

Rebuttal Report of Dr. Stephen Ansolabehere

July 27, 2022

Stephen Ansolabehere

I. Statement of Inquiry

1. I have been asked to examine and respond to portions of the July 18, 2022, expert report of Dr. John Alford and the July 23, 2022, expert report of Mr. Sean Trende in this matter.
2. My qualifications are described in my May 20, 2022, Expert Report and in my CV that is attached as Appendix B to that report.
3. This rebuttal report is based on data provided by Dr. Alford and data used in preparing my May 20, 2022, Expert Report and my June 13, 2022, Supplemental Report.

II. Response to Dr. Alford

A. Matters Dr. Alford Does Not Dispute or Address

4. Substantial portions of my Expert Report and Supplemental Report are undisputed by Dr. Alford. Dr. Alford does not dispute or offer any evidence contrary to any of the estimates of racial voting patterns in general elections offered in Part IV and Part V and the Appendix to my Expert Report. He also does not dispute or offer any evidence contrary to any of the estimates offered in my Supplemental Report. Dr. Alford therefore does not dispute any of my quantitative analysis of racial voting patterns, including minority cohesion and white bloc voting, in the enacted congressional map, in either of my congressional demonstration maps, or in my Texas House demonstration maps.
5. Dr. Alford does not dispute my analysis of the ability of minorities to elect their preferred candidates in Enacted CD-7, Enacted CD-9, Enacted CD-15, Enacted CD-16, Enacted CD-18, Enacted CD-20, Enacted CD-23, Enacted CD-27, Enacted CD-28, Enacted CD-29, Enacted CD-30, Enacted CD-32, Enacted CD-33, Enacted CD-34, or Enacted CD-35. For a summary of my analysis, see Table 3 of my expert report.
6. Dr. Alford offers no analysis of Demonstration Map 1 or of Demonstration Map 2, and he does not dispute my analysis of the demographics of the districts in those maps, nor my analysis of the ability of minorities to elect their preferred candidates in CD-7, CD-9, CD-10, CD-12, CD-15, CD-16, CD-18, CD-20, CD-23, CD-28, CD-29, CD-30, CD-32, CD-33, CD-34, CD-35, or CD-38 in Demonstration Map 1 or Demonstration Map 2. Because Dr. Alford does not analyze those districts, he does not offer any analysis that disputes or rebuts my assessment of cohesion between racial groups in primary elections in Demonstration CDs. See Table 16 of my Expert Report.
7. Dr. Alford offers no analysis to rebut or refute my analysis of racial voting patterns in Texas State House Districts in Harris and Tarrant Counties. Nor does he offer any analysis to rebut or refute my analysis of the ability of minority voters to elect their preferred candidates in the Enacted or Demonstration House Districts in Harris and Tarrant Counties.

8. In short, none of the analyses offered by Dr. Alford contradict any conclusion reached in my expert report concerning the prevalence of racially polarized voting or the ability of minorities to elect their preferred candidates in CDs in the Enacted Map, Congressional Demonstration Map 1 or Demonstration Map 2, or the Texas House demonstration map.

B. Response to Dr. Alford's Racially Polarized Voting Analysis

9. The analysis that Dr. Alford does offer relates to the interpretation of voting data and quantitative analysis, rather than challenging the quantitative analysis itself. This report responds to Dr. Alford's analyses as they relate to the relevance and effect of candidate race on racially polarized voting, Dr. Alford's use of a 60 percent threshold for assessing cohesion in general elections, and Dr. Alford's assessment of certain primary elections and their relevance.

