Supplemental Report on Partisan Bias in Florida’s Congressional Redistricting Plan

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This report is a supplement to our initial “Report on Computer Simulations of Florida Congressional Districting Plans.” It responds to some of the issues raised in the expert reports and deposition testimony of Professor Thomas Darling and Professor Nolan McCarty. While some of their comments create confusion that we take the opportunity to resolve, most of this supplemental report consists of concrete responses to substantive and methodological questions raised by these expert witnesses. Their critiques have inspired additional analyses that only strengthen our initial conclusions.

In our 2013 article in the Quarterly Journal of Political Science, we used Florida’s November 2000 election results to illustrate a broader phenomenon that we called “unintentional gerrymandering.” Democratic voters are concentrated in large, dense cities that their candidates win with overwhelming majorities, and in smaller cities and towns that are surrounded by Republican rural areas, such that Congressional districts are won by Republicans with comfortable but not overwhelming majorities. We used computer simulations to show that in Florida and elsewhere, at least some of the pro-Republican bias seen in districting plans drawn by politicians would likely remain even if Republican legislators were no longer responsible for drawing the districts. The goal of that paper was not to assess whether actual plans were drawn with partisan intent, but rather, to explain the prevalence of such “unintentional” gerrymandering as a general phenomenon.

More recently, we updated our analysis and used simulations based on precinct-level presidential votes as a baseline against which to contrast a specific plan: the 2012 Congressional redistricting plan enacted by the Florida Legislature. Naturally, we used the more recent 2008 presidential results as the basis for this updated analysis. Few would disagree with the conclusion that the plan is severely biased in favor of the Republican Party: It produces 17 out of 27 districts with majorities in favor of a presidential candidate whose statewide vote share was only slightly above 48.6 percent. The question posed to us, however, was whether the plan is more biased than the benchmark produced by our party-blind simulations.

Our initial report demonstrated that this is indeed the case. Subsequently, we received valuable feedback in the form of reports and depositions from expert witnesses summoned by opposing counsel. These reports do not undermine the analysis presented in our original report. Rather, they suggest a series of additional checks that we undertake in this supplemental report.
First, we share Professor McCarty’s interest in the difference between our simulation results from 2000 and those from 2008, and we evaluate his claim that “the difference between the expert and academic findings could only be accounted for by a major shift in the geographic distribution of partisanship in Florida between 2000 and 2008” (McCarty deposition, p. 41). This assessment is correct, and the first section of our report demonstrates that Florida has indeed undergone a profound demographic shift with important implications for the geographic distribution of partisanship over the last decade. The bias owing to “unintentional gerrymandering” against Democrats that we reported in our journal article has been substantially ameliorated by a sharp improvement in the performance of Democrats in suburbs and exurban areas. This is explained in part by a dramatic change in the number and geographic distribution of Hispanic voters in Florida, most notably in Central Florida.

Second, Professors McCarty and Darling have argued that by focusing exclusively on the 2008 presidential election, we have neglected to mobilize a variety of potentially valuable additional precinct-level indicators of partisanship. Furthermore, we agree with Professor McCarty’s suggestion that when comparing districting plans, “what one really wants to know is not the number of McCain districts, but the number of Republican districts” (McCarty deposition, p. 44). In section two of this report, we include simulations based on a variety of additional Florida statewide elections, and use Professor McCarty’s preferred technique for translating these results into a measure of partisanship that is useful for the analysis of redistricting. This additional analysis only strengthens the conclusions in our original report.

Finally, we acknowledge Professor Darling’s argument, in his expert report and deposition testimony, that redistricting in practice is done by humans rather than computers, and the "human map-drawers" in the Florida Legislature may have considered different district boundaries than those created in our districting simulations (Darling Expert Report, page 5-6). Accordingly, in response to Professor Darling’s argument, we supplement the simulations by examining all of the proposed redistricting plans submitted to the Florida Legislature by interest groups, individuals, and members of the Legislature. Of the 43 valid plans proposed to the Legislature, only the final enacted plan (Plan H000C9047) produced 17 pro-McCain districts. Each of the remaining 42 proposed plans is less extreme, producing 16 or fewer pro-McCain seats.

1. Hispanics and the Changing Political Geography of Florida

In his expert report and deposition testimony, Professor Nolan McCarty expressed surprise at the difference between the results of our journal article (using 2000 data) and those of our expert report (using 2008 data). To be clear, the “unintentional gerrymandering” effect has not gone away: our simulations still produce an advantage for the Republicans. However, the size of this geographic advantage has attenuated substantially since 2008.

