IN THE COMMONWEALTH COURT OF PENNSYLVANIA

_____

League of Women Voters of Pennsylvania, *et al.*,	)	
	)	
Petitioners,	)	
	)	**No. 261 MD 2017**
v.	)	
	)	
The Commonwealth of Pennsylvania, *et al.*,	)	
	)	
Respondents.	)	

_____)

[PROPOSED] ORDER

AND NOW, this ___ day of _____, 2017, upon consideration of

Petitioners' Motion *In Limine* To Exclude Testimony from Dr. James Gimpel

Regarding the Intended or Actual Effect of the 2011 Map on Pennsylvania's

Communities of Interest ("Motion") and any response thereto, it is hereby

ORDERED that the Motion is **GRANTED**, and accordingly, Respondents are

BARRED from introducing Dr. Gimpel's testimony regarding the intended or

actual effect of Pennsylvania's 2011 congressional districting map on

Pennsylvania's communities of interest.

BY THE COURT

_____
J.

IN THE COMMONWEALTH COURT OF PENNSYLVANIA

_____

League of Women Voters of Pennsylvania, *et al.*,

                        Petitioners,

              v.

The Commonwealth of Pennsylvania, *et al.*,

                       Respondents.

No. 261 MD 2017

_____

PETIONERS' MOTION *IN LIMINE* TO EXCLUDE TESTIMONY FROM DR. JAMES GIMPEL REGARDING THE INTENDED OR ACTUAL EFFECT OF THE 2011 MAP ON PENNSYLVANIA'S COMMUNITIES OF INTEREST

Petioners, by and through undersigned counsel, respectfully move the Court *in limine* for entry of an order barring Respondents Speaker Turzai and President Pro Tempore Scarnati (collectively, "Legislative Respondents") from introducing testimony from their purported expert Dr. James Gimpel regarding the intended or actual effect of Pennsylvania's 2011 congressional districting map on Pennsylvania's communities of interest.

The reasons and grounds for this motion are set forth in the accompanying Memorandum of Law and attached exhibits, which are incorporated by reference as if fully set forth herein.

Dated: December 10, 2017

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Counsel for Petitioners

IN THE COMMONWEALTH COURT OF PENNSYLVANIA

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MEMORANDUM OF LAW IN SUPPORT OF PETIONERS' MOTION *IN LIMINE* TO EXCLUDE TESTIMONY FROM DR. JAMES GIMPEL REGARDING THE INTENDED OR ACTUAL EFFECT OF THE 2011 MAP ON PENNSYLVANIA'S COMMUNITIES OF INTEREST

In an effort to provide a post hoc justification for Pennsylvania's ridiculously contorted congressional district boundaries that divide many significant communities of interest while ensnaring others in odd tentacles, Respondents offer the testimony of purported expert Dr. James Gimpel. Dr. Gimpel is a professor of political science at the University of Maryland with no training or expertise in the history of Pennsylvania or its politics. Dr. Gimpel intends to offer a district-by-district analysis concerning the intent or state of mind of mapmakers in drawing particular district lines, which is not an appropriate subject for expert testimony. For example, Dr. Gimpel asserts:

- "The 4th District and the 12th District were quite obvious candidates for a merge . . . ." Ex. A, 12/9/17 Gimpel Revised Report with Redline at 12.

- "The decision to divide the city of Erie from smaller towns around it was made to maintain the city as a community-of-interest . . . ." *Id.* at 14.

- "The 2011 Plan divides the city of Chester because of its sizable population . . . ." *Id*. at 17.

- "[T]here was no thought of a need to counterbalance or isolate Mercer's Democratic population when the 3rd District boundaries were redrawn." *Id*. at 20.

- The 12th District "*was certainly not constructed as a safe Republican seat.*" *Id*. at 24 (emphasis in original).

This is by no means an exhaustive list—Dr. Gimpel's report is riddled with many such observations.

Dr. Gimpel's opinions regarding the intent of the mapmakers who drew and enacted these boundaries, as well as their effect on Pennsylvania's communities of interest, lack any factual basis—unless they are based on information that Legislative Respondents withheld from Petitioners on the grounds of legislative privilege. Either way, Dr. Gimpel's opinions should be excluded for three related reasons. *First*, Dr. Gimpel fails to provide the basis (any facts or data from the record) or the method he supposedly utilized to support his conclusions—on the face of his report, his opinions are nothing more than uninformed conjecture.

