

1. Pursuant to 28 U.S.C. section 1746, I, Matt Barreto, declare as follows:
2. My name is Matt Barreto, and I am currently Professor of Political Science and Chicana/o Studies at the University of California, Los Angeles. I was appointed Full Professor with tenure at UCLA in 2015. Prior to that I was a tenured professor of Political Science at the University of Washington from 2005 to 2014. At UCLA I am the faculty director of the Voting Rights Project in the Luskin School of Public Affairs and I teach a year-long course on the Voting Rights Act (VRA), focusing specifically on social science statistical analysis, demographics and voting patterns that are relevant in VRA expert reports. I have written expert reports and been qualified as an expert witness more than three dozen times in Federal and State voting rights and civil rights cases, including many times in the state of Texas. I have published peer-reviewed, social science articles specifically about minority voting patterns, racially polarized voting, and have co-authored a software package specifically for use in understanding racial voting patterns in VRA cases. I have been retained as an expert consultant by counties across the state of Texas to advise them on racial voting patterns as they relate to VRA compliance during redistricting. As an expert witness in VRA lawsuits, my testimony has been relied on by courts to find in favor of both plaintiffs and defendants.
3. In this matter, I was asked to assess how Plan S2168 altered SD10, and the demographic patterns and voting patterns in Tarrant County, Texas, in particular looking at State Senate districts 9, 10 and 22 in the enacted plan.
4. I obtained data from the Texas Legislative Council (TLC) and the Capitol Data Project for statewide election results by county and voter demographics by county. All results are available at the precinct (VTD) level and I have merged together the election returns with voter racial/ethnic demographics to create a standard dataset for analyzing voting patterns. Race and population data were obtained from the U.S. Census 2010 and 2020 PL-94 Redistricting files.

I. Statewide Population Growth and Enacted Map Characteristics

5. Narrowing in on Tarrant County, I begin with a broader view of the entire state of Texas and how its population has changed and shifted over the past decade. Overall, Texas gained almost 4 million in population, however these gains were uneven by geography and race/ethnicity. Specifically, the Anglo/White population experienced a 5 point drop in population share from 2010 to 2020 going from 45% of the state population to now just 40%. In contrast, the Latino population grew by almost 2 million, a 21% increase and the Black population grew by 557,887, a 19% increase. What's more, the Asian American population grew by 65% adding over 600,000 new residents in the last 10 years. Thus, the entire population growth of almost 4 million occurred because of increases in the non-white population. A districting scheme must

take into account population shifts and draw boundaries around communities of interest, careful not to overly pack or crack minority communities.

Table 1: Texas Population Change 2010 to 2020 by race/ethnicity

	2020	2010	Change	Pct
Texas Statewide Total	29,145,505	25,145,558	3,999,947	16%
Hispanic	11,441,717	9,460,920	1,980,797	21%
Anglo	11,397,343	11,584,597	187,254	2%
Black	2,886,825	3,444,712	557,887	19%
Asian	948,426	1,561,518	613,092	65%
All other/multi-racial	452,044	1,112,961	660,917	146%

6. From a population growth perspective, the 3,812,693 increase in non-white residents should account for slightly more than 4 additional full state Senate districts, given a district size of 940,178 people. What's more, it is possible to draw 6 additional full state Senate districts that are greater than 67% non-white from this population growth alone.
7. However, the Texas Senate map instead diluted the minority population, cracking it into multiple districts, combining it with Anglo voters who bloc vote against minority candidates of choice. As compared to the existing benchmark map which has 16 majority-minority voting age population (VAP) districts, the new enacted Plan S2168 has 15 majority-minority VAP districts.

8. This statewide inequality is most visible in and around Tarrant County. Overall Tarrant County experienced a 17% increase in its population from 2010 to 2020, growing by over 300,000 total population. This population growth was driven by large increases in the Black, Hispanic and Asian communities, while the Anglo/White population actually declined by 3% over the last ten years. With strong growth from minority communities, there is no question that it is possible to maintain the existing performing district in which minority preferred candidates have the opportunity to be elected--Senate District 10.

Table 2: Tarrant County Population Change 2010 to 2020 by race/ethnicity

	2020	2010	Change	Pct
Tarrant County Total	2,110,640	1,809,034	301,606	17%
Hispanic	620,907	482,977	137,930	29%
Anglo	904,884	937,135	(32,251)	-3%
Black	358,645	262,522	96,123	37%
Asian	127,783	83,378	44,405	53%
All other/multi-racial	98,421	43,022	55,399	129%

II. Benchmark SD10 Is a Performing Crossover District

9. Benchmark SD10 is a performing crossover district. Its total population is 39.5% Anglo, and 61.5% non-white minority. This includes 32.2% Hispanic, 21.5% Black, and 5.7% Asian. Its voting age population (“VAP”) is 43.9% Anglo, 28.8% Hispanic, 20.3% Black, and 5.5% Asian. According to the 2015-2019 ACS compiled by the Texas Legislative Council¹, its citizen voting age population (“CVAP”) is 53.9% Anglo, 20.4% Hispanic, 20.9% Black, and 3.6% Asian. When SD10 was last enacted in 2013, its Anglo CVAP was 57.7% according to the 2011 to 2015 ACS (midpoint year 2013)². Given the steady decline in Anglo share of the district’s CVAP, and the lag inherent in the 5-year ACS estimates, benchmark SD10 is almost certainly a majority minority district by CVAP today.
10. Benchmark SD10 effectively functions as a crossover district for minority voters. In 2018, Democrat Beverly Powell carried SD10 by a margin of about 10,000 votes or 3.5 points. Powell was the clear minority candidate of choice winning more than 80% of Hispanic votes and more than 90% of Black votes. While Anglo voters generally voted Republican, there was enough crossover voting in 2018 from Anglos that when combined with strong voting cohesion among minorities that SD10 was a minority performing district. In recent elections, SD10 benchmark has performed well, with minority candidates of choice winning 19 of 23 elections across 2018-2020, including winning 10 of 10 in 2020.

¹ https://data.capitol.texas.gov/dataset/32f7ee1f-a491-4e2b-a996-4e0064141682/resource/1a00f9d4-a34f-46f0-907e-761be8b28051/download/plans2100r116_acs1519.pdf

² https://data.capitol.texas.gov/dataset/11af74fa-6c1a-45cc-b364-2e015e9ae764/resource/cc7c9ee2-5438-4671-83b8-15fd3c29f435/download/plans172_red116_acs_special_tabulation_2011-2015.pdf

Table 3: SD10 Benchmark Results for Minority Candidates of Choice in Recent Elections

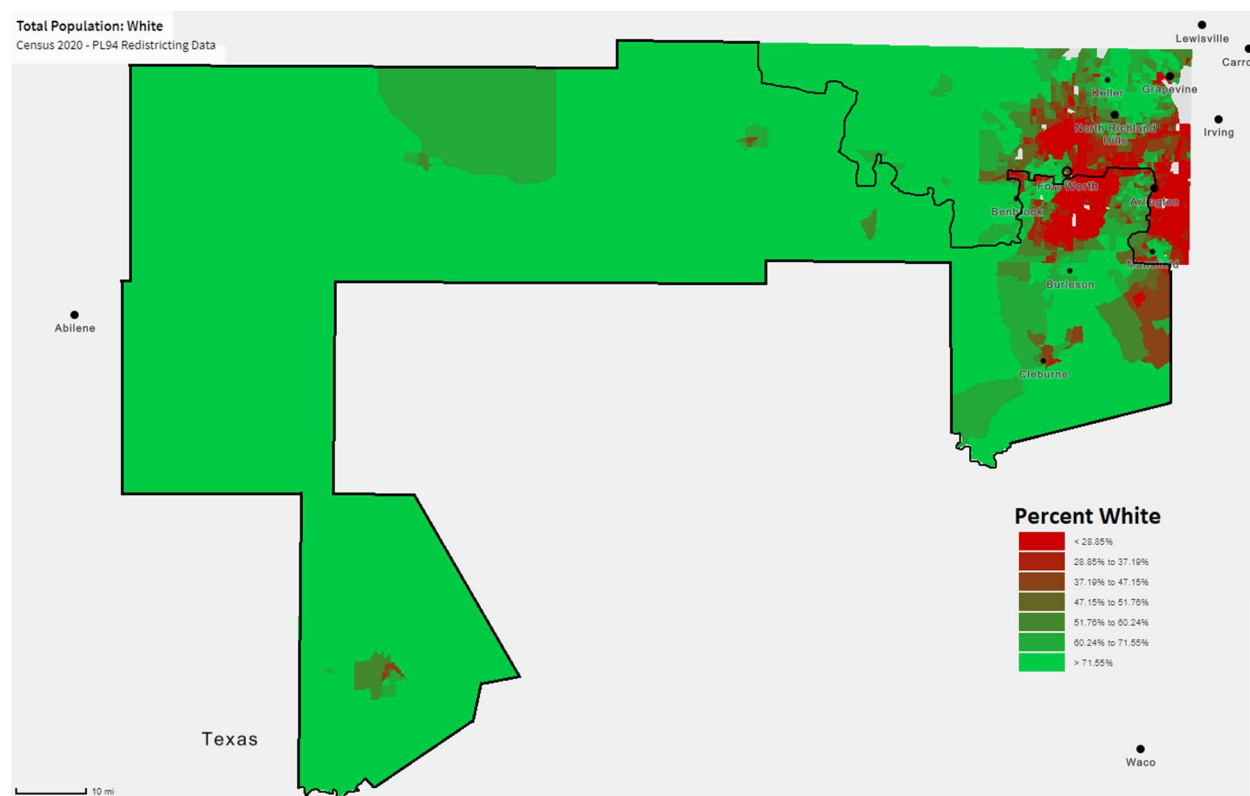
SD 10 Benchmark Election Performance - 2020			SD 10 Benchmark Election Performance - 2018		
<u>Candidate</u>	<u>Share</u>	<u>Minority preferred</u>	<u>Candidate</u>	<u>Share</u>	<u>Minority preferred</u>
Biden	53.1	YES	O'Rourke	53.3	YES
Trump	45.4		Cruz	45.9	
Hegar	49.8	YES	Valdez	47.1	
Cornyn	47.7		Abbott	51.1	NO
Castaneda	49.0	YES	Collier	50.8	YES
Wright	47.7		Patrick	46.9	
Meachum	50.4	YES	Nelson	51.6	YES
Hecht	47.2		Paxton	46.1	
Cheng	50.9	YES	Chevalier	48.1	
Bland	49.1		Hegar	48.5	NO
Williams	50.3	YES	Suazo	47.4	
Boyd	47.4		Bush	49.8	NO
Triana	49.8	YES	Olson	50.9	YES
Busby	47.7		Miller	47.0	
Davis-Frizell	51.6	YES	McAllen	48.3	
Richardson	48.4		Craddick	48.6	NO
Clinton	51.1	YES	Kirkland	51.2	YES
Yearly	48.9		Blacklock	48.8	
Birmingham	50.8	YES	Sandill	50.8	YES
Newell	49.2		Devine	49.2	
			Cheng	51.0	YES
			Brown	49.0	
			Jackson	49.8	YES
			Keller	48.0	
			Franklin	50.6	YES
			Hervey	49.4	