1. Dr. Alford's Analysis of Candidate Race

10. Dr. Alford offers an analysis of election results that considers candidate race or ethnicity. He compares the rate of white support for Democratic candidates when the candidate is white, Black, or Hispanic, and he finds little difference at the district level or the aggregate level. Based on this analysis, he concludes that the race of the candidate is of no consequence. See Alford Report 5–13.
11. There are several problems with Dr. Alford's analysis of the effects of candidate race on white support.
12. First, Dr. Alford does not specify the source for his data regarding candidates' races and ethnicities. Determining candidate race and ethnicity is not always straightforward. Wherever Dr. Alford obtained his data, it is incomplete. In Dr. Alford's underlying data files, the races of several Democratic candidates are coded as "NA," which indicates that the racial coding is missing. This is especially common for elections in 2014 and 2016. Moreover, even where data is available, without knowing Dr. Alford's source, I cannot confirm whether the racial coding data is accurate. For the remainder of my analysis, however, I will treat Dr. Alford's coding of candidate race as given.
13. Second, Dr. Alford's analysis of candidate race fails to control for other relevant factors. As Dr. Alford notes in his discussion of primaries, there are many factors that affect elections, such as policy differences and ideologies of candidates. His analysis of candidate race in general elections, however, does not control for any of those factors that he states are of importance. Instead, his analysis focuses exclusively on the race of the Democratic Party candidate.
14. One relevant factor that Dr. Alford's analysis ignores is the race of the opposing, Republican Party candidate. Race is a potentially salient difference between candidates only where the candidates are of different races. But Dr. Alford's analysis does not distinguish between a contest in which an Hispanic Democratic Party candidate faces a white Republican Party

candidate (and thus race is a potentially salient difference) and a contest in which an Hispanic Democratic Party candidate faces an Hispanic (or Black) Republican Party candidate.

15. Third, Dr. Alford's analysis pools all years and contests and, thus, conflates the race of the candidate with the year of the election, even though the overall partisan preferences of Texas's voters, and thus the success of Democratic Party candidates, vary substantially from year to year.
16. To isolate the effect of the race of the candidate on white voters' support therefore requires considerable care in drawing comparisons. Specifically, so as not to conflate the effect of year with party or with race requires a full set of possible comparisons of party-race pairings for each particular year. For instance, if one observes that white voters voted against Hispanic Republicans in 2014 and for white Democrats in 2016, one could not say if the difference in white voters' behavior was due to race. It might very well reflect the differences in the political environment between 2014 and 2016, or differences in party, or possible interactions between those factors.
17. To attempt to isolate the effect of candidate race on white voters' votes, the appropriate comparison to make is within specific election years in which all possible pairings of race and party of the candidates can be observed. Specifically, we need to observe and contrast the voting behavior of a particular group of white voters across four different circumstances: elections in which a White Republican faced a white Democrat, elections in which a white Republican faced an Hispanic Democrat, elections in which an Hispanic Republican faced a white Democrat, and elections in which an Hispanic Republican faced an Hispanic Democrat.¹ This would allow the isolation of candidate race from the effects of party and year, and therefore contrast white Democrat-white Republican contests in a given year with white Democrat-Hispanic Republican contests, and contrast white Democrat-white Republican contests in a given year with Hispanic Democrat-white Republican contests in each year.²
18. Dr. Alford instead pools the data for all years and parties, and his analysis therefore conflates any estimates of the component of the vote attributable solely to the race of the candidate with the party of the candidate or with any factor that affects all elections in a given year. For example, if in one year every election is white versus white and in another year every election is white Republican versus an Hispanic Democrat, it is impossible to tell whether the differences in the vote count are attributable to the race of the candidate, the party of the candidate, or the year of the election.

¹ The paucity of Black Republican candidates in Texas precludes a similar analysis with respect to Black candidates.

² There are also other, potential confounding factors, such as differences between individual candidates other than race and political party. But the consistency with which my analysis shows non-white candidates underperforming with white voters against white candidates suggests that individual candidate characteristics do not explain the differences. And in any event, my analysis controls for many of the most obvious confounding variables—opposing candidate race, election year, and candidate party—while Dr. Alford's does not. My analysis therefore provides a more reliable estimate of the effect of candidate race on white voters' support than Dr. Alford's does.