This change flows not from some alteration or inconsistency in our analysis, but rather, from a fundamental change in the residential location of Democrats and Republicans in the state. Even the most casual observer of Florida politics knows that more than half of the state’s population growth since 2000 has come from non-Cuban Hispanic immigrants who have voted overwhelmingly for Democrats. What is important for our analysis is not that the Hispanic
population has increased by 1.54 million since 2000, however, but that the residential location choices of new Hispanic voters have transformed the state’s political geography. We provide a map of Florida’s Hispanic population in 2000 (Figure 1a) and 2010 (Figure 1b), and a map that highlights the change in Hispanic population share over the decade (Figure 1c). Figure 1 displays precinct-level data, and Figure 2 displays county-level data.

[FIGURES 1 AND 2 HERE]

The maps show that much of the growth of Florida’s Hispanic population has been in Central Florida. In particular, the Hispanic population growth has centered along the I-4 corridor, from St. Lucie County on the Treasure Coast, through Osceola and Lake Counties in Central Florida and into Marion County. The Hispanic population more than doubled in Osceola County, and more than tripled in Lake County. Very large increases were also seen in Polk, Orange, and Hillsborough Counties. Such dramatic demographic change in such a short time is quite rare.

Figure 1 also reveals that the Hispanic share of the population has not been growing most rapidly in dense urban centers like Fort Lauderdale and downtown Miami, but rather in their outskirts, such as Miramar and Pembroke Pines. In the central part of the state, some of the largest increases are in locales like Town ‘n’ Country and Brandon in Hillsborough County, Deltoma and other bedroom communities in the Greater Orlando metropolitan area, and sprawling I-4 communities like Lakeland.

Throughout the state, the Hispanic population growth has occurred in sprawling suburbs, exurbs, small and medium-sized towns, and even rural areas. This is true even in Northern Florida. It is important to note that the new arrivals in Central Florida are not Cubans with lingering cold-war attachments to the Republican Party. Nor are they non-citizens arriving from Latin America who cannot vote. Rather, the vast majority are Puerto Ricans migrating from New York and New Jersey or Puerto Rico who need only change their registration in order to participate in Florida elections. Only around 25 percent of the Hispanics in the Orlando area, for instance, are foreign-born.

At the same time, Florida’s Hispanic electorate has moved decisively toward the Democratic Party. According to exit polls, Albert Gore received 44 percent of the Hispanic vote, but by 2012, Obama’s Hispanic vote share was above 60 percent. This percentage is almost surely higher in Central Florida, which lacks a sizable Cuban population.

[FIGURE 3 HERE]

Figure 3 displays this change by plotting the county-level change in Republican presidential vote share on the vertical axis, and the change in the Hispanic share of the population between the 2000 to 2010 censuses on the horizontal axis. It shows that the Republicans have gained support in the (mostly rural) counties that have not gained significant Hispanic population, whereas Democrats have gained electoral support in the rapidly-growing counties that have experienced Hispanic population growth.

Taken together, these trends add up to a stunning transformation in Florida’s political geography. Above all, growing counties like Orange and Osceola have gone from slight majorities in favor of George W. Bush in 2000 to healthy victories for Obama in 2008.
Figure 4 takes a closer look at this transformation using precinct-level data. While much of rural Florida, as well as areas like Boca Raton, became more Republican from 2000 to 2008, many of the medium-density suburban areas became more Democratic, not only in the I-4 corridor of Central Florida, but also around Tallahassee, Pensacola, and Jacksonville to the North.

Given such a rapidly transforming geography, it is not surprising that the average number of majority-Republican seats produced by our simulations has fallen. Many of the suburban, exurban, and small-town areas that had non-Hispanic white majorities in 2000, especially in central Florida, ended up falling into districts with Republican majorities in the analysis published in the *Quarterly Journal of Political Science* (See Figure 5 of the published paper). Yet these Republican majorities were not especially large. Changes in political geography over an 8-year period were sufficiently large to push some of these Central and Northern Florida districts over the threshold into the Democratic column.

Figures 5 and 6 illustrate how this district-level transformation occurred. Figure 5 presents data at the level of the actual Congressional districts used in Florida from 2003 to 2012. The vertical axis captures the change in Hispanic share of the population from 2000 to 2010 in these districts, and the horizontal axis captures George W. Bush’s vote share in the November 2000 presidential election. Note that Hispanic population growth was very substantial in many of the several Congressional districts where Bush received just over 50 percent of the vote.