III. Plan S2168 Dismantles SD10 as Effective Crossover District

11. Instead of maintaining SD10 as an effective crossover district for minority voters in Tarrant County, the Plan S2168 clearly cracks the minority population in Tarrant into Senate Districts 9, 10, and 22, resulting in the inability of minority-preferred candidates to prevail in any of those districts.
12. By contrast to benchmark SD10, the new district is substantially more Anglo and less minority. Its total population is 49% Anglo, 28.2% Hispanic, 17.7% Black, and 3.4% Asian. Its voting age population (“VAP”) is 53.3% Anglo, 24.7% Hispanic, 16.6% Black, and 3.3% Asian. According to the 2015-2019 ACS compiled by the Texas Legislative Council³, its citizen voting age population (“CVAP”) is 62.2% Anglo, 17.5% Hispanic, 17.0% Black, and 2.0% Asian.
13. As seen in Figure 1 below, the southern part of Tarrant County, which has a large non-white population – indicated by red shading on the map, is cracked from the rest of the Tarrant non-white population and combined with seven counties which have very large Anglo populations. This has the effect of diluting the Tarrant minority population by combining it with Anglo populations that are not a cohesive community of interest in Senate District 10.

³ https://data.capitol.texas.gov/dataset/70836384-f10c-423d-a36e-748d7e000872/resource/dc8e7520-345f-4bfe-8aa7-2770ec78152b/download/plans2168r116_acs1519.pdf

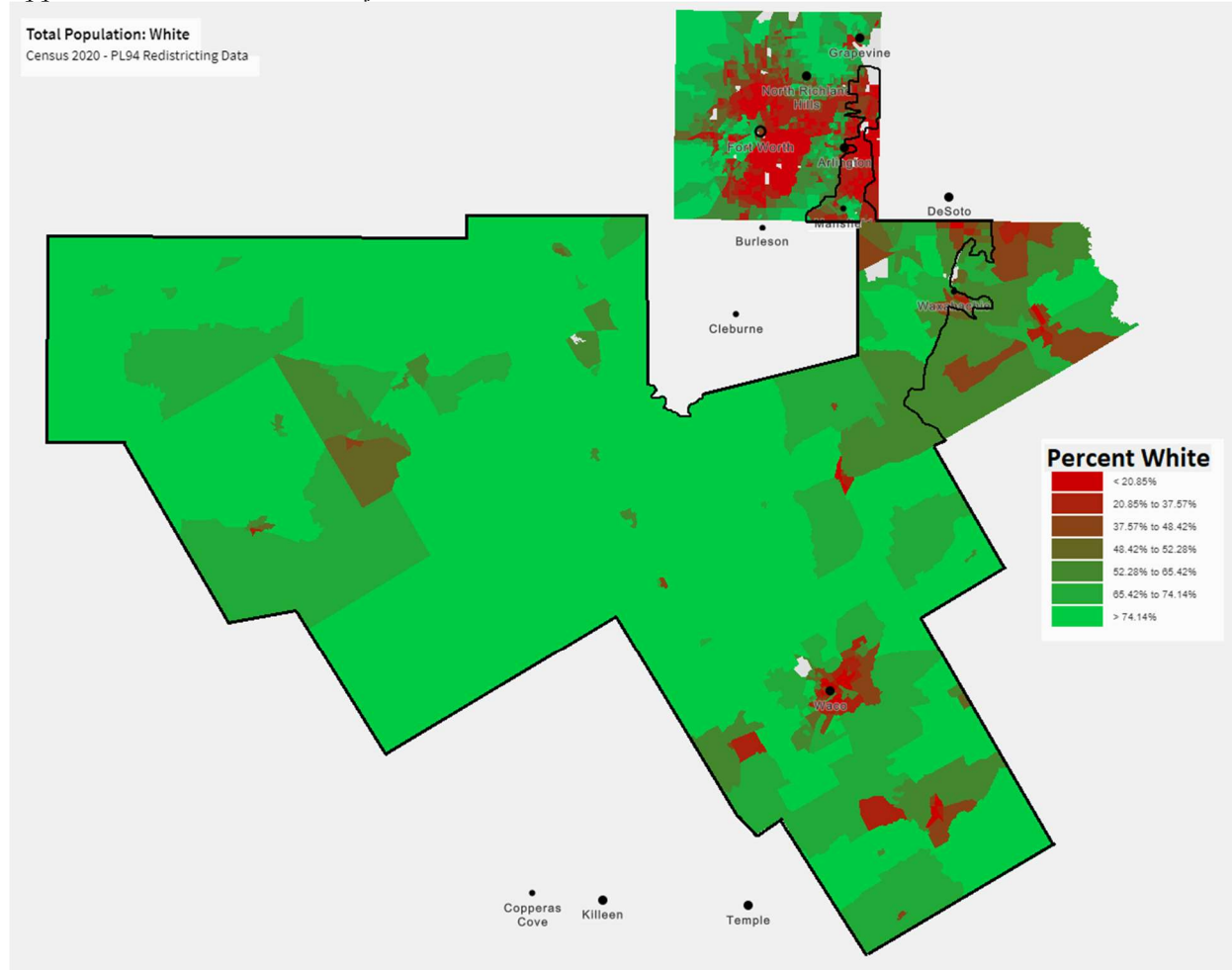
Figure 1: Percent Non-Hispanic Anglo/White in Census Block Group, Census 2020
SD10 boundary overlaid⁴



14. Next, a large minority population on the eastern side of Tarrant County is cracked and combined with 11 counties that are combined for an Anglo population well over 75 percent. As shown in Figure 2 below, a geographically small, but highly populated and heavily minority portion of east Tarrant County is fractured from nearby minority communities of interest to be grouped with dissimilar Anglo majorities counties to its south. The result is once again the dilution of the non-white voting population in Tarrant County into Senate District 22

⁴ Maps created in Social Explorer, district boundary overlaid for purposes of visual representation

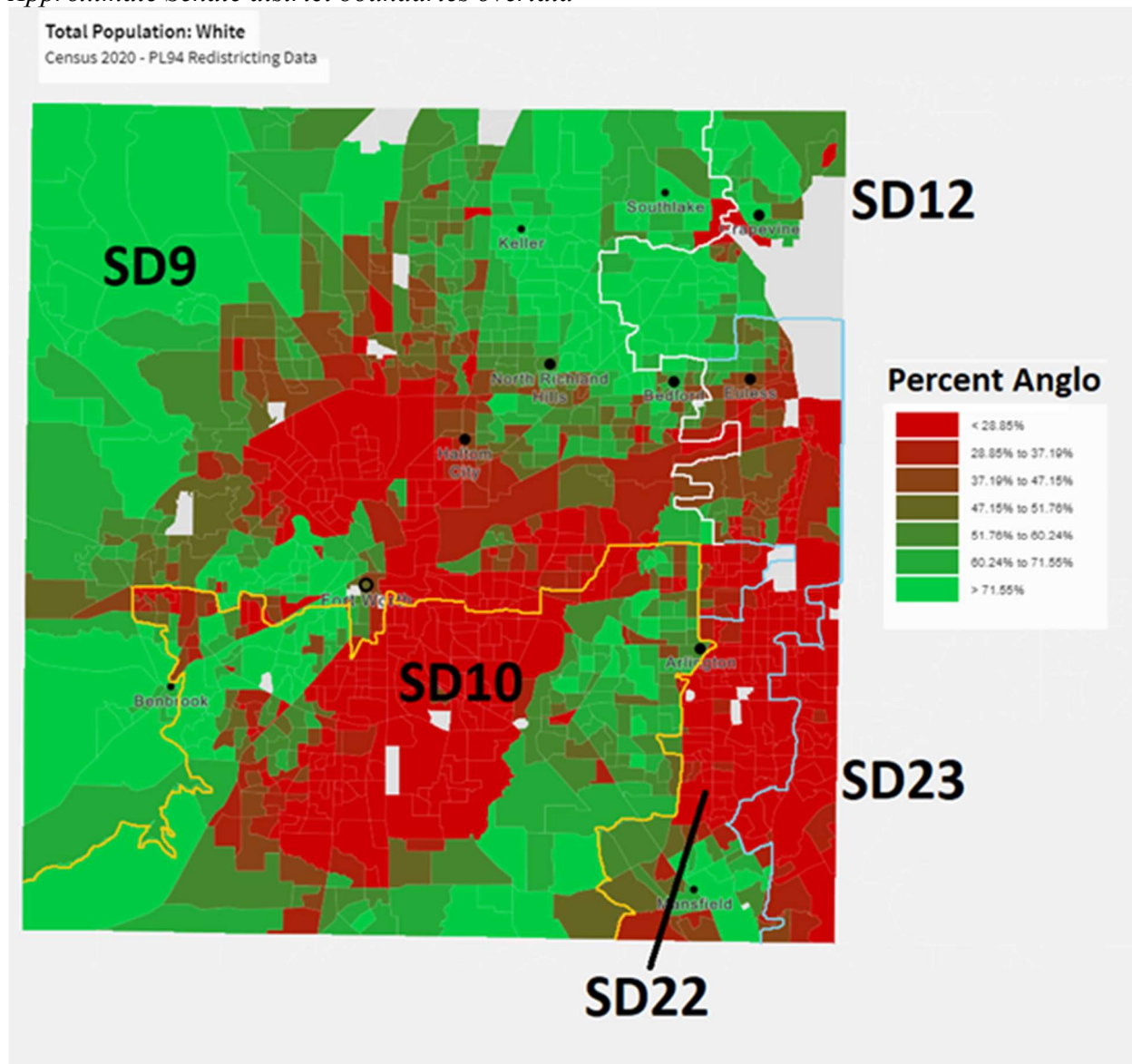
Figure 2: Percent Non-Hispanic Anglo/White in Census Block Group, Census 2020
Approximate SD22 boundary overlaid



15. The pattern of cracking the minority population is most apparent when we zoom in to just Tarrant County to observe the different Senate district boundaries within the county. SD10 used to be wholly contained within Tarrant County, forming a cohesive community of interest centered in the City of Fort Worth. In fact, 157 precinct/VTDs that had been part of SD10 were shifted away from SD10 into SD9 and SD22.
16. Although benchmark SD10 was near ideal population--just 5,318 persons (0.57%) overpopulated--Plan S2168 moved 387,161 people out of the district. The population removed from the district is 56.4% minority: 168,721 (43.6%) are Anglo, 122,446 (31.6%) are Hispanic, 63,362 (16.4%) are Black, and 27,522 (7.1%) are Asian.
17. Plan S2168 then moved into SD10 377,534 new residents. The population added to the district is just 32.8% minority: 253,532 (67.2%) are Anglo, 81,604 (21.6%) are Hispanic, 25,138 (6.7%) are Black, and 5,734 (6.7%) are Asian.