Second, if Dr. Gimpel does have any basis for his unsupported assertions about the mapmakers' purported intent, then his testimony should be precluded because Legislative Respondents withheld such information in discovery in this case based on privilege. Indeed, Dr. Gimpel's trial testimony in the federal

2

gerrymandering litigation, *Agre v. Wolf*, as well as other indicia in his report suggest that he has a source for his observations that has not been disclosed to Petitioners. Legislative Respondents opposed Petitioners' subpoena for evidence of legislative intent on the grounds of legislative privilege; basic privilege law mandates that having shielded discovery in this area, Legislative Respondents cannot try to introduce such evidence through Dr. Gimpel's sword.

Third, it is clear that without access to sources of legislative intent that Legislative Respondents have withheld from Petitioners, Dr. Gimpel does not have any independent expertise or knowledge that would qualify him to offer these unsupported assertions regarding the intent behind this map's boundaries and their effect on Pennsylvania's communities of interest.

For these reasons, the Court should exclude Dr. Gimpel's testimony under Pennsylvania Rules of Evidence 702 and 705.

BACKGROUND

Petitioners allege that Respondents burdened their free speech and association rights and intentionally discriminated against them as members of an identifiable political group when enacting Pennsylvania's 2011 congressional district map. Among other evidence, Petitioners will offer the expert testimony of John J. Kennedy ("Dr. Kennedy"), who concludes that the 2011 map splits significant communities of interest to an unprecedented extent and that the current

district boundaries are consistent with a partisan gerrymander meant to dilute Democratic votes. A Pennsylvania native, Dr. Kennedy has taught political science at West Chester University since 1997. Ex. B, at 73. Dr. Kennedy has devoted his career to studying Pennsylvania's communities of interest at the municipal, county, and regional levels, as well as how those communities of interest have responded to political elections in the last 75 years of Pennsylvania's political history. A copy of Dr. Kennedy's report is attached hereto as Exhibit B.

Dr. Gimpel's report is offered primarily as a response to Dr. Kennedy's analysis.

ARGUMENT

I. Dr. Gimpel Fails to Identify the Factual Basis and Grounds for His Opinions About Legislative Intent

Dr. Gimpel was required to state in his report "the substance of the facts and opinions" in his testimony "and a summary of the grounds for each opinion." Pa.R.C.P. 4003.5(a)(1)(B). To be admissible at trial, those opinions must be based on facts, not "guesswork." *Commonwealth v. Galvin*, 985 A.2d 783, 801 (Pa. 2009). Without a factual basis, an expert's opinion is mere conjecture and as such, inadmissible. *Hussey v. May Dep't Stores*, 357 A.2d 635, 637 (Pa. Super. 1976); *see also First Methodist Episcopal Church v. Banger Gas Co.*, 130 A.2d 517, 537 (Pa. 1957) ("[W]here there is no reasonable basis for an [expert] opinion, it is valueless and hence inadmissible.").

Moreover, Pa.R.E. 705 requires Dr. Gimpel to provide "some factual predicate for the opinion identified on the record." *Starr v. Veneziano*, 747 A.2d 867, 874, n.10 (Pa. 2000). Dr. Gimpel "must point to, rely on or cite some . . . facts, empirical studies, or the expert's own research—that [he] has applied to the facts at hand and which supports [his] ultimate conclusion." *Nobles v. Staples, Inc.*, 150 A.3d 110, 114–15 (Pa. Super. Ct. 2016). "[E]xpert testimony is incompetent if it lacks an adequate basis in fact," and "an opinion based on mere possibilities is not competent evidence." *Helpin v. Trs. of Univ. of Pa.*, 969 A.2d 601, 617 (Pa. Super. Ct. 2009) (also referencing Pa.R.E. 703), *aff'd*, 10 A.3d 267 (Pa. 2010).