19. For every recent year except for 2018, the data are inadequate to allow for an analysis that separates the race of the candidate from the party of the candidate. The reason is that, except in 2018, the full set of candidate race and candidate party pairings are not available. In 2020, no Black or Hispanic candidates were nominated by the Republican party. In 2014 and 2016, there are no cases in which an Hispanic Republican faced a white Democrat in a statewide election. In these years, it is impossible to separate the effect of the race of the candidate from other factors. And pooling all of the years, as Dr. Alford does, only adds the additional conflating factor of the political conditions of particular years. Thus, only in 2018 are the full set of candidate race and candidate party comparisons available, and any reliable conclusions regarding the effect of candidate race possible.
20. As for 2018, the data provided by Dr. Alford for the 2018 General Elections reveals that the race of the candidate indeed had a substantial effect on the voting behavior of white voters that was distinct from the effect of the candidate's political parties.
21. First, consider the contrast across contests in 2018 in which there is a white Republican. In 2018, there were 6 elections in which there was a white Democrat and a white Republican running for a statewide office. In those elections, white voters, across all 38 CDs in the Enacted Map, on average voted for the Democratic candidate at the rate of 29.7 percent. This figure is displayed on the bottom of Table 1. There was one statewide election in 2018 with a white Republican and an Hispanic Democrat. In that election white voters across all CDs in the Enacted Map on average voted 25.9 percent for the Democrat. That contrast indicates that, when the Republican candidate is white, white voters voted for the Democratic candidate at a lower rate when that candidate was Hispanic than they did when that candidate was white. Specifically, the white vote for the Democrat was 3.8 percentage points lower, on average across the 38 CDs in the Enacted Map, when the Democrat was Hispanic and the Republican was white, compared to the case where both candidates were white. See Table 1. This 3.8 percent effect is statistically significantly different from zero.³
22. A parallel pattern emerges when the Republican candidate is Hispanic and the Democratic candidate is white. According to Dr. Alford's data, there was one general election contest in 2018 in which an Hispanic Republican faced a white Democrat. In that contest, 32.2 percent of white voters chose the white Democrat. There was, also, one general election contest in 2018 in which an Hispanic Republican faced an Hispanic Democrat. In that contest, 26.5 percent of white voters chose the Hispanic Democrat. When faced with a choice between a white Democrat and an Hispanic Republican, the white vote for the Democrat was 5.7 percentage points higher, on average across the 38 CDs in the Enacted Map, than when both

³ I use a paired two-sample t-test, in which each CD is the level of the pairing. The t-statistic is 13.4 with 37 degrees of freedom. The probability of observing such a difference at random is effectively 0.

candidates were Hispanic. See Table 1. This 5.7 percent effect is statistically significantly different from zero.⁴

23. Thus, in 2018, an Hispanic candidate nominated by either party lost an average of 4.3 percentage points of support from white voters when running against a white candidate, as compared to contests in which both candidates were of the same race. That is an estimate of how the race of the individual candidate, regardless of the party that nominated that candidate, contributed to the patterns of white voting. Unlike Dr. Alford's analysis, it separates the effect of the candidate's race from the effects of the candidate's party, the effects of events in a given year on the mobilization of groups, or other factors that might also be taken to contribute to voting patterns of racial groups.
24. This pattern holds at the district level as well. Based on the data that Dr. Alford provided at the level of each CD in the Enacted Map, in every CD, white support for the minority candidate is lower when the minority candidate is running against a white candidate, as opposed to when there are two white candidates running against each other. This pattern arises regardless of the party of the minority candidate.
25. Focusing on the subset of 15 CDs in which the majority of the CVAP is non-white, the effect of candidate race is even larger than for the average CD. Again, the analysis is restricted to 2018 as that is the only election in which the full set of comparisons of candidate race and candidate party arise. The bottom of Table 1 presents the average values of the vote for each pairing of candidates. On average, in these 15 CDs, when a white Democrat faces an Hispanic Republican, 44.0 percent of white voters vote for the white Democrat over the Hispanic Republican. But when an Hispanic Democrat faces an Hispanic Republican (and thus race is not a salient difference between the candidates), only 36.5 percent of white voters choose the Hispanic Democrat – a 7.5 percentage point difference. In these same 15 CDs, when a white Democrat faces a white Republican, 40.6 percent of white voters chose the white Democrat. However, when an Hispanic Democrat faced a white Republican, only 36.4 percent of white voters chose the Hispanic Democrat – a 4.1 percentage point difference. These effects are statistically significantly different from 0.⁵ Hence, in the 15 CDs in which a majority of the CVAP is non-white, white voters choose white candidates at a higher rate than they choose Hispanic candidates when they face that choice, regardless of the party that nominated the Hispanic candidate. See Table 1.
26. Dr. Alford offers an extensive discussion of Enacted CD-7. Consider the row of Table 1 that corresponds to CD-7. When a white Democrat opposed an Hispanic Republican, 62.4 percent of white voters chose the white Democrat. However, when an Hispanic Democrat faced an Hispanic Republican, only 53.6 percent of white voters chose the Hispanic Democrat. That is