18. In total, Plan S2168 moves 764,695 people in redrawing SD10. The changes increase SD10's Anglo share of the population by roughly 10%, and convert it from a majority-minority VAP district to a majority-Anglo VAP district.
19. As the map in figure 3 makes abundantly clear, the high-density minority portions of Tarrant County have been cracked into SD9, SD10, and SD22, which heavily dilutes the minority voting strength in SD9, SD10 and SD22.

Figure 3: Percent Non-Hispanic Anglo/White in Census Block Group, Census 2020
Approximate Senate district boundaries overlaid



IV. Racially Polarized Voting Analysis in counties which comprise SD9, SD10 and SD22

20. I next examine whether voters of different racial/ethnic backgrounds tend to prefer different or similar candidates in a wide range of electoral settings. The phenomenon called *racially polarized voting* (RPV) is defined as voters of different racial or ethnic groups exhibiting different candidate preferences in an election. It means simply that voters of different groups are voting in polar opposite directions, rather than in a coalition. Voters may vote for their candidates of choice for a variety of reasons, and RPV analysis is agnostic as to why voters make decisions, instead RPV simply reports *how* voters are voting. It measures the outcomes of voting patterns and determines whether patterns track with the race/ethnicity demographics of neighborhoods, cities, and voting precincts.
21. Voting patterns in Plan S2168's configuration of SD9, SD10 and SD22 counties and precincts are definitely characterized by racially polarized voting. SD10 precincts combined demonstrate one of the strongest patterns of RPV that I have ever measured across more than 50 jurisdictions I have analyzed in my career.
22. In recent elections which I analyzed, Black and Hispanic voters demonstrated strong cohesion, both voting together for their candidates of choice. Anglo/White voters have divergent voting patterns, voting as a bloc *against* minority preferred candidates.
23. This relationship is easily demonstrated in the graphs below which plots the vote a candidate received in each precinct (VTD) on the vertical Y-axis against the percent Anglo within each precinct on the horizontal X-axis. Figures 4-6 below demonstrate that across SD10 Anglos and non-white minorities vote in polar opposite directions. Because Anglos are more numerous in the district, they block Black and Hispanic candidates of choice from ever being able to win.

Figure 4: Vote Choice in the 2020 Presidential Election Sorted by Percent Anglo SD10

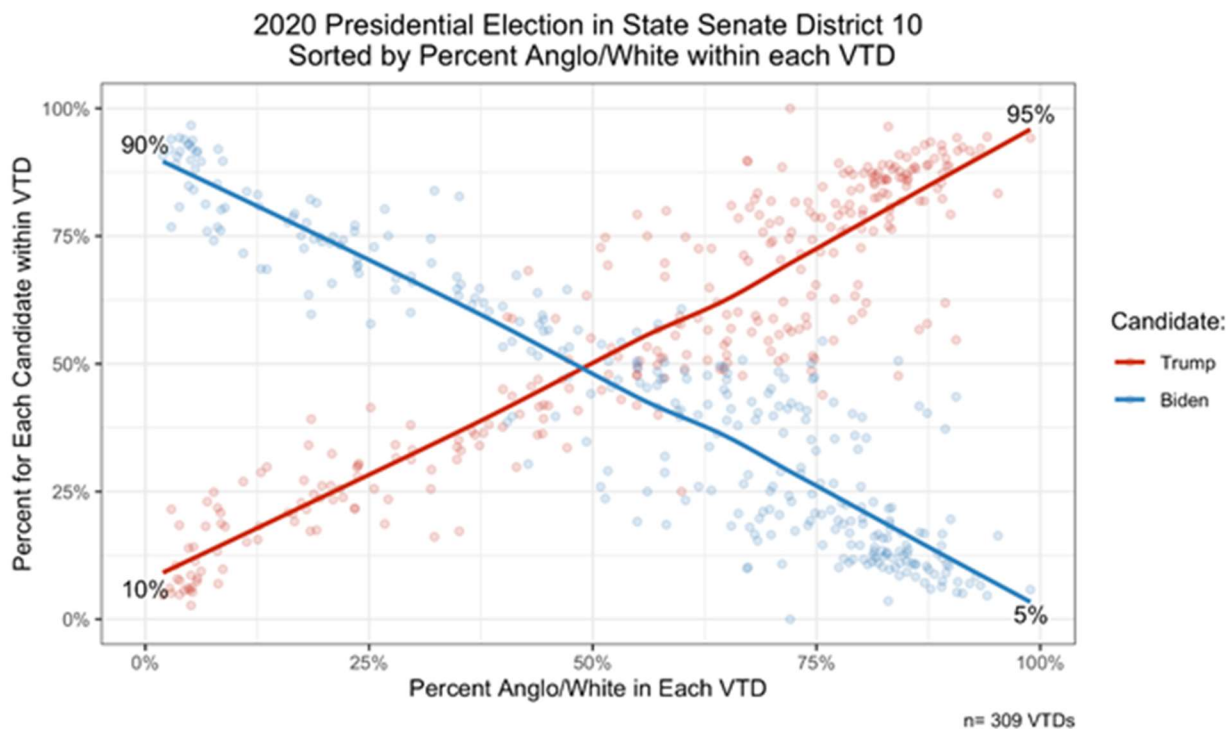


Figure 5: Vote Choice in the 2018 Gubernatorial Election Sorted by Percent Anglo SD10

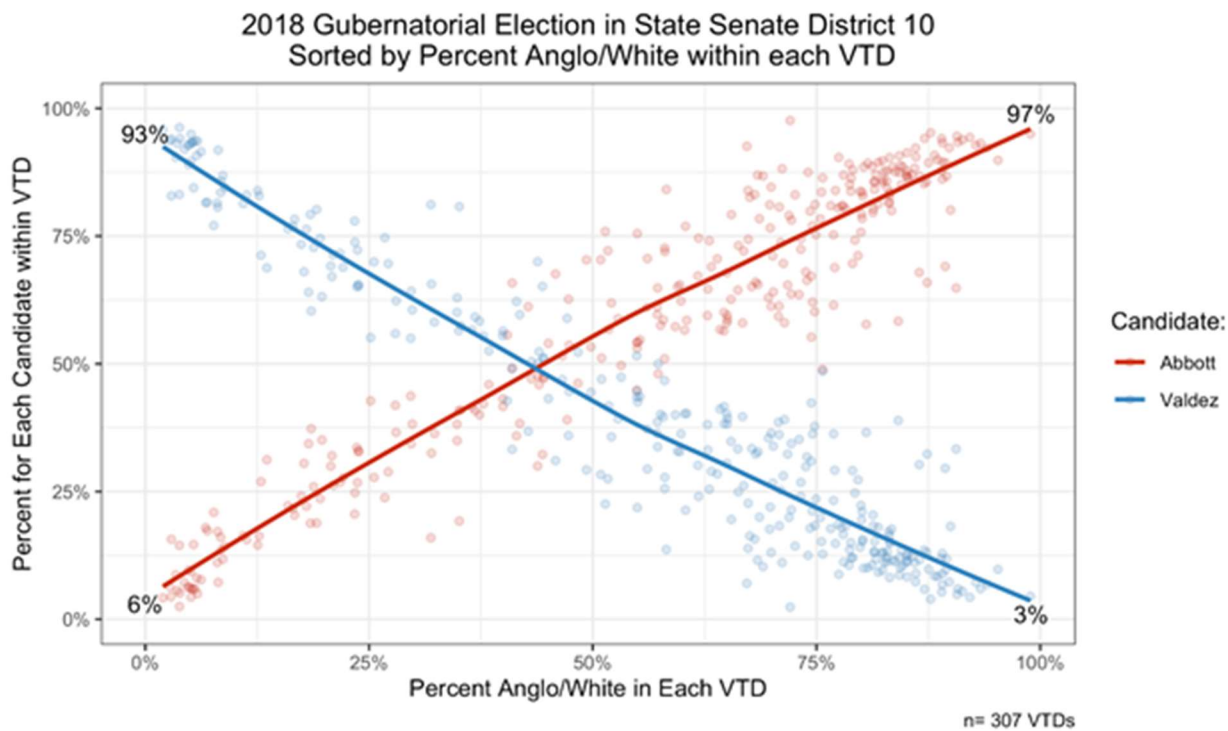
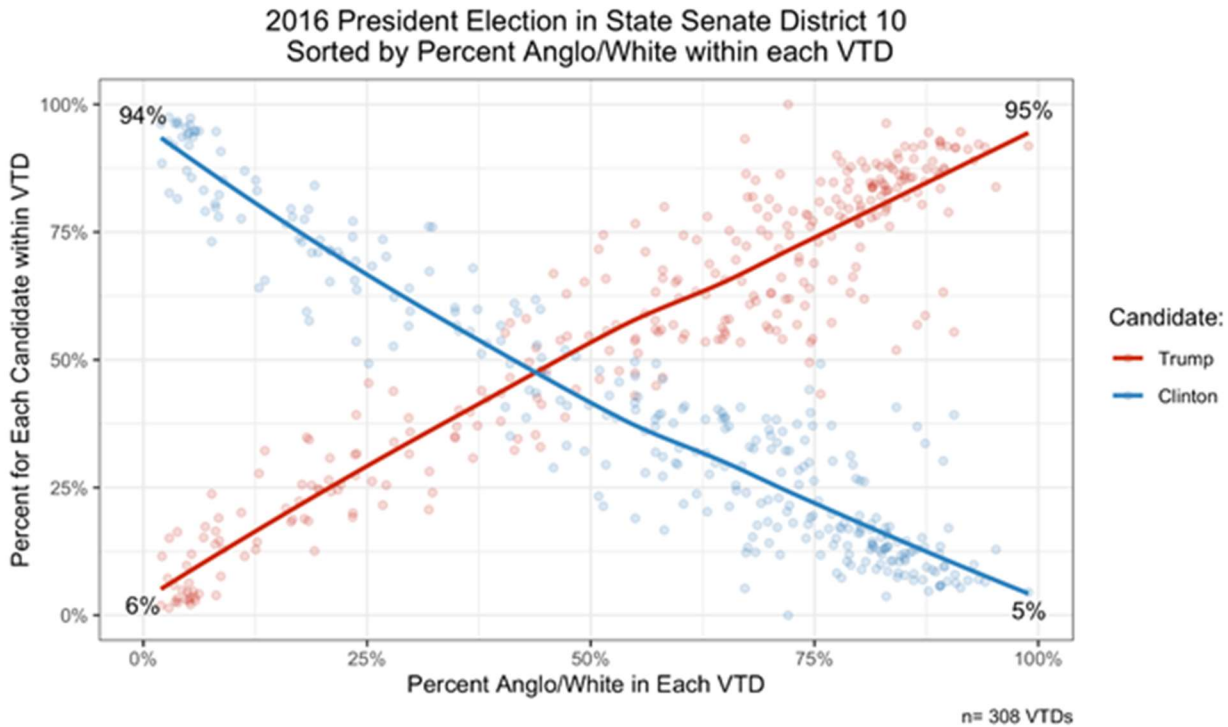


Figure 6: Vote Choice in the 2016 Presidential Election Sorted by Percent Anglo SD10



24. This same pattern emerges when we consider voting patterns in the counties and precincts that comprise Senate District 22. The portion of Tarrant that is heavily minority votes cohesively in favor of Democratic candidates, while the outlying areas outside of Tarrant which are heavily Anglo vote cohesively for Republican candidates. Because the Anglo voting population is more numerous than Blacks and Hispanics combined they are able to control election outcomes and systematically block minority preferred candidates from winning.