In his report, Dr. Gimpel provides no references for the bulk of his district-by-district conclusions, and nothing tied to the factual record in this case. Especially given his lack of background in Pennsylvania political history or geography, *see infra* Section III, Dr. Gimpel's report appears to be "based solely upon conjecture or surmise," and should be excluded. *See id.* at 617. For example, Dr. Gimpel asserts:

- the "split in Erie County was implemented primarily to maintain population balance as the district was shifted southward to help absorb the population from the lost district." Ex. A, at 13. Again, there is no basis in the record to explain how Dr. Gimpel knows or can opine on the primary purpose of this move.

- "the 4th District and the 12th District were quite obvious candidates for a merge" because of population loss. *Id.* at 12. But Dr. Gimpel does

5

not explain to whom this merge was so obvious, why population loss is the determinative factor for merging districts, or what, if any, factors are important in his analysis. And this guess about which districts were "obvious" candidates to be merged leads to further baseless assumptions about the mapmakers' actual intent.

- the "decision to divide the city of Erie from smaller towns around it was made to maintain the city as a community-of-interest . . . ." *Id*., at 14. There is nothing in the record to explain how Dr. Gimpel knows the basis for this decision, who made it, or that Dr. Gimpel has accurately presented the basis for the decision.

- the 9th District "had to shift westward to accommodate the seat loss." *Id*. at 22. But Dr. Gimpel provides no basis for his assumption that seat loss to the west of the 9th District was a preordained conclusion of the redistricting process.

- the 12th District "is drawn to encompass large sections of the 4th and the previous 12th district . . . there was nothing especially 'meticulous' or 'calculating' about it . . . ." *Id*. at 24. Again, Dr. Gimpel provides no explanation or basis for his opinion that the 12th District was not drawn in a "meticulous" or "calculating" fashion.

In his report, Dr. Gimpel does not say whether he personally investigated the bases for his claims or whether he is merely hypothesizing about possibilities in service of Legislative Respondents' defenses in this case. Either way, he has not disclosed the sources on which he must be relying as required under the Pennsylvania Rules. Pa.R.C.P. 4003.5(a)(1)(B). "[E]xperts are subject to the usual rules of relevance in giving their opinions and cannot base them on extraneous irrelevant factors not properly in evidence." *Kozak v. Struth*, 531 A.2d 420, 422 (Pa. 1987).

6

II.   Dr. Gimpel's Testimony Should be Excluded to the Extect He Relies Directly or Indirectly on Sources That Legislative Respondents Withheld From Discovery in This Case Based on Privilege

As discussed, Dr. Gimpel's district-by-district justification of the 2011 map abounds with unsupported speculation presented as fact concerning the mapmakers' supposed intent in drawing particular district lines, and often reads as though Dr. Gimpel is merely regurgitating undigested information taken directly from the Legislative Respondents who took part in drawing the current map.

Indeed, Dr. Gimpel's testimony in the *Agre* trial, read in conjunction with his report, suggests that the ultimate source for Dr. Gimpel's district-by-district analysis comes from individuals with direct knowledge of the mapmaking process. Dr. Gimpel's report cites sources provided by the "General Assembly Legislative Data Processing Center," Ex. A at 28, 36, and his report repeatedly speaks to the drafter's intent, *see supra S*ection I. It is likely that one individual whose intent Dr. Gimpel considered was John Memmi, the lead Republican mapmaker, whom Legislative Respondents' counsel retained in this case as a "non-testifying expert." *See* Turzai/Scarnati Response to Petitioners' Motion to Exclude Report of Gimpel and Compel Production of Underlying Information, at 2. Indeed, in his *Agre* testimony, Dr. Gimpel testified that he knew Mr. Memmi had been retained by Legislative Respondents' counsel, and although they did not have direct communications, Dr. Gimpel agreed it would be "important to get [Mr. Memmi's]

opinion as to what the intent was." Ex. C, 12/6/2017 P.M. Trial Tr. 36:6-14. Dr.

Gimpel has now amended his report to delete the claim that he received

information about county splits from "GIS experts in the state legislature" and

from the "General Assembly." Ex. A at 28, 36. But he testified under oath in the

Agre litigation that he understood that "some" of the information that was the basis

for his report there (which was substantially similar to his report in this case)

"came from the General Assembly" and was "passed through counsel to me." Ex.