Now let us trace the evolution of support for Republicans in these districts from 2000 to 2008. In Figure 6, we display the 2000 Bush vote share for each district with black dots, and the 2008 vote share for John McCain with red stars. Let us follow the electoral transformation of the districts from Figure 5 that had slim Republican majorities in 2000 but subsequently experienced a large influx of Hispanic voters by 2008. Many of them experienced substantial decreases in Republican vote share (e.g. Districts 24, 8, 12, 25, 18, and 21). Two of them—Districts 8 and 18—actually flipped and became majority-Democratic. Four others came within a hair of doing so.

The exact same transformation occurs in our districting simulations. In parts of Florida where the simulations previously upheld consistent, small majorities for Bush, an influx of suburban and exurban Democrats has pushed the Democrats above the 50 percent mark in a number of the 2008 simulations. This is true not only in Central Florida and suburban Miami, but even in Northern Florida.

In sum, Professor McCarty is correct to point out that the changes in the simulation results from 2000 to 2008 are noteworthy. This is true not because of some fault with the simulation technique, however, but because Florida has undergone a fascinating geographic and demographic transition. Democratic voters are now less concentrated in Florida’s dense cities, and more evenly spread out through its sprawling suburbs and exurbs. Thus they are more efficiently distributed in space, and the pro-Republican bias associated purely with human
geography is waning. However, this transformation has not been reflected in the Legislature’s redistricting plan.

2. Additional Measures of Precinct-Level Partisanship

Background

In our original expert report from February 15, 2013, we applied the simulation technique from our journal article using 2008 instead of 2000 presidential election results in order to provide a non-partisan benchmark against which to contrast the Legislature’s redistricting plan. Our intention was to keep the analysis relatively straightforward and intuitive so as to communicate the results to non-specialists.

However, the expert witnesses for opposing counsel have encouraged us to enrich the analysis. Above all, Professors McCarty and Darling have questioned our reliance on the results of a single presidential election as a proxy for precinct-level partisanship. There are indeed other proxies for partisanship at our disposal, including precinct-level results of other state-wide elections.

Our initial decision to use the presidential vote was based not only on a desire for continuity with our earlier work, where the presidential vote was our only option to facilitate cross-state comparisons, but also on our assessment that it was the “cleanest” available measure of partisanship that would allow us to aggregate up to the level of simulated (and enacted) Congressional districts and make inferences about which party would obtain a majority of those districts. Presidential elections are useful for this purpose because the presidency is a federal office and the issue politics of Congressional and presidential elections are quite similar. We shied away from analyzing data from state offices because we observed that the party platforms and the nature of issue politics of state elections in Florida are quite distinctive, such that the labels “Republican” and “Democrat” can have subtly different meanings in statewide races. Moreover, the candidates in these races generally have very distinctive regional support bases drawn from networks of social ties that they have developed over the course of a political career. These local support bases are reflected in their precinct-level vote shares, and they are not correlated with federal-level partisanship. We also shied away from using the one U.S. Senate election at our disposal because we did not have a good sense for how to infer partisanship from a three-way race in which an independent received 30 percent of the vote.

Nevertheless, there are other potentially valuable data that may be used. The challenge is to employ a technique for making use of data like returns from rather lopsided and geographically distinctive election for Chief Financial Officer or Commissioner of Agriculture where the signal-to-noise ratio, for our purposes, may be quite low. It is not useful to merely aggregate the raw results from these relatively noisy non-competitive elections to the level of simulated districts, as attempted in Professor Darling’s expert report.

Rather, we agree with Professor McCarty that “what one really wants to know is not the number of McCain districts, but the number of Republican districts” (McCarty deposition, p. 44). By the same token, we are not interested in the number of districts that favored Charlie Crist or Pam
Bondi in their respective elections. Rather, we want to exploit the information from these various races as statistical proxies, or predictors, of partisanship in Congressional elections.