Figure 7: Vote Choice in the 2020 Presidential Election Sorted by Percent Anglo SD22

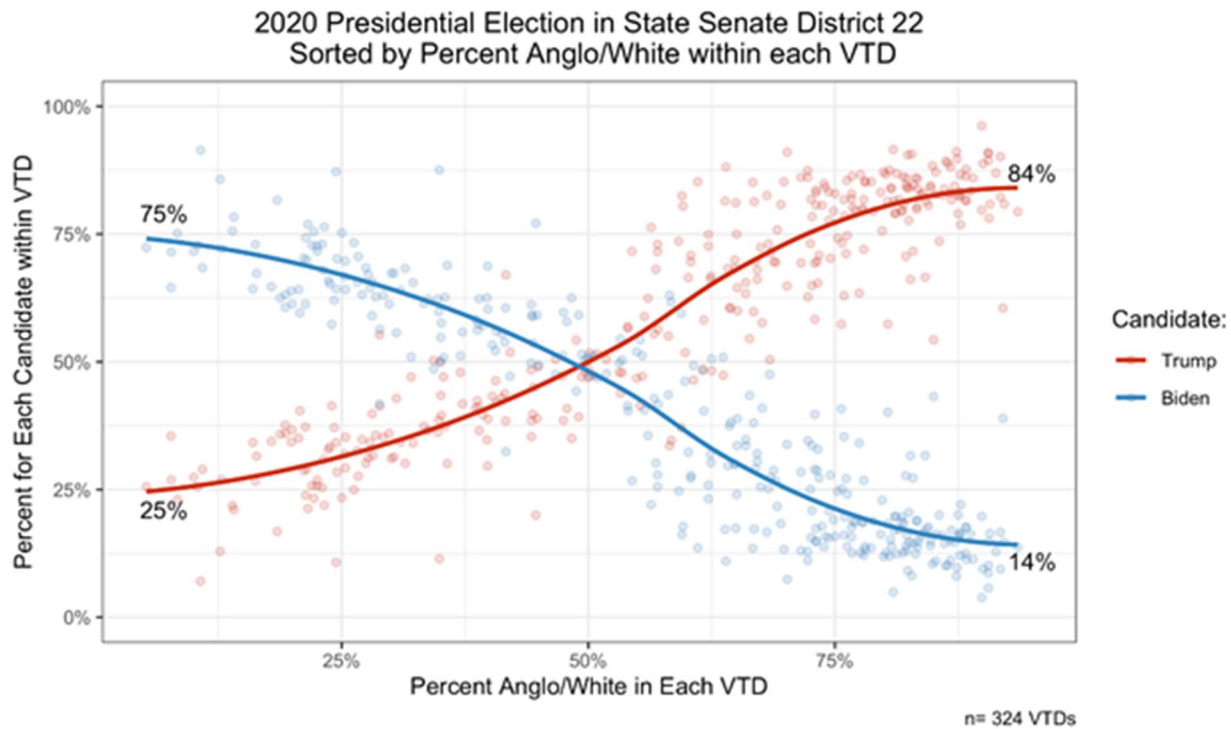


Figure 8: Vote Choice in the 2018 Gubernatorial Election Sorted by Percent Anglo SD22

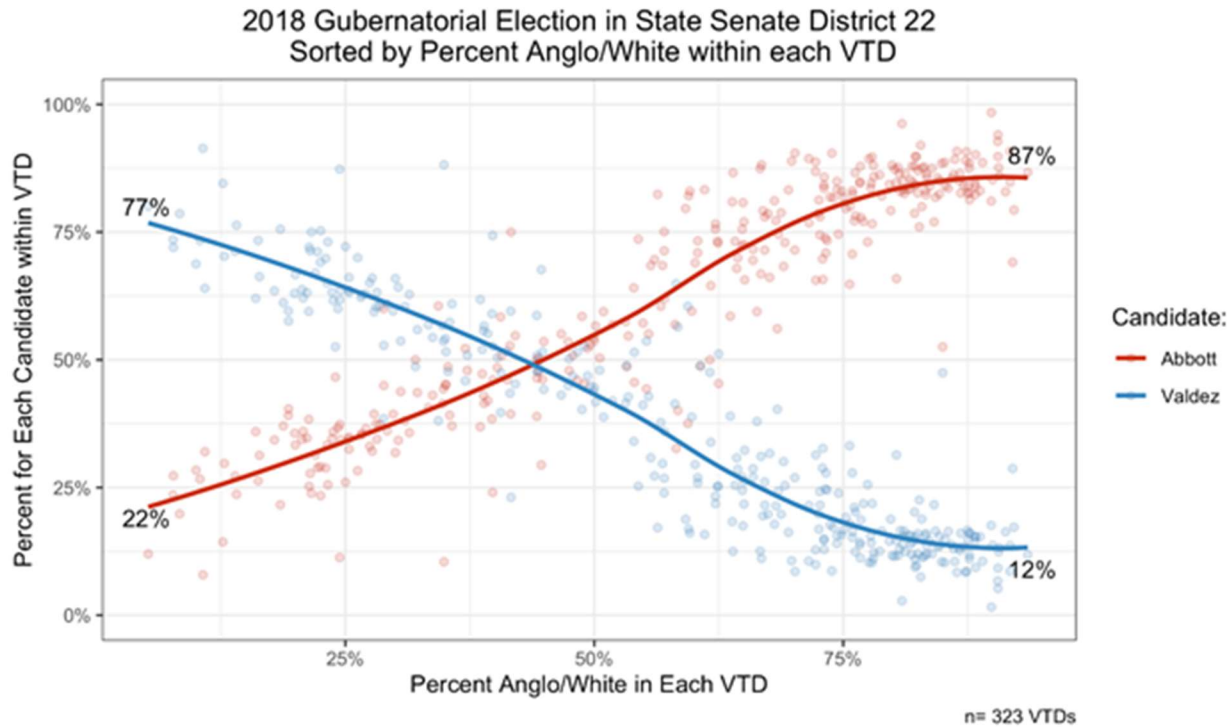
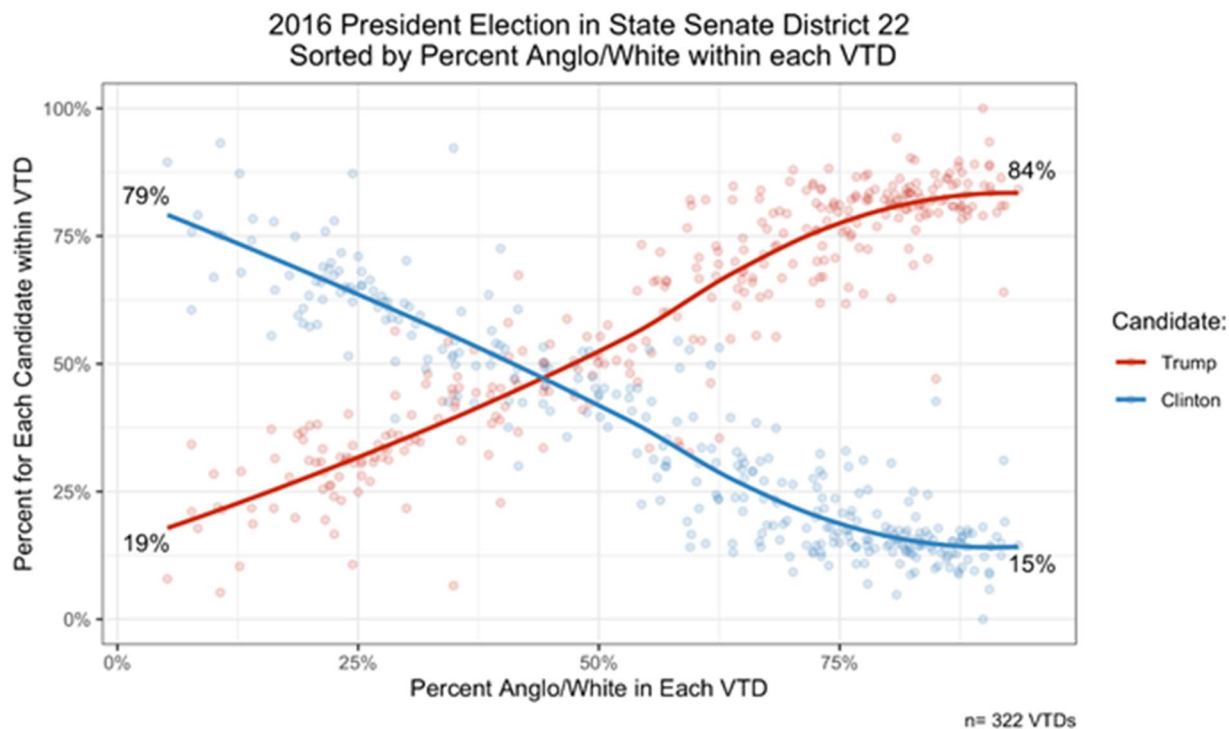


Figure 9: Vote Choice in the 2016 Presidential Election Sorted by Percent Anglo SD22



25. Turning to Senate District 9 which is contained within Tarrant County, we find similar patterns of racially polarized voting. Areas of Tarrant SD9 that are heavily minority vote cohesively in favor of Democratic candidates. Democratic candidates continue to fare well in diverse precinct which are still majority-minority, however in voting precincts that are majority-Anglo the Republican candidate is preferred. This trend is most obvious in SD9 precincts which are heavily Anglo, demonstrating 75% to 85% Republican vote consistently, and serving to block minority candidates of choice.