C, 12/6/2017 P.M. Trial Tr. 35:4-9.

This is all too convenient. The Legislative Respondents asserted privilege

over all legislative materials, and specifically opposed Petitioner's request to

depose Mr. Memmi and the other participants in the mapmaking process. To the

extent that Dr. Gimpel's ultimate source for these opinions is a source over which

the Legislative Respondents asserted privilege, they cannot introduce evidence

they asserted was privileged through this back door. Because Dr. Gimpel's report

appears to be fundamentally tainted by such evidence, he should be barred from

testifying.

III. Dr. Gimpel is Not Qualified to Offer Opinions Regarding Communities of Interest in Pennsylvania or the Intent of Mapmakers

To the extent Dr. Gimpel is *not* improperly relying on a factual basis

provided to him by Legislative Respondents but kept from Petitioners, his opinions

on the purpose and effect of Pennsylvania's current district boundaries *still* must be

excluded—because he lacks any qualification to testify as an expert on that subject. The Court should only allow Dr. Gimpel to testify as an expert if he has a "reasonable pretension to specialized knowledge on the subject under investigation." *Miller v. Brass Rail Tavern, Inc.*, 664 A.2d 525, 528 (Pa. 1995). To qualify as such, Dr. Gimpel must possess "greater expertise than is within the ordinary range of training, knowledge, intelligence, or experience." *Freed v. Geisinger Med. Ctr.*, 971 A.2d 1202, 1208 (Pa. 2009). The fact that Dr. Gimpel may be an expert in *something* is not enough to render his opinions admissible in this case, on this subject—the intent behind and impact of Pennsylvania's current district boundaries. Experts should be "permitted only to render opinions in the specific field(s) in which they have expertise, and not to speculate outside their fields." *Tucker v. Bensalem Twp. Sch. Dist.*, 987 A.2d 198, 204 (Pa. Commw. Ct. 2009).

Dr. Gimpel fails to meet this standard in two separate respects. First, Dr. Gimpel lacks qualifications to express opinions on the mapmakers' intent. His report is replete with suggestions that he has intimate knowledge of the mindset of the mapmakers. *See* Ex. A at 12 ("quite obvious candidates for a merge"), 13 ("split…was implemented primarily to"), 14 ("the decision to divide…was made to…"); 16 ("the exigencies and constraints created…the elimination…and the attendant complications"); 17 ("was expanded…to address," "divides…because"),

9

18 ("one precinct was removed to meet"), 20 ("there was no thought of a need"),

21 "to achieve . . . necessitates a split"), 21 ("the map makers could have made it a

much safer bet"), 22 ("the District had to shift…this is why"), 24 ("drawn to

encompass…nothing especially meticulous or calculating about it"), 24 ("certainly

not constructed as"), 24 ("had to be considered on a block-by-block basis"), 26

("the change results in improved representation"), 26 ("The Route 222 corridor…is

considered").

Barring his reliance on sources withheld from Petitioners, Dr. Gimpel has no

basis to offer such opinions. Dr. Gimpel professes no particular expertise in

mindreading, nor does he contend he was actually involved in the mapmaking in a

way that would allow him to provide such insights. He should not be permitted to

"speculate outside [his] fields." *Tucker*, 987 A.2d at 204.

Second, he lacks expertise in the subjects that are relevant to responding to

Dr. Kennedy's opinion – the history and treatment of Pennsylvania's significant

communities of interest under the current and prior redistricting maps. Dr.

Gimpel's field of study does not extend to Pennsylvania and its political geography

or political history, the very issues on which Dr. Kennedy will testify. Dr. Gimpel

is a political science professor at the University of Maryland and whose

consideration of redistricting in Pennsylvania appears to have begun only when

Legislative Respondents retained him in this case and the case regarding

10

Pennsylvania's gerrymandered map in federal court, *Agre v. Wolf.* Dr. Gimpel

identifies no Pennsylvania-related qualifications in his report and none appear on

his CV. His curriculum vitae lists two publications, an article, and extensive

involvement about Maryland, but nothing about Pennsylvania. *See* Ex. D, Gimpel

CV.