Predicting partisanship from multiple elections

In our journal article and our original expert report, we proceeded from the premise that presidential election results are sufficient predictors of partisanship in Congressional races. But, indeed, other elections can also shed light on the question. For Florida Congressional delegations in recent years, we know which party won each seat, and we can calculate from precinct-level data the district-level results in each of the most recent statewide elections of every type. Specifically, we have precinct-level election data from not only the 2008 presidential contest, but also from the U.S. Senate, Attorney General, Chief Financial Officer, Governor, and Commissioner of Agriculture elections held in 2010. We use the results from these particular six elections because they are the most recent of each type of statewide election prior to the 2012 redistricting process. Given the massive demographic changes described above, it would be inappropriate to reach back earlier in history.

We then estimate a logistic regression model that uses the district-level results from all six of these elections to predict whether a Democrat or Republican wins the actual Congressional election. The model statistically analyzes each Florida congressional district with respect to the Republican vote share it produced in each of these six elections. The model uses these six Republican vote shares to predict, for any enacted or simulated Congressional district, the probability that the district elects a Republican congressional representative in November 2012. The data used for statistical estimation of the model is based upon the outcome of all Florida congressional elections for Congresses 113 (November 2012), 112 (November 2010), and 111 (November 2008): the three most recent rounds of Congressional elections held in Florida.

This model allows us to estimate, for instance, that in the Legislature's newly enacted plan, Congressional District 27 has a 92.7% probability of electing a Republican to the House of Representatives. This estimate of a 92.7% probability is based upon District 27's Republican vote shares in the six statewide elections we analyze: District 27 produced a 51.6% Republican vote in the 2008 presidential election, 55.0% in the 2010 US Senate election, 51.5% in the 2010 gubernatorial election, 54.4% in the Attorney General election, 60.4% in the Chief Financial Officer election, and 58.4% in the Commissioner of Agriculture election. This model gives us an understanding of how district-level results from these various elections translate into legislative wins and losses for Republicans and Democrats in U.S. Congressional races in Florida.

Using this statistical model, we now have a more sophisticated way to analyze both the Legislature's enacted plan as well as all of our simulated redistricting plans. Rather than simply assuming, for example, that a 50.5 percent McCain share translates into a Republican legislative seat, we can use the full range of our knowledge about how Attorney General, Presidential, Gubernatorial, and other election results translate into the probability of a Republican legislative victory. This richer statistical model guards against the possibility that, for example, an anomalous occurrence in the 2008 presidential election might influence our results. We simply use the coefficients from our logistic model, and the underlying election results from each race,
to predict which party would win or lose each seat in the enacted plan and in each of the simulated plans.

This method is exactly the same technique used by McCarty, Poole, and Rosenthal in their well-regarded paper that uses simulated districts to explore the relationship between gerrymandering and political polarization. Rather than contrasting the simulated and enacted plans according to the number of districts with McCain (or Crist or Bondi) majorities in the simulated and enacted plans, we contrast these predicted Republican seat shares.

This approach is a bit more complicated and harder to explain than our simpler approach based only on the presidential election, but it builds from the strength of all of the data at our disposal, and minimizes the possible distortions that might flow from idiosyncrasies of individual elections. It even allows us to use some relatively idiosyncratic statewide elections (e.g. Commissioner of Agriculture) that would otherwise be of little use.

Results

We have not conducted additional simulations. Rather, we have used the same simulated plans generated for our initial report, but we have used the underlying precinct-level results of the available elections from 2008 to 2010 to generate predicted probabilities of Republican victories in each simulated district, and calculated the expected number of Republican victories associated with each plan by summing over these predicted probabilities. We apply the same technique to the enacted plan.

[FIGURE 7 HERE]

The results are presented in Figure 7. Each line in the graph corresponds to a different set of simulations. The logic of each of these simulations is explained in our original, February 15, 2013 expert report. The red markers correspond to the Legislature's enacted plan being evaluated. Our statistical model predicts that the Legislature's enacted plan produces an estimated 17.0 Republican legislators among the 27 districts; this estimate is virtually identical to the 17 total Republicans elected under the enacted plan in November 2012.

The expected Republican seat shares from our 10,000 computer-simulated districting plans are presented in gray in Figure 7. As we explained in our original expert report, we employed 10 different simulation procedures, drawing 1,000 different simulated congressional districting plans under each of these 10 procedures. Figure 7 therefore compares the estimated number of Republican legislators produced by each of the 10,000 simulated districting maps against the estimated 17.0 Republican legislators produced by the Legislature's enacted map.

The main result of our analysis in Figure 7 is not much different than in our initial study. Only 3 of the 10,000 simulated districting maps we analyze produce as many as or more Republican legislators than the 17.0 Republicans produced by the Legislature’s enacted map. The remaining 9,997 of the simulated maps (99.97%) produce fewer Republican legislators than the Legislature's plan.