Figure 10: Vote Choice in the 2020 Presidential Election Sorted by Percent Anglo SD9

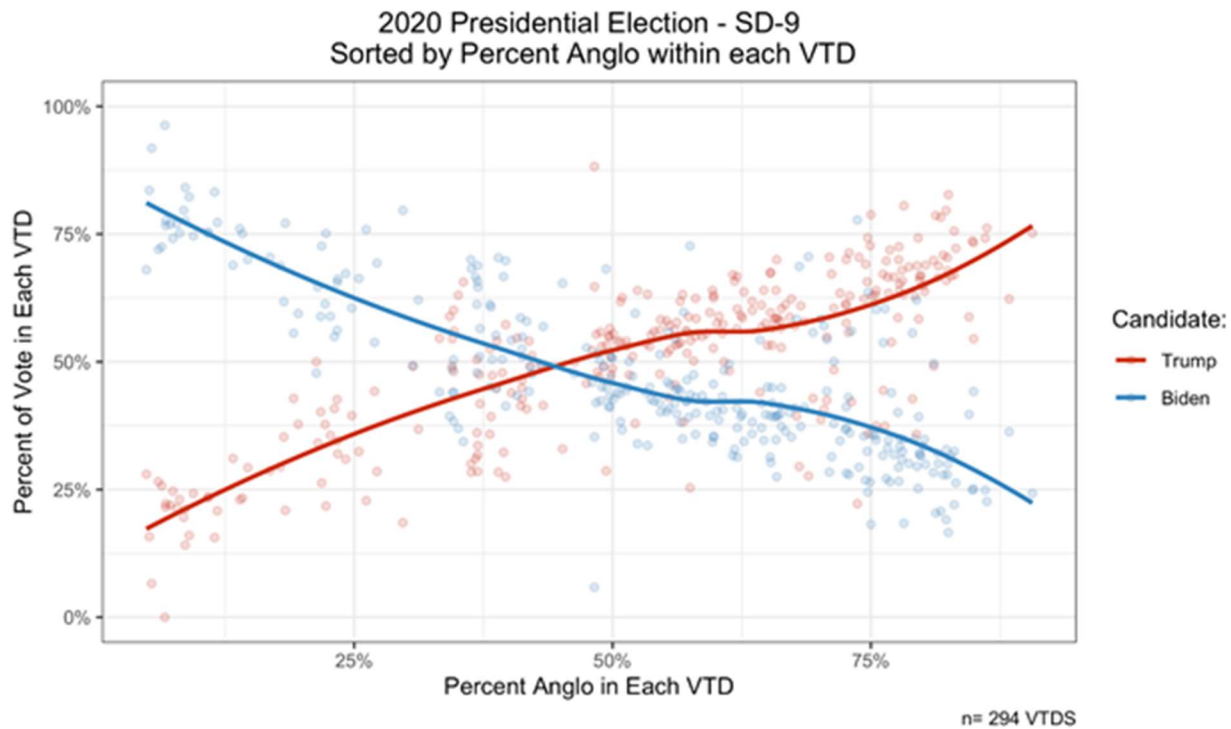


Figure 11: Vote Choice in the 2018 Gubernatorial Election Sorted by Percent Anglo SD9

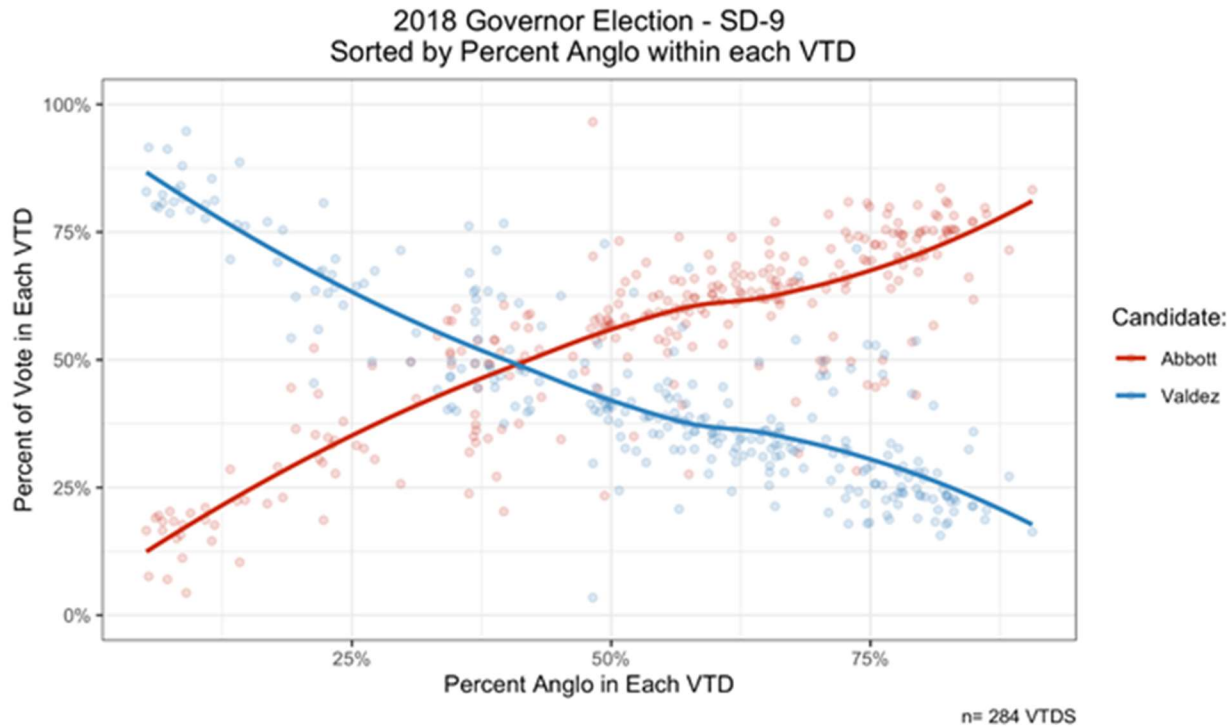
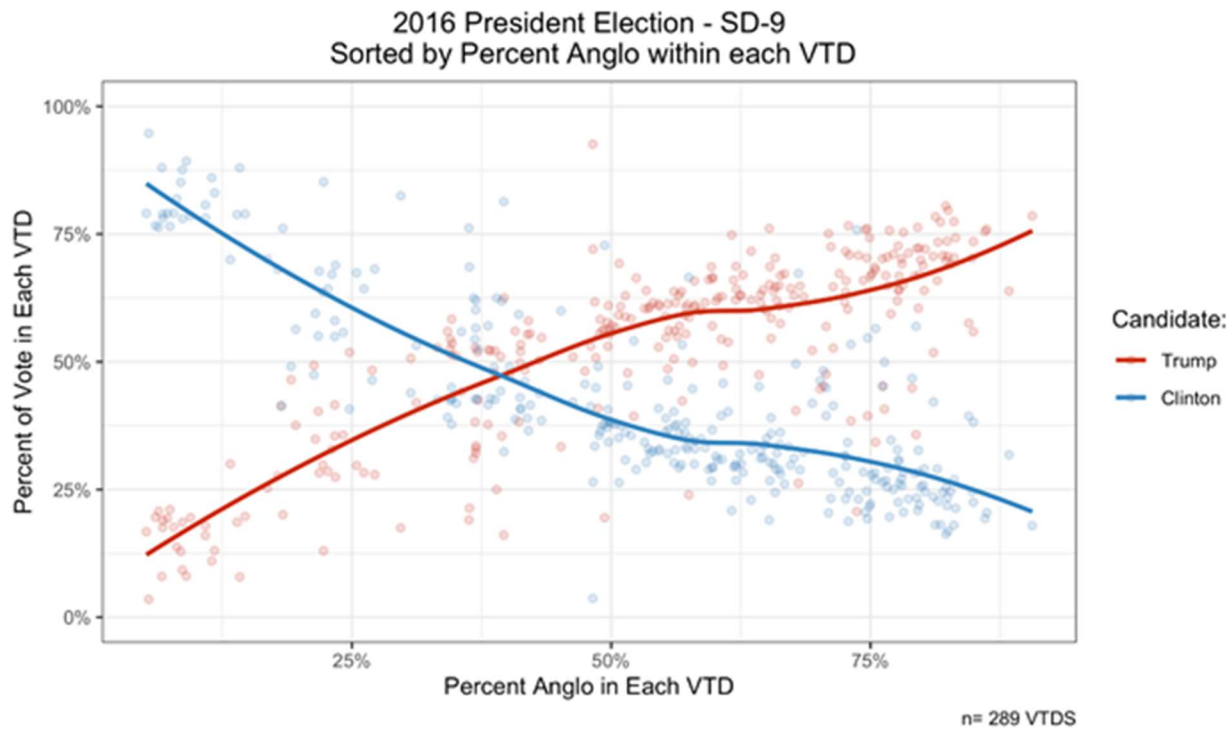


Figure 12: Vote Choice in the 2016 Presidential Election Sorted by Percent Anglo SD9



26. Across all three of Plan S2168's SD9, SD10 and SD22, as a voting precinct gets more and more heavily Anglo, there is a clear increase in the vote for the Republican candidate, across every single contest analyzed. In contrast, high density Black or Hispanic precincts vote heavily for the Democratic candidate. In addition to the ecological regression charts, I ran ecological inference analysis using the eiCompare package in R, to provide vote estimates for each racial/ethnic group in SD9, SD10 and SD22. Those results are reported below in Tables 4-6. Overall, the relationship holds across numerous elections analyzed, year-in, year-out, and is very strong evidence of racially polarized voting.