Despite having little background in Pennsylvania, Dr. Gimpel intends to

offer conclusions about the mapmakers' motivations when drawing particular

district boundaries, as well as how those boundaries affected Pennsylvanians. For

example, Dr. Gimpel asserts that because Northwest Pennsylvania is "distinctive"

and has a "conservative brand of politics," it is "extremely difficult…to create a

competitive congressional district utilizing the turf lying wholly outside the city of

Erie in District 3." Ex. A at 10-11. Similarly, he insists that the elimination of

Reading from the 6th District in favor of incorporating new areas in Lebanon and

Berks Counties was because these areas were "more similar to the areas [the 6th

District] maintained." *Id.* at 21, without explain why the seat of Berks County is

less similar to Berks County than the rest of the Sixth District. He references no

data or sources for any of these claims. Dr. Gimpel has no more expertise when it

comes to describing the political geography of Erie, Reading, or anywhere else

specific in Pennsylvania than a layperson. Without knowledge in Pennsylvania's

communities, in particular, his position as a political scientist gives him no added insight into the specific subject of his proffered testimony.

Dr. Gimpel acknowledges in his written work that detailed knowledge of a particular state is particularly important to being able to analyze a state, noting there is "political regionalism *within* states" and that "[b]y expressing their views and interests from *within a given geographic location*, people create political spaces in which they are allied with like-minded citizens…" James G. Gimpel & Jason E. Schuknecht, *Patchwork Nation: Sectionalism and Political Change in American Politics* (2007), at 2 (emphasis added). In Dr. Gimpel's own account, then, to opine on Pennsylvania communities of interest, one must be attuned to fine regional differences. Dr. Gimpel may meet this standard for Maryland, but he falls far short of this standard for Pennsylvania. In short, he lacks "greater expertise than is within the ordinary range of training, knowledge, intelligence, or experience." *Freed*, 971 A.2d at 1208.

CONCLUSION

For the foregoing reasons, Petitioners respectfully request that this motion to exclude testimony from Dr. Gimpel regarding the intended or actual effect of the enacted map on Pennsylvania's communities of interest be granted.

Dated: December 10, 2017

Respectfully submitted,

/s/ Benjamin D. Geffen

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Counsel for Petitioners

EXHIBIT A

Expert Report of

James G. Gimpel, Ph.D.

I am a Professor of Political Science in the Department of Government at the University of Maryland, College Park. I received a Ph.D. in political science at the University of Chicago in 1990. My areas of specialization include political behavior, political geography, geographic information systems (GIS), state politics, population mobility and immigration. Publications include papers in well-regarded peer reviewed political science journals (*AJPS, APSR, JoP, QJPS*), journals in other social science fields, as well as several books relating to the same subjects. I was retained at the rate of $300 per hour plus costs. My opinions expressed in this case are in no way contingent on the payment of any monies owed to me for my services. My opinions in this report are given within a reasonable degree of professional certainty. Any monies owed to me are not contingent on the outcome of this case.

Focus of Research and Overview

On October 24, I was asked by the legislative respondents in this case to respond to the petitioners' expert reports on Pennsylvania's present congressional redistricting plan, passed into law by the Pennsylvania legislature on December 22, 2011, and under which the 2012, 2014 and 2016 congressional elections were carried out. I begin by reviewing the values and redistricting criteria commonly used by state legislatures to draw legislative districts. These criteria are often in conflict with each other, creating challenges for any would-be mapmaker. There is no perfect map that optimizes the value of all of the measures now incorporated into the redistricting process. Automated map drawing might reveal redistricting options much more quickly than a well-trained professional can use GIS software to draw the maps one-at-a-time, but the automated tools still fail to produce a perfect map, insulated from credible legal challenge (Browdy 1990; Cho and Liu 2016). Those charged with the task

of drawing, then approving, district boundaries inevitably weigh some priorities more heavily than others, some criteria must take precedence, and these decisions are inherently value laden and political, not within the capacity of technical expertise to decide. Technical experts can produce a large number of plans to consider, but nothing about their expertise leads inexorably to the conclusion that one plan is best.