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This statistically strong result reinforces our original conclusion that the Legislature’s enacted plan is an extreme statistical outlier with respect to partisanship. The vast majority of our 10,000 simulated districting plans yield between 14 and 16 estimated Republican-controlled seats. No matter which approach we take to the simulations, after drawing thousands of plans, we almost never see a plan with 17 expected Republican seats. The Legislature’s plan is an extreme outlier relative to the distributions of plans produced by the non-partisan simulations.

Why not apply the uniform swing?

A key advantage of this approach is that it allows for the use of relatively non-competitive elections while avoiding any arbitrary or misleading application of the so-called “uniform swing.” When writing our journal article, we wanted to demonstrate that the problem of “unintentional gerrymandering” is present not just in Florida, but also in other urbanized states. We thought Florida was an excellent case study to demonstrate the phenomenon precisely because the election in 2000 was a tie. A challenge, however, was to come up with a comparable measure of “natural” pro-Republican bias in states where the 2000 presidential election was more lopsided. Our goal was, quite simply, to produce cross-state graphs that would make sense to readers. Thus we generated a hypothetical tied election in each state by adding or subtracting the same number of McCain votes in each simulated district to achieve an exact statewide tie between Obama and McCain. We then calculated the McCain seat share produced by our simulations for each state under a hypothetical scenario of a tied election, where the tie was achieved via a blunt and admittedly unrealistic uniform vote shift across all districts in the state.

The uniform swing relies on the rather unrealistic assumption that parties gain and lose support uniformly across regions. When applying the uniform swing, one is quite literally making up data. The only reason to engage in such a practice is if the benefits outweigh the costs. In our case, the benefit was cross-state comparability in the estimation of electoral bias that is induced by human geography.

But the purpose of our analysis in this case is quite different. We are attempting to use the simulations as a non-partisan baseline against which to compare the Legislature’s plan in an effort to evaluate partisan intent in the redistricting process. We do not understand the basis of the claim in Professor McCarty’s expert report that we should have applied the uniform swing in this analysis. Since we are not trying to make comparisons across states or over time, there is simply no benefit that justifies buying into the rather heroic assumption of a uniform vote swing.

More importantly, application of the uniform swing would undermine our efforts to make inferences about partisan intent. If one is attempting to use the 2008 election results to draw an advantageous map for Republicans, one wants to create small but trustworthy Republican majorities in as many of the pivotal districts as possible. Thus a plan drawn with partisan intent would have a telltale group of pivotal districts with McCain vote shares just above 50 percent, whereas many of the comparable districts in a non-partisan plan would be just below 50 percent. Our initial report demonstrated that this is indeed the case (See Figures 3, 5, and 7).

It may seem innocuous to add some number of McCain votes to every district in each of the simulated and enacted plans, but consider what this means for the comparison at the heart of our analysis. The hypothetical Republican seat share in the gerrymandered plan under evaluation
would remain unchanged, since the pivotal districts had already been manipulated so as to have a 
McCain vote share above 50 percent. However, in the non-partisan plans, the uniform swing 
would push the McCain vote above 50 percent in some of the crucial pivotal districts, artificially 
creating the appearance of similarity between the plan drawn with partisan intent and those 
drawn without. This is exactly what has happened in the “uniform swing” analysis presented in 
Professor McCarty’s expert report.

In sum, we see no justification for arbitrarily adding or subtracting votes for candidates as part of 
an exercise that compares a districting plan to a non-partisan baseline in an effort to ascertain 
partisan intent. Indeed, this practice would lead to mistaken inferences. One might argue for 
this approach only as a way to make direct comparisons of data from different elections where 
the parties received different vote shares, but the logistic regression approach advocated by 
McCarty, Poole, and Rosenthal and implemented above is a better alternative.

3. Moving Beyond Simulations: Open Redistricting

Finally, we acknowledge that computer simulations are not the only way to produce a baseline 
against which to contrast a proposed districting plan. It is possible that there is some unknown 
cognitive bias associated with the way the human eye and brain interact when drawing districts 
that is simply not captured by our simulation technique. Professor Darling argues that a “human 
map-drawer’s attention” might produce subtly different results than our algorithm (Darling 
Expert Report, page 5-6). In several places in his expert report, Professor Darling criticizes our 
algorithm for missing out on subtleties of “the map drawing process used in Florida,” such as the 
practice of beginning with the panhandle (Darling Expert Report, page 14).