Table 4: Ecological inference analysis of vote choice by race – SD10

	Anglo	Latino	Black
Biden	12.4	78.3	92.2
Trump	86.2	19.7	7.8
Hegar	9.9	75.9	90.9
Cornyn	88.2	19.2	6.9
Valdez	7.6	75.7	91.3
Abbott	91.1	21.0	8.8
O'Rourke	12.8	82.4	95.1
Cruz	86.3	16.5	4.7
Clinton	8.0	75.3	92.3
Trump	87.8	17.9	7.3
Davis	10.3	73.4	92.6
Abbott	88.2	22.7	7.3

Table 5: Ecological inference analysis of vote choice by race – SD22

	Anglo	Latino	Black
Biden	9.5	76.4	93.0
Trump	89.1	21.4	6.9
Hegar	7.6	76.5	97.7
Cornyn	90.7	19.4	2.0
Valdez	6.5	74.2	92.3
Abbott	92.7	24.2	7.8
O'Rourke	9.8	79.6	96.9
Cruz	89.5	19.9	3.0
Clinton	6.5	78.0	99.6
Trump	90.6	17.2	0.4
Davis	8.5	73.9	87.9
Abbott	90.4	22.2	9.9

Table 6: Ecological inference analysis of vote choice by race – SD9

	Anglo	Latino	Black
Biden	20.3	74.2	84.4
Trump	78.7	23.7	15.2
Hegar	15.8	22.8	83.8
Cornyn	82.6	74.1	16.1
Valdez	12.1	80.0	81.5
Abbott	86.5	19.7	18.4
O'Rourke	18.4	80.7	83.2
Cruz	80.7	18.6	16.2
Clinton	14.4	79.5	77.5
Trump	85.7	20.5	22.4
Davis	14.7	77.7	86.4
Abbott	85.2	22.4	13.5

Table 7: SD9, SD10, SD22 in S2168 Plan do not perform for Minority Candidates of Choice

District	# VTDs	Biden		Trump	
9	364	165,645	42.6%	216,751	55.7%
10	340	155,339	41.4%	214,676	57.2%
22	342	147,821	38.3%	232,500	60.2%

District	# VTDs	Hegar		Cornyn	
9	364	152,193	39.4%	222,785	57.7%
10	340	145,387	39.1%	217,653	58.5%
22	342	137,991	36.2%	233,612	61.2%

District	# VTDs	Valdez		Abbott	
9	364	107,076	37.5%	173,290	60.6%
10	340	106,614	37.3%	175,032	61.2%
22	342	97,006	33.7%	186,047	64.7%

District	# VTDs	O'Rourke		Cruz	
9	364	124,874	43.6%	159,311	55.6%
10	340	121,105	42.3%	163,026	56.9%
22	342	111,695	38.8%	174,041	60.4%

District	# VTDs	Clinton		Trump	
9	364	109,572	36.0%	178,688	58.6%
10	340	114,729	37.2%	180,506	58.5%
22	340	104,425	33.8%	191,169	61.8%

District	# VTDs	Davis		Abbott	
9	364	56,328	34.0%	106,125	64.0%
10	340	68,510	38.3%	107,558	60.1%
22	340	52,178	31.3%	111,818	67.0%

Minority Voters within Tarrant County are Cohesive

27. When running EI analysis on Tarrant County as a whole, not just within a specific district, we find very strong evidence that Black and Hispanic voters are supporting the same candidates, and at very high rates. Overall, Black and Hispanic voters in Tarrant vote for Democratic candidates across multiple elections, overtime, at rates of 80% to 90%, which suggests they are very cohesive and can be considered a community of interest. In contrast, when looking countywide, Anglo voters consistently bloc vote against minority candidates of choice, clear

evidence of racially polarized voting. As evidenced in the ecological scatter plots below, there are some regions within Tarrant where Anglo voters are registering 30% to 40% crossover voting, however there are many other regions where Anglo voters bloc vote heavily against minority interests.

Table 8: Ecological inference analysis of vote choice among Black and Hispanic voters – Tarrant countywide

	Latino	Black	Anglo
Biden	80.8	90.4	19.7
Trump	18.8	9.5	80.2
Hegar	79.3	89.5	15.6
Cornyn	18.1	9.8	82.6
Valdez	83.5	89.1	11.6
Abbott	16.3	10.9	88.4
O'Rourke	85.0	90.9	18.1
Cruz	15.0	9.1	81.9
Clinton	83.8	89.5	13.7
Trump	16.2	10.6	86.3
Davis	79.9	88.7	13.9
Abbott	20.1	11.4	86.1

Figure 13: Vote Choice in the 2020 Presidential Election Sorted by Percent Anglo - All Precincts in Tarrant County

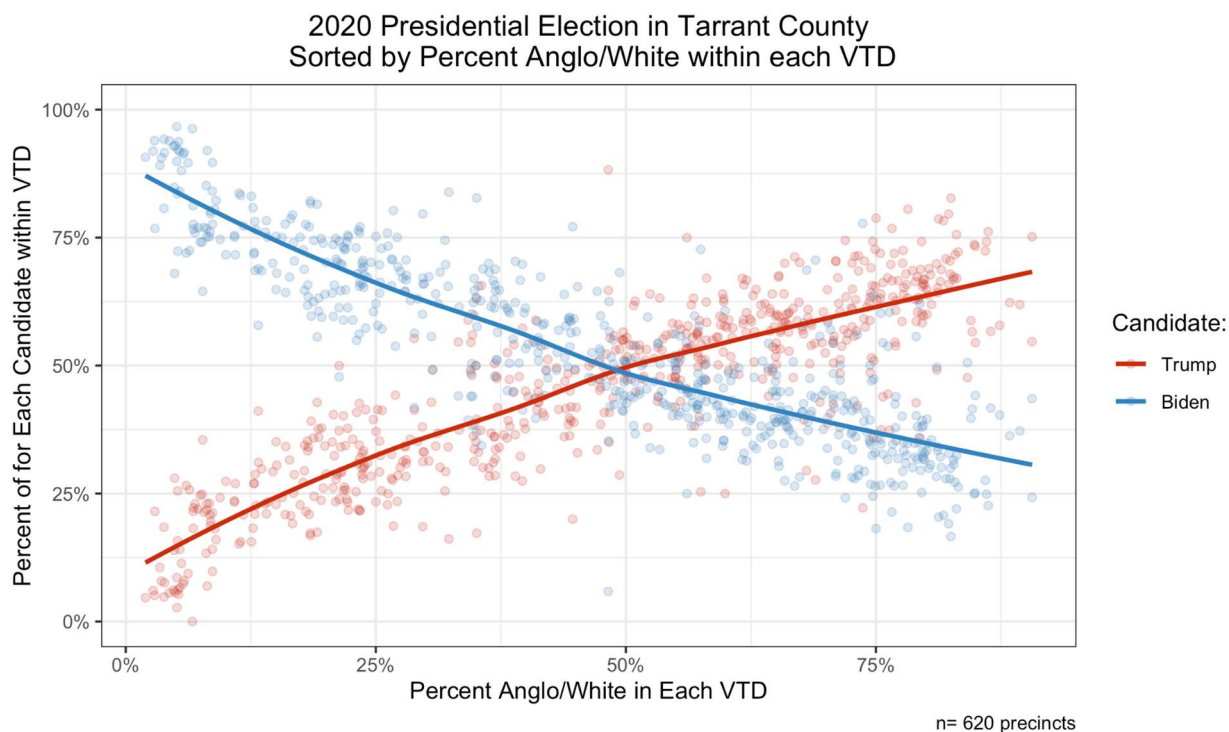


Figure 14: Vote Choice in the 2018 Gubernatorial Election Sorted by Percent Anglo - All Precincts in Tarrant County

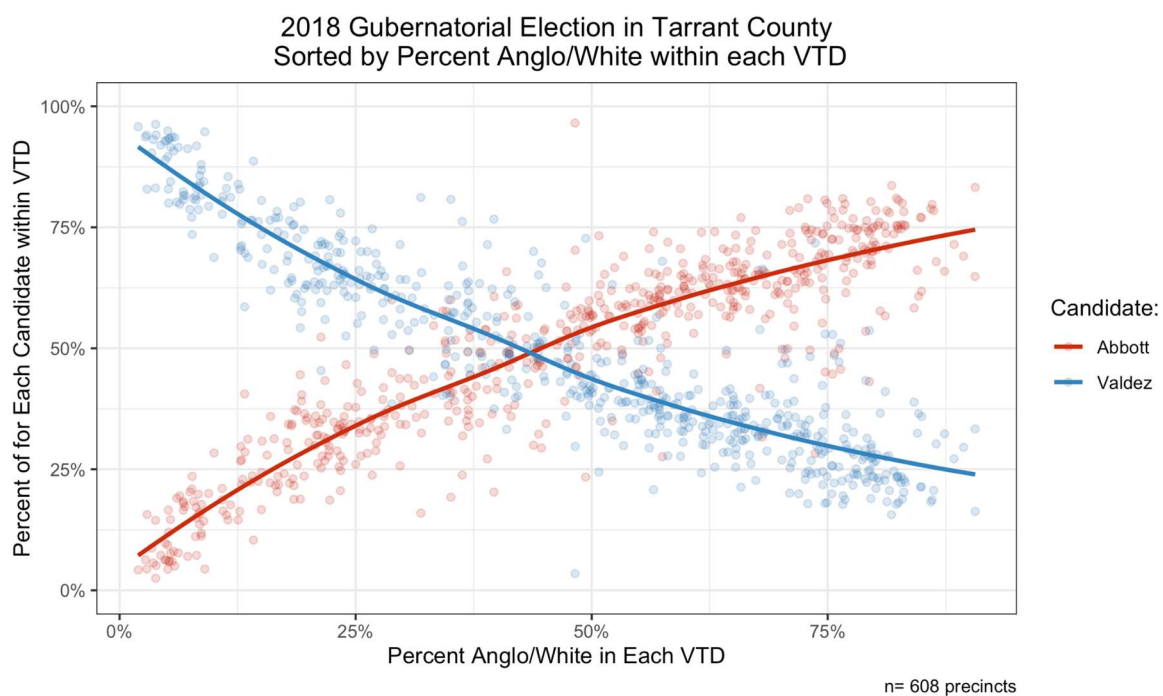
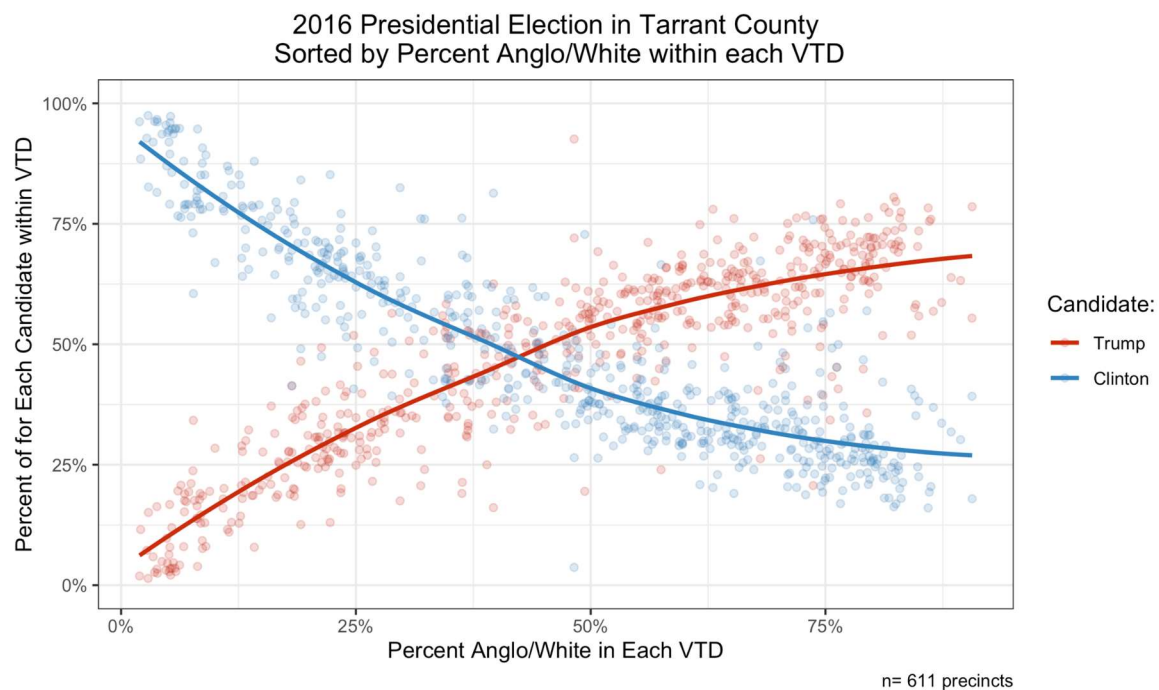