⁴ I use a paired two-sample t-test, in which each CD is the level of the pairing. The t-statistic is 18.7 with 37 degrees of freedom. The probability of observing such a difference at random is effectively 0.

⁵ The t-statistics are 10.8 and 10.4, respectively, and each has 14 degrees of freedom. The probability of either of these statistics occurring by chance is effectively 0.

an 8.8 percentage point difference. Likewise, when a white Democrat faced a white Republican, 58.3 percent of white voters chose the white Democrat. Yet, when an Hispanic Democrat faced a white Republican, only 52.5 percent of white voters chose the Hispanic Democrat. That is a 6.2 percentage point difference. In this example, the effect of the race of the candidate becomes clear only when the races of both candidates are incorporated into the analysis, which Dr. Alford does not do.

27. Thus, there are differences in white voting behavior that are attributable to the race of particular candidates. Those differences are obscured in Dr. Alford's analysis because he does not sufficiently disaggregate the data to separate the effects of candidate race from other confounding factors.
28. In sum, a more careful analysis of Dr. Alford's data on the race of candidates reveals that the voting behavior of white voters differs depending on the race of the candidates, holding constant the party and year. Specifically, as the analysis of the 2018 elections reveals, where white voters face a choice between a white candidate (of either party) and an Hispanic candidate, they provide a higher level of support to the white candidate than they otherwise would.

2. Response to Dr. Alford's Reliance on the 60 Percent Threshold to General Elections

29. In assessing whether minority groups are politically cohesive, Dr. Alford applies a 60-percent threshold, requiring that at least 60 percent of the group in question support the same candidates in general elections. In support of such a threshold, Dr. Alford cites other experts in this matter.
30. I am not aware of any support in the political science literature for the specific use of a 60-percent threshold in the context of assessing cohesion in general elections. Rather, cohesion analysis calls for a more flexible analysis that considers the context of the particular district.
31. In any event, Dr. Alford offers no examination of the analyses of general elections in my Expert Report using the 60 percent threshold. For completeness, I offer that analysis here.
32. In every instance, the level of minority group cohesion in the Enacted and Demonstration Maps is above 60 percent. Applying the 60 percent rule, Hispanic voters are cohesive at the 60 percent level in every one of the majority HCVAP CDs in the Enacted Map and in the Demonstration Maps. See Ansolabehere Expert Report, Tables 3, 4, and 5, and Tables 13, 14, and 15. Black voters are cohesive at the 60 percent level in CD-30 under Demonstration Map 1, which is a majority Black CVAP CD. See Ansolabehere, Expert Report, Tables 4 and 14. Black and Hispanic voters are cohesive (i.e., both groups prefer the same candidates) at the 60 percent level in general elections in each of the majority Black Plus Hispanic CVAP CDs in the Enacted and Demonstration Maps. See Ansolabehere Expert Report, Tables 3, 4, and 5, and Tables 13, 14, and 15. Dr. Alford offers no analysis to contradict these findings. Thus, applying the 60 percent threshold for minority voting cohesion would not alter any of the conclusions drawn in my Expert Report and Supplemental Report.