The expert reports by the petitioners use a variety of measures to show that the Pennsylvania congressional districts have a Republican advantage, though this could be argued to be an incumbency protection plan, rather than a "Republican" plan, per se. Conflicting criteria are involved in map drawing and the balance of conflicting values creates trade-offs. Among the traditional and widely applied redistricting criteria are the following:

1. Contiguity

2. Equal population across districts

3. Compactness of shape

4. Consistency with past districts

5. Districts should not split county and municipal boundaries

6. Districts should be politically balanced between the parties

7. Some districts should be drawn to ensure descriptive representation of minorities

8. Districts should be composed of persons with a community of interest.

9. Districts should protect incumbents

Extended discussions of the regularity of specific types of conflicts can be found elsewhere (Lowenstein and Steinberg 1985; Cain 1992). Most plainly, the demand for equality of population may limit the shape and compactness of districts. Sparse populations may require enclosure by protruded shapes. Attempting to preserve communities of interest will commonly make it difficult to achieve an

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even balance of partisans.   Ensuring descriptive representation of minority voters in one or more

districts will also make it more difficult to achieve partisan balance in nearby districts (Brace, Grofman

and Handley 1987).

The underlying residential patterns in Pennsylvania and many other states also make it very

difficult to create competitive districts in some areas.   In Philadelphia and its suburbs, for instance, with

a significant share of the state's low income and minority population, drawing politically competitive

seats that preserve the city as a community of interest will be close to impossible given the electoral

groups that presently constitute the two major parties.   The same is probably true throughout the

northcentral part of the state where rural and small town residents have established histories of

identifying with Republicans.   The upshot of residential settlement is that some partisan tilt in a

Republican direction is going to be the result of a redistricting plan that ensures descriptive

representation for the state's racial/ethnic minorities while also ensuring equal population across

districts, and the preservation of communities of interest.

In the end, there is no such thing as an unobjectionable map, especially for one containing more

than three or four districts. Moreover, the shapes of districts and the calculation of the efficiency gap

are not useful tools for detecting partisan intent and do not provide Courts with a manageable standard

for identifying unconstitutional gerrymanders. Finally, partisan gerrymandering is not easy to

accomplish because across and within cycles there is considerable variation in party inclination and

support.   Map makers intent on producing anything but the most one-sided majorities for one party or

the other face too much uncertainty in states as evenly divided and as closely contested as

Pennsylvania.   Even the districts that the petitioners single out do not turn out to have steeply lopsided

Republican majorities of the kind one might expect from uninhibited partisan map making.   Nor are the

members of Congress elected to and occupying these districts ideological or immoderate in their

political behavior and viewpoints.   Evidence at the end of this report will show that Republican

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incumbents presently occupying these seats are among the most moderate members of the House Republican Conference.   The lines resulting from passage of Act 131 have not resulted in a more polarized Pennsylvania delegation and the incumbents occupying these seats have not been demonstrated to be less responsive to constituents than they were before their elections under the 2011 congressional redistricting plan in Pennsylvania ("2011 Plan"), or than their predecessors were in cases in which they are newly elected.

Redistricting Principles in Conflict

By now it is no secret that the goals of redistricting frequently run counter to one another, creating trade-offs that are impossible to resolve in the absence of a consensus on priorities (Lowenstein and Steinberg 1985; Butler and Cain 1992, Chap 4; Niemi and Deegan 1978).   The desirable features of congressional districts encompass both geographic (and geometric) features, as well as those thought to achieve the goal of fairness.   Among the familiar geographic aspects are: contiguity and compactness, which need little explanation.   To these is frequently added consistency or congruity with past districts, certainly to the extent possible.   One would not switch a district from one side of the state to the other, or from a dense core city, to a sparsely settled rural area. In the redistricting process, new map drawing almost always begins with the implicit restrictions imposed by the boundaries of the previous map, not by throwing it out and starting from scratch.   This desire for continuity is an important constraint, even if it is "understood" rather than expressly identified in legislative language.   In many cases the demand to have districts consistent with past mappings is also in the service of the related aspiration to preserve "territorial community" (Stephanopoulos 2012) or ensuring that a map recognizes and preserves communities of mutual interest (Forest 2004).