Moreover, Professor Darling argues in his expert report and deposition testimony that our 
simulations cannot be viewed as random draws from the exceptionally large number of feasible 
valid plans. As he explained in his deposition, this argument was taken from some of the 
methodological work of Micah Altman and Michael McDonald—pioneers in the field of 
automated redistricting—who argue that care must be taken in the use of the language of 
classical hypothesis testing when one does not know the full distribution of feasible plans.

It is possible that scientific progress will soon lead to the development of a practical technique 
for generating the full set of valid plans, but until that time, we believe our simulation technique 
provides the best possible non-partisan benchmark. Our simulation approach is a simple and 
fully transparent way of generating party-blind plans according to the requirements of the Florida 
Constitution. To our knowledge, no one has yet proposed a concrete story about why our sample 
from the (unknown) overall distribution of plans is biased or in which direction. Nor has anyone 
proposed a superior baseline.

Nevertheless, we recognize that some skeptics will simply not trust computer simulations over 
the human eye and hand under any circumstances. Fortunately, in drawing on the recent 
contributions of Micah Altman and Michael McDonald, Professor Darling points the way toward 
an alternative benchmark. Altman and McDonald argue that the way forward is to supplement 
computer simulations with information gleaned from an open redistricting process that enables
us to learn from the so-called “wisdom of crowds.”2 Make all of the underlying block-level data available to the public, explain the rules in a straightforward way, and provide them with a user-friendly online software platform for drawing and submitting their own valid plans. Then archive these plans on a web portal for scholars to download and analyze.

The Florida Legislature has done just that. Through the Florida Senate’s web page, we were able to access maps of not only the various redistricting plans and amendments submitted by the committees of the Florida House and Senate, but also a wide variety of plans submitted by members of the public. It is our understanding that these public plans were not formally introduced in the Legislature, but were sometimes mentioned during presentations at committee meetings. Helpfully, the Senate web page includes the redistricting committee’s designation of each plan according to whether it is contiguous, complete, and within an acceptable range of population deviation. We therefore throw out any plan that fail short on one or more of these prerequisites, leaving us with a sample of 43 plans: 19 that were considered as part of the deliberations of the House or Senate committees, and 24 that were submitted by advocacy groups or members of the public.

We use the GIS boundary files associated with these plans, and we aggregate the 2008 McCain vote share to the level of the proposed Congressional districts. We then calculate the number of majority-McCain districts generated by each plan.

[FIGURE 8 HERE]

Each line in Figure 8 corresponds to one of the 43 plans. The plans are ordered from bottom to top according to the date of submission, with the final, adopted plan displayed on the top row in black. The plans proposed by the redistricting committee of the Florida House of Representatives are represented in red, those introduced by Florida Senators are displayed in blue, and the plans submitted by the public and by various advocacy groups are represented in green.

Of the 43 proposed plans, only the Legislature’s final enacted plan (Plan H000C9047) produced 17 pro-McCain seats. Each of the remaining 42 proposed plans is less extreme, producing 16 or fewer pro-McCain seats. The valid plans submitted by members of the public ranged from 10 to 16 pro-McCain seats, with an average of 14.4 and a median of 15. Thus on average, like our simulations, these plans were somewhat biased against the Democrats, but the final plan adopted by the Legislature was the most extreme of all. We have no knowledge of the intentions of the members of the public who took the time to develop and submit these plans. Thus, we are more comfortable using the computer simulations as a non-partisan baseline, but at the very least, these plans provide a valuable reality check for our simulation results.

Figure 8 also illustrates an interesting story about the evolution of the Legislature’s proposed plans from November of 2011 to January of 2012. Senate Bill 1174, which was first submitted on November 28, 2011 for consideration by the Senate Reapportionment Committee, proposed a congressional districting plan with 15 McCain-majority districts. Meanwhile, the House subcommittee debated 7 separate plans, which ranged from 14 to 16 seats with McCain

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majorities. The Senate Reapportionment Committee subsequently proposed an amendment, or "Committee Substitute," of SB 1174 that increased the number of pro-McCain districts from 15 to 16 (Plan S000C9006). A further amended plan with a similar level of pro-Republican bias was then submitted to the Senate by Senator Don Gaetz (Plan S004C9014). Finally, the House of Representatives considered the bill, and an amendment advocated by Representative Will Weatherford, the chair of the House Redistricting Committee, pushed the number of McCain-majority seats in the final enacted plan from 16 to 17 (Plan H000C9047). In sum, this legislative history of SB 1174 illustrates how the Legislature amended its congressional districting plan to incrementally increase from 15 to 17 districts with McCain majorities.