33. Dr. Alford offers as a reason for the 60 percent threshold the determination of election performance and whether a district affords minority voters the opportunity to elect their preferred candidates. He states that “the standard for minority cohesion mechanically connects the level at which majority cohesion becomes bloc voting to defeat the minority preferred candidate. Setting the threshold for minority cohesion at 60%, effectively sets the crossover threshold level at 40%, with anything below that being bloc voting to defeat the minority preferred candidate, setting aside issues of turnout.” (Alford, page 4.)
34. Dr. Alford offers no analysis to support his assertion of such a “mechanical” effect. The ability to elect depends on many factors, including racial polarization and, importantly, group turnout rates, which he mentions only as a caveat.
35. Further, Dr. Alford offers no assessment of the ability of minority voters to elect their preferred candidates, beyond his assertion of a mechanical effect. I provided a full assessment of the ability to elect in the Enacted CDs in which non-white voters comprise a majority of the CVAP (Ansolabehere, Expert Report, Table 10) and in the Demonstration Maps (Ansolabehere, Expert Report, Tables 11 and 12). Nothing in Dr. Alford’s report rebuts or contradicts my analysis of the ability of minority voters to elect their preferred candidates. Importantly, Dr. Alford offers no analysis to refute my finding that in Enacted CD-23, although Hispanic voters are the majority of the electorate and vote cohesively, the very high level of white bloc voting and turnout issues mean that Hispanic voters do not have the ability to elect their preferred candidates.

3. Response to Dr. Alford’s Analysis of Primary Elections

36. Dr. Alford does not dispute or rebut directly any of my analyses of racial voting patterns in primary elections, which concerned majority Black plus Hispanic CDs in Demonstration Map 1, Demonstration Map 2, and the Texas House demonstration map. See Expert Report, Table 16 and Table A12. Those analyses show that it is possible to configure CDs in the Houston and Dallas-Fort Worth areas, and a HD in Tarrant County, that cover communities of Black and Hispanic voters who vote cohesively in primary elections and that vote cohesively in general elections. Elsewhere in my report I show that voting is racially polarized in general elections in these areas.
37. Dr. Alford does offer an analysis of primary elections based on the analyses of Dr. Duchin and Dr. Grumbach, experts for other plaintiffs. That analysis is flawed for several reasons.
38. First, Dr. Alford’s attempt to use primary election results to control for other factors ignores the limitations inherent in primary election results. Dr. Alford begins his discussion of primaries with the argument that primary elections “by removing party differences between candidates allow for a clear view of voter’s responses on other dimensions, including the issue of racial cohesion and polarization.” Alford Report 13. This statement suggests that Dr. Alford is attempting to infer from primary elections the racial voting preferences of the electorate as a whole, by “removing,” or in the parlance of statistics controlling for, party.

