *Politics, Groups, and Identities* **3** (2): 278–94.

Swain, Carol M. 1995. *Black Faces, Black Interests*. Enlarged Edition. Cambridge, MA: Harvard University Press.

Tate, Katherine. 2003. *Black Faces in the Mirror: African Americans and Their Representatives in the U.S. Congress*. Princeton, NJ: Princeton University Press.

Thernstrom, Abigail. 1987. *Whose Votes Count: Affirmative Action and Minority Voting Rights*. Cambridge, MA: Harvard University Press.

Whitby, Kenny J. 2007. "The Effect of Black Descriptive Representation on Black Electoral Turnout in the 2004 Elections." *Social Science Quarterly* **88** (4), 1010–23.

Whitby, Kenny J., and Franklin D. Gilliam Jr. 1998. "Representation in Congress: Line Drawing and Minorities." In *Great Theatre: The American Congress in the 1990s*, eds. Herbert F. Weisberg and Samuel C. Patterson. New York: Cambridge University Press, 33–51.

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