More broadly, the Legislature clearly had a number of less-biased plans produced by interest groups and the public at its disposal, and the redistricting committee of the House of Representatives Redistricting Committee considered a plan with relatively modest pro-Republican bias (14 seats). Yet over the course of the amendment process, the plan evolved from one that drew 15 McCain-majority seats (SB 1174) to a final, adopted plan that created 17 seats favoring the party controlling the redistricting process.

4. Conclusion

There can be little debate that the Legislature's plan does not treat the parties equally. Based on 2008 presidential results, the Legislature's plan produces a majority in 63 percent of the seats for a Republican candidate that received a statewide vote share of only 48.6 percent. However, the question at hand is not whether the Legislature's plan is fair, but whether it was drawn with partisan intent. By pointing out in our scholarly research that residential geography can generate pronounced partisan bias in favor of Republicans in the absence of intentional gerrymandering, one might say that we have raised the bar for anyone attempting to prove such intent.

Even so, the Legislature's plan easily passes this hurdle. Whether we rely simply on the 2008 presidential election or the more complex, multi-election approach to measuring district-level partisanship, the Legislature's plan produces greater bias in favor of the Republican Party than well over 99% of our simulated plans, most of which are slightly or moderately biased in favor of the Republicans.

For those who do not trust computer algorithms, we have also shown that the Legislature's plan is more favorable to Republicans than any plan submitted by the public as part of Florida's open redistricting initiative, and indeed more favorable to the Republicans than every single alternative proposal considered by the Florida House Redistricting Committee and Senate Reapportionment Committee.
Figures 1a and 1b:

2000 Hispanic Share of Total Population

Legend:
☐ Less Hispanic
■ More Hispanic

2010 Hispanic Share of Total Population

Legend:
☐ Less Hispanic
■ More Hispanic
Figure 1c:

2000 to 2010 Change in Hispanic Share of Population

Legend:
- Less Hispanic
- More Hispanic
Figure 2:

2000 to 2010 Change in Hispanic Share of Population

Legend:
- □ Less Hispanic
- ■ More Hispanic
Figure 3:

County-Level Changes in Hispanic Population and Republican Voting
Figure 4:

Changes in Precinct-Level Republican voting, 2000 (Bush Vote Share) to 2008 (McCain Vote Share)

Legend:
- □ Changed to More Democratic
- ■ Changed to More Republican
Figure 5:

Florida Congressional Districts Enacted in 2002

[Graph showing the distribution of Florida Congressional Districts (CD) based on change in Hispanic percent (2000-2010) and district-level George Bush vote share (Nov. 2000).]
Figure 6:

Partisan Change in 2002–Enacted Congressional Districts

Legend:
- ● 2000 George Bush Vote Share
- ★ 2008 John McCain Vote Share

2002–Enacted Congressional Districts Aligned from Most to Least Republican

Republican Presidential Vote Share

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Figure 7:
Comparison of Legislature’s Enacted Districting Plan To Computer-Simulated Districting Plans

Legend:
* Legislature’s Enacted Districting Plan
- Computer-Simulated Districting Plans

With No Majority-Black VAP Districts
   Held Fixed
With One Majority-Black VRA District
   (District 24) Held Fixed
With Two Majority-Black VAP Districts
   (5 and 24) Held Fixed
With Two Majority-Black VAP Districts
   (20 and 24) Held Fixed
With Three Majority-Black VAP Districts
   (5, 20, and 24) Held Fixed
   With 46 Counties Held Intact
   And No Majority-Black VAP Districts Held Fixed
   With 46 Counties Held Intact
   And One Majority-Black VRA District (District 24) Held Fixed
   With 46 Counties Held Intact
   And Two Majority-Black VAP Districts (5 and 24) Held Fixed
   With 46 Counties Held Intact
   And Two Majority-Black VAP Districts (20 and 24) Held Fixed
   With 46 Counties Held Intact
   And Three Majority-Black VAP Districts (5, 20, and 24) Held Fixed

Predicted Number of Republican Legislators Elected in November 2012
From Each Districting Plan (27 Total Congressional Districts)