39. Dr. Alford offers no basis for inferring anything about the electorate *as a whole* from the subset of people who vote in one primary or another. The analysis of the primary elections is about the choices in one party's primary. The only way one could generalize to the electorate as a whole would be if the primary electorates were representative of the electorate as a whole. Dr. Alford offers no information or analysis concerning the representativeness of the primary electorate of voters as a whole, even of voters of a given party.
40. My Expert Report, at paragraph 18 and footnote 5, discusses reasons, based on peer reviewed research, why the primary electorate is unrepresentative of the electorate as a whole. These problems include very low turnout, skewed turnout of racial groups across parties, and political alignments of parties such that the voters in one party are not representative of the attitudes and behaviors of non-partisans or of those in the other party. The skew in the alignment of racial groups across parties is particularly troublesome, because in order to generalize from the primaries one would have to assume that the groups within primaries are representative of all racial groups, e.g., white Democrats are representative of all white voters, Black Republicans are representative of all Black voters. That is patently not the case in Texas, where, for example, the overwhelming majority of white voters vote in the Republican primary and the overwhelming majority of Black voters vote in the Democratic primary, meaning that white Democratic primary voters and Black Republican primary voters each have political preferences that are highly non-representative of their respective racial groups.⁶ One would also have to assume that the people who vote in primaries are representative of those who do not, when the opposite is the case: primary voters are more partisan than non-primary voters. Dr. Alford says nothing to dispute or rebut these characteristics of primary electorates. Nor does he offer a way to extrapolate from the primary electorate to the electorate as a whole.
41. Second, by Dr. Alford's own standards, the low turnout in primaries means that we should hesitate to draw inferences about the primary electorate. In his analysis of general elections, Dr. Alford introduces a threshold of 10 percent: if less than 10 percent of the CVAP participates in an election then (he says) we can have little confidence in statistical evidence based on that election. Alford Report 7. Dr. Alford offers no direct estimates of primary turnout levels in his report, and, thus, no analysis as to whether the primaries he analyzes have sufficient turnout to warrant any inferences about racial voting patterns.
42. Based on statewide figures from the Texas Secretary of State and CVAP estimates in my Expert Report, the percent of the CVAP that voted in the primary elections statewide was

⁶ The CBS News Polls for the Texas Republican and Democratic Primaries in 2016, for example, report the percentages of party's primary electorates that were of particular racial or ethnic groups. Combined with the information from the Texas Secretary of State on the percent of the CVAP who voted in the two primaries, I estimate that 80 percent of white voters who voted in either the Democratic or Republican primary in 2016 voted in the Republican primary and 75 percent of Black voters who voted in either the Democratic or Republican primary in 2016 voted in the Democratic primary.

<https://www.cbsnews.com/elections/2016/primaries/republican/texas/exit/>;
<https://www.cbsnews.com/elections/2016/primaries/democrat/texas/exit/>

usually below Dr. Alford's 10 percent threshold in the election years he examines.⁷ Turnout as a percent of CVAP was 3 percent in the 2014 Democratic Primary and 7 percent in the 2014 Republican Primary. Turnout as a percent of CVAP was 7 percent in the 2016 Democratic Primary and 15 percent in the 2016 Republican Primary. Turnout as a percent of CVAP was 6 percent in the 2018 Democratic Primary, 3 percent in the 2018 Democratic Runoff, 8 percent in the 2018 Republican Primary, and 2 percent in the 2018 Republican Runoff. In the 2020 Presidential Primary, the Republican Primary vote was 11 percent of the CVAP and Democratic Primary vote was 12 percent of the CVAP. Only the 2016 Republican Primary and the 2020 Democratic and Republican Primaries clear Dr. Alford's 10 percent threshold for having sufficient turnout to allow for inferences. (A similar problem, stemming from low turnout, applies to any effort to infer racial groups' support for candidates in low-turnout special elections).

43. Third, all of Dr. Alford's analyses and interpretations of primary elections rely upon the assumption that any one group has a single most preferred candidate. It may be the case, however, that minority voters have multiple preferred candidates in a primary election, and a single preferred candidate in the general election. In a primary election, voters may want either of two candidates to win, and they may like them equally. Such a possibility is actually predicted to occur commonly by analytical political science, because it reflects the equilibrium state—one would expect candidates pursuing elected office to converge on the political preferences of the median voter inside the primary electorate.⁸ The possibility that a group of voters in the primary election has more than one preferred candidate exposes a fundamental flaw in Dr. Alford's reasoning about primaries.
44. A simple example demonstrates the problem. Suppose that there are three candidates: A, B, and C. A and B choose to run in the Democratic Primary, and C chooses to run in the Republican Primary. Minority voters like A and B equally, and they strongly prefer these two candidates to candidate C. In the Democratic primary, minority voters will split their votes equally between candidates A and B, because minority voters like them equally. Suppose A wins a tie breaker and faces candidate C in the general election. In the general election, all of the minority voters would choose A over C.
45. The first problem with Dr. Alford's interpretation of primary cohesion that this example exposes is that minority voters can split their votes between candidates in a primary election and still have a preferred candidate, or more properly two preferred candidates. The fact that the minority group splits its vote evenly in the primary but has a clear first choice in the general election may even be evidence that there are two (or more) preferred candidates for the group.
46. This example exposes a further problem with Dr. Alford's analysis of primary elections. His analysis of the incidence of racial cohesion and polarization considers the primary in isolation from the general election. In this example, the only way to determine whether minority voters