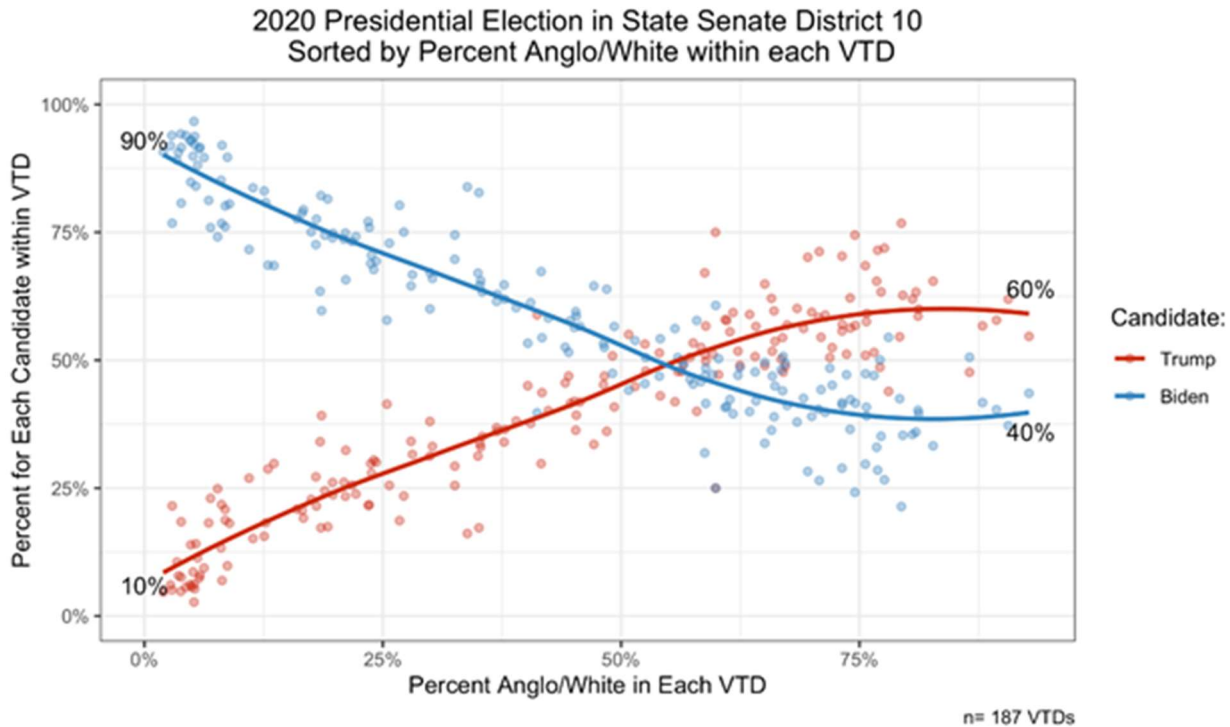
Figure 15: Vote Choice in the 2016 Presidential Election Sorted by Percent Anglo - All Precincts in Tarrant County



Tarrant County Versus non-Tarrant Counties in SD10 and SD22

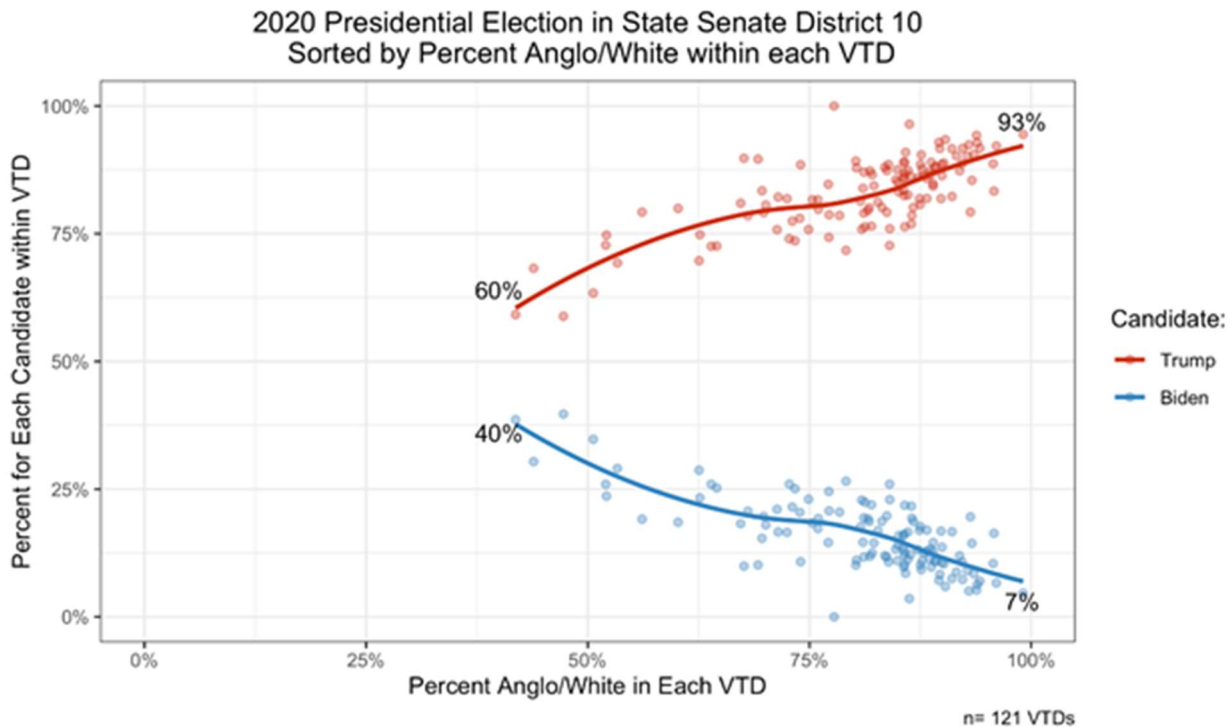
28. What is particularly noteworthy is how dramatically different voting patterns are inside Tarrant County versus in other counties which have been joined to form SD10 and SD22.
29. For example, if we isolate voting patterns to just the precincts within Tarrant County that have apportioned into SD10, we see high rates of minority cohesion, and also more Anglo cross-over voting than in the outlying counties. While the Black and Hispanic SD10 precincts inside Tarrant County are voting very cohesively, the majority-Anglo precincts are giving about 25% to 40% vote for Biden in the 2020 Presidential.

Figure 16: Vote Choice in the 2020 Presidential Election Sorted by Percent Anglo SD10
Subset to only SD10 precincts within Tarrant County



30. However, a very different picture of voting patterns emerges when we focus in on those SD10 precincts outside of Tarrant County. First, the non-Tarrant counties are almost entirely super-majority Anglo. Of the 121 VTDs, 118 are majority-Anglo VAP and the largest concentration are in the 80% to 100% Anglo range. Looking at voting patterns, the Anglo vote in these non-Tarrant counties is extremely cohesive, giving Biden less than 10% of the vote in 2020. Thus, it is clear that grouping the Tarrant and non-Tarrant counties and VTDs does not create a common community of interest, in fact it is just the opposite. The non-Tarrant counties have very different racial composition and extremely different voting patterns.

Figure 17: Vote Choice in the 2020 Presidential Election Sorted by Percent Anglo SD10
Subset to only SD10 precincts outside Tarrant County



Precincts Moved Out of SD10

31. The new Senate districting plan moved more than 150 precincts out of the current SD10 and into neighboring districts. The precincts which they moved out constituted minority-performing precincts which contributed to the election of minority candidates of choice. In particular, 157 precincts that voted cohesively with the Tarrant County SD10 precincts were shifted out of SD10 and into SD9 (131 precincts) and SD22 (26 precincts).
32. Overall, the 157 precincts which had been in SD10 and were moved out were 56% minority and 44% Anglo and voted 52% for Biden compared to 46% for Trump. Thus these precincts which were moved had been performing alongside the heavily Black and Hispanic portions of SD10 to contribute to the election of minority-preferred candidates.
33. In contrast, the 137 precincts which were moved into SD10 were only 23% minority and 77% Anglo and voted 19% for Biden and 80% for Trump. This new set of precincts in 7 counties beyond Tarrant are quite dissimilar and will serve to block minority candidates of choice from winning election in Senate District 10.

Table 9: Summary Description of Precincts Moved Out and Moved In to SD10

	# VTDs	Biden %	Trump %	Anglo	Minority
Moved out SD 10:	157	52.1%	46.3%	43.6%	56.4%
Moved in SD 10:	137	21.8%	76.9%	67.2%	32.8%

34. I will provide additional data and analysis of population statistics and election results on areas of the Senate maps in and around the Dallas/Fort Worth area as requested by the Court and counsel.