⁷ The Texas primary election data are available from the Texas Secretary of State's website: <https://www.sos.state.tx.us/elections/historical/index.shtml>.

⁸ See James Adams and Samuel Merrill III, "Candidate and Party Strategy in Two-Stage Elections Beginning with a Primary," *American Journal of Political Science* 52 (2008): 344-359.

have a preferred candidate is to examine the general election in addition to the primary election. In this example, minority voters do have preferred candidates, candidate A and candidate B. Minority voters are indifferent between these two choices, and they strongly prefer candidate A or candidate B to candidate C. Examining primaries alone and in isolation from the general election, then, cannot address whether minority voters are cohesive. Had minority voters been indifferent between A, B, and C, they would have split their votes equally in the primary and in the general elections. In order to conclude that a group is not cohesive they must lack cohesion in the primary and in the general election.

47. Fourth, and relatedly, Dr. Alford provides no justification for using a 60 percent threshold in assessing cohesion in primary elections. Whatever the logic for a 60 percent threshold in general elections, there is no support for such a threshold in primaries. I know of no academic research and no court that has ever relied on a 60 percent threshold in primaries to gauge group cohesion. Dr. Alford offers no argument as to why that threshold should be applied in primary elections.
48. In my report I rely on general elections and, where there is the possibility of a coalition district, primary elections. In my analysis of primaries, I use a 50 percent threshold for group cohesion. That threshold would be consistent with the possibility of two preferred candidates in two-candidate primaries, while the 60 percent threshold would not.
49. Using a 50-percent threshold for determining whether a candidate is preferred by minority voters in primary elections is not tautological, as Dr. Alford suggests, both because there may be more than two primary candidates and because I am comparing the partisan preferences of multiple groups—i.e., of Black and Latino voters. There are circumstances in which there would be clear evidence of lack of cohesion—for example, if there are two minority groups and they strongly prefer different candidates in the primary elections. Also, there are circumstances in which the primaries prevent the emergence of the minority preferred candidates. For example, suppose half of the Democratic electorate was white and half was Black. Suppose that all white voters preferred A to B and that almost all Black voters preferred B to A. This is a case of high polarization inside the primaries: All white voters vote for A, and almost all Black voters vote for B. Candidate A is clearly second-best for Black voters, and they will choose A over C in the general election. Finally, there are cases in which a group is simply not cohesive at any stage: they split their votes between A and B in the primary and between A and C in the general.
50. My analysis divides cases into those in which each minority group has a clear single preferred candidate and those in which they do not. Among the cases where there is a clear preferred candidate for Blacks and for Hispanics, both groups choose that candidate almost all of the time. In cases where there is not a single preferred candidate (i.e., the groups have multiple preferred candidates), one of those preferred candidates emerges from the primary elections and both groups coalesce around that group in the general election. That analysis is provided in Tables 16 and A12. Dr. Alford does not refute that analysis.
51. Moreover, applying the 60 percent threshold to my primary analysis would in fact strengthen in the inference of cohesion between groups. Under such a threshold, the number of instances

in which both groups have a singular preferred candidate in the primary goes down. However, in every instance in which each group clearly does have a preferred candidate by a 60 percent threshold, Black and Hispanic voters have the *same* preferred candidate, so they vote cohesively in the primary and they vote cohesively in the general elections. See Table 2.

III. Response to Mr. Trende

52. Mr. Trende offers an analysis of precinct-level boundary changes to argue that party and not race guided the configuration of the districts.
53. My Expert Report took a higher-level approach and showed that additional majority minority districts could have been drawn in specific areas of the Texas Congressional and State House maps. These districts would have covered communities and areas where voting is racially polarized, where minorities vote cohesively, where there is sufficient minority population to comprise a majority of the CVAP, and in which minorities would have the opportunity to elect their preferred candidates. I further showed that these CDs were as compact and usually more compact than the Enacted CDs and HDs in question.

Mr. Trende offers no analysis to dispute any of my findings or analyses regarding the Enacted Congressional and House District Maps. Nor does he offer any analysis the Demonstration Maps in my report or the findings and conclusions that those maps support.

Table 1: 2018 General Election: Race of Candidate and White Vote for the Democratic Candidate				
	Hispanic Republican		White Republican	
CD	White Democrat Candidate	Hispanic Democrat Candidate	White Democrat Candidate	Hispanic Democrat Candidate
	Percent of Whites who Voted for the Democrat			
1	11.2	9.5	10.8	8.7
2	25.2	20.6	22.6	19.3
3	27.1	20.0	23.7	20.2
4	20.4	15.0	17.7	14.5
5	13.2	10.2	11.9	9.4
6	16.1	12.4	14.7	11.1
7	62.4	53.6	58.3	52.5
8	10.7	8.8	9.7	7.3
9	59.4	51.7	54.6	48.7
10	28.7	23.6	26.6	22.4
11	11.6	9.5	11.1	8.4
12	30.1	24.0	27.6	23.7
13	21.9	18.5	20.0	17.9
14	20.0	15.9	17.8	14.9
15	10.9	8.9	10.7	7.9
16	28.1	19.2	22.7	21.1
17	23.0	18.2	20.8	17.8
18	60.2	51.3	55.6	51.1
19	17.3	13.8	15.8	13.4
20	43.6	32.4	39.0	35.3
21	28.0	22.4	26.6	21.8
22	21.7	18.3	19.7	16.1
23	23.8	15.8	20.5	16.4
24	37.8	28.5	34.2	28.0
25	18.7	14.2	16.8	13.7
26	26.0	18.9	22.5	19.2
27	15.9	12.5	15.3	11.8
28	20.5	16.8	18.5	14.5
29	53.1	47.6	49.5	47.8
30	59.0	48.5	55.7	50.0
31	30.2	24.3	27.6	22.9
32	58.5	48.0	54.4	47.8
33	57.9	49.1	54.2	49.3
34	30.8	24.6	27.0	23.9
35	75.2	68.1	72.3	68.3
36	14.2	12.2	13.6	10.6

37	81.2	73.8	78.4	73.9
38	31.2	24.8	28.2	22.7
Average All CDs	32.2	26.5	29.7	25.9
Average Majority Minority CDs	44.0	36.5	40.6	36.4
Number of Contests	1	1	6	1

Table 2. Analysis of Primary and General Coalescence using the 60% Threshold								
		Single Preference In Primary (60%)			Black and Hispanic have Single 1 st Choice			All Cases
District	Number of Cases	Black	Hispanic	Both	Groups Agree (Cohesive)	Groups Disagree		Coalesce in General Election
DM1: CD-12	21	13 62%	13 62%	11 52%	11 100%	0		21 100%
DM1: CD-29	21	11 52%	8 38%	6 29%	6 100%	0		21 100%
DM1: CD-33	21	10 48%	10 48%	7 33%	7 100%	0		21 100%
DM2: CD-29	21	11 52%	11 52%	8 38%	8 100%	0		21 100%
DM2: CD-33	21	11 52%	5 24%	4 19%	4 100%	0		21 100%
HD-94	21	11 52%	7 33%	7 33%	7 100%	0		21 100%