35. I declare under penalty of perjury that the foregoing is true to the best of my knowledge.

November 24, 2021

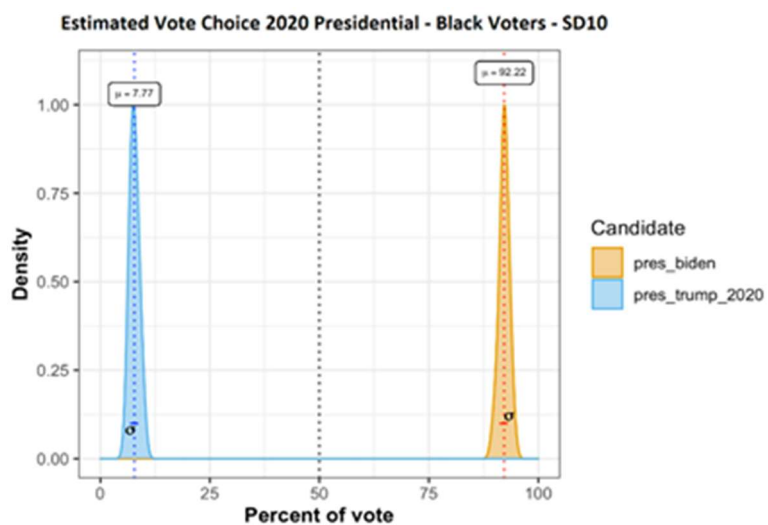
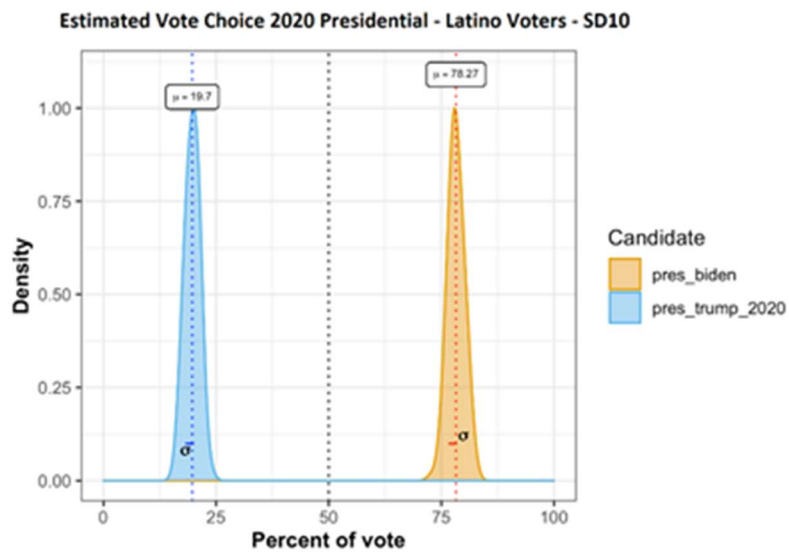
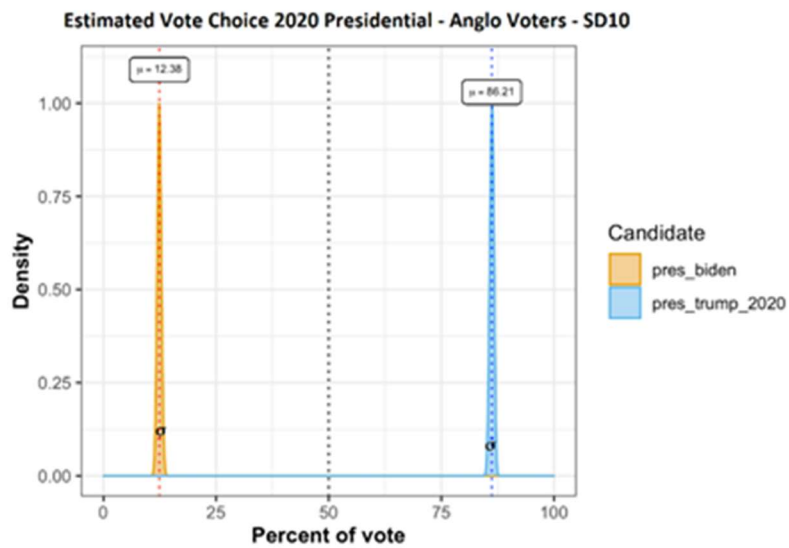


12/23/2021

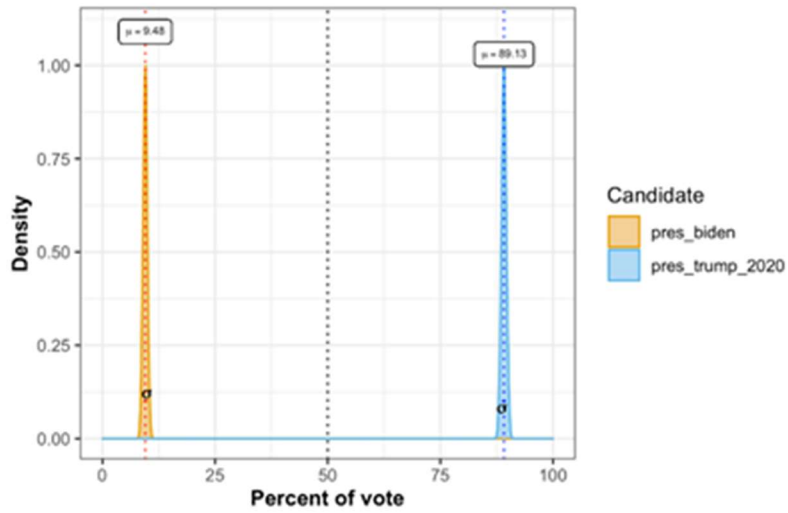
Matt Barreto

Agoura Hills, California

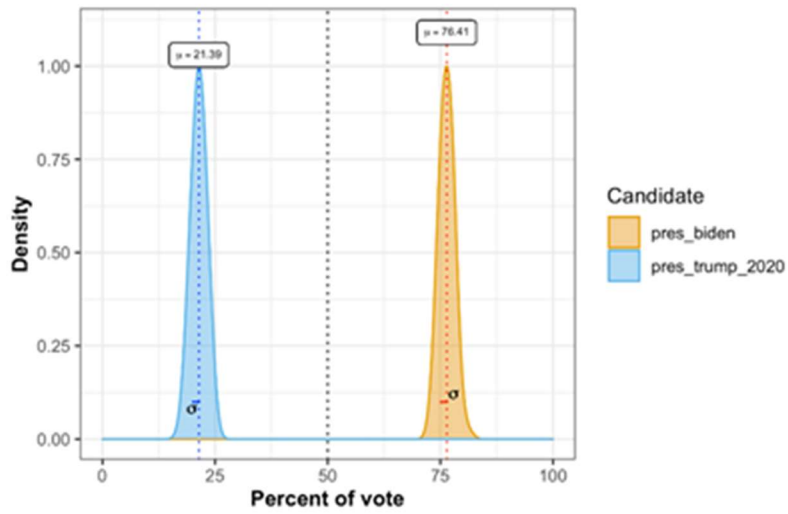
Appendix – Racially Polarized Voting Graphs



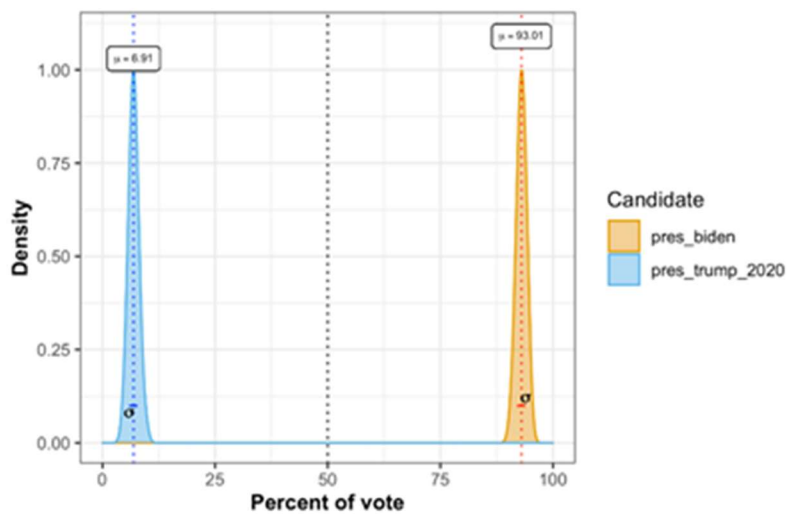
Estimated Vote Choice 2020 Presidential - Anglo Voters - SD22



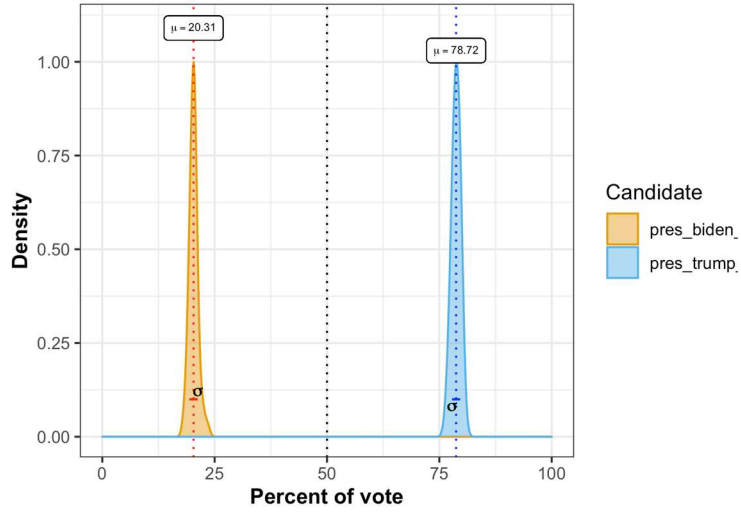
Estimated Vote Choice 2020 Presidential - Latino Voters - SD22



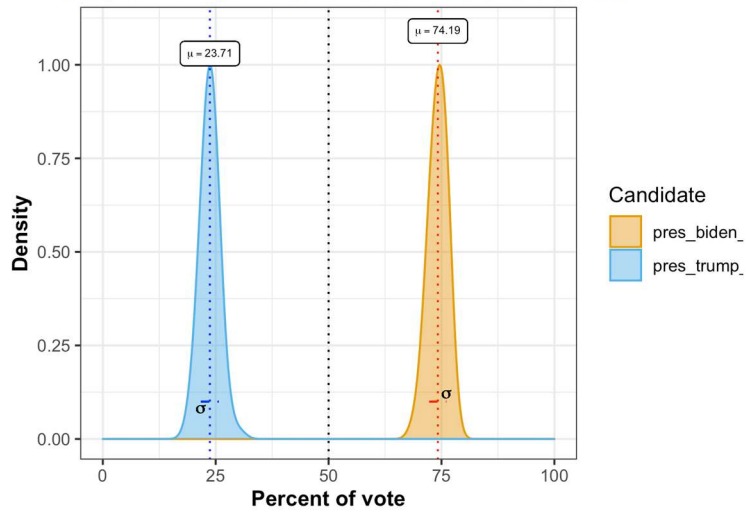
Estimated Vote Choice 2020 Presidential - Black Voters - SD22



Estimated Vote Choice 2020 Presidential - Anglo Voters - SD9



Estimated Vote Choice 2020 Presidential - Latino Voters - SD9



Estimated Vote Choice 2020 Presidential - Black Voters - SD9