Among the fairness criteria are very well established principles such as equality of numbers, or certainly *near* equality.   Under redistricting cases since the 1960s, this fairness doctrine has been

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interpreted consistent with Section 2 of the 14th Amendment to mean equality across the *whole* number of persons; not just those of voting age, those who are registered to vote, or those who identify with a political party.   For practical reasons it is sometimes difficult to come by exact equality, but large deviations from equality are not desirable, except in cases in which several small states receive a singular representative in the U.S. House in spite of having considerably fewer people than the average House district elsewhere.

The demand for population equality is often thought of as the most fundamental goal to be met in a new redistricting plan.   Population equality with close to zero deviation is the primary requirement a plan must fulfill.   But given the uneven population distribution within states, it is challenging to draw compact districts that are also equal in population or equal population districts that fully respect community boundary lines. In many states, mid-sized and larger cities stand out alone among a sea of sparsely populated rural areas and towns that they have traditionally served as a commercial hub and transit center. For a city of considerable size traditionally positioned near the edge of a district, or on a border, there are many circumstances in which it cannot be encompassed whole, within a single district, as would be desirable from a community-of-interest standpoint. Instead it must be divided between two or more districts as a practical measure in compromise to the state's underlying population distribution.

Another aspect of population equality that is frequently passed over in hasty critiques of redistricting maps is the need to reapportion voters into equal sized districts after a seat has been lost, such as in Pennsylvania after the 2011 reapportionment. Seat loss usually follows steady population loss in an area.   Ordinarily, however, a region does not lose a full district's worth of citizens in a ten year span, but instead loses a much smaller fraction, perhaps 20-30 percent, perhaps as much as half.   With the new redistricting, then, some 500,000 people from the abolished district (approximately 30 percent less than the 710,000 size of current congressional districts) will have to be redistributed among

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neighboring districts in the region. The effect will be to require serious and controversial alterations to existing district lines to absorb the excess population from the eliminated district. To maintain population equality, it may well be necessary to parcel out the population among multiple districts since pushing 500,000 voters into a single district would almost certainly create imbalance. Typically, however, all of the districts receiving the population from the abolished district will have to be adjusted.

Fairness also dictates that population growth must be accommodated, not merely population loss.   Some may be of the impression that since Pennsylvania lost a seat, there was no population growth to be seen, and none to be accounted for in the 2011 Plan.   This is flat wrong, as it turns out that the state's population growth was quite uneven, with an uptick in the Central and Southeastern counties.   A district that adds anywhere from 5,000 to 80,000 new residents will have to be altered to maintain its population equality with neighboring districts. Obviously the higher the rate of growth the more boundaries will have to shift, typically contracting to encompass a smaller land area but encompassing greater population density.

Other fairness criteria that must be met include minority descriptive representation, proportionality of seats with votes, and competitiveness of individual elections – presumably assured by drawing districts that encompass approximately even shares of identifiers with the two major political parties.   These fairness goals are commonly in conflict with each other, and also with the geometric criteria. Creating a more competitive district involves the uncertain calculation that voters will follow their party registration or their past voting inclinations in future elections. Strong partisans, to be sure, are highly predictable across election cycles, but weaker partisans and independents are not. Encompassing an approximately equal mix of Republicans and Democrats may require some highly distorted boundary drawing, to say nothing of the guesswork involved in estimating the future political tendencies of independents and weak partisans.

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Minority descriptive representation is understood to mean that minority, mainly African American and Latino, populations should have a reasonably sure chance to elect someone from their own racial/ethnic group.   Minorities should not be spread so thinly across districts that they have no opportunity to elect one of their own though bloc voting.   Ensuring that African Americans and Latinos have an ability to elect an African American or Latino candidate, under circumstances of racially polarized voting, has been deemed necessary to achieving this end by assorted judgments under the Voting Rights Act of 1965, as amended in 1982.   The challenge in some states, however, is to place ethnic minority voters in sufficiently concentrated pockets to ensure descriptive representation, without hindering the achievement of other important goals.   A plan is not permitted to "pack" minorities into super majorities, nor is it permitted to "crack" them into small minority-sized parcels. The ambiguity in much redistricting analysis and criticism is that all redistricting maps involve the grouping and dispersing of populations. Every map with any large number of districts will always reflect some "packing" and "cracking" – perhaps this is why the petitioners have not presented an alternative map.   It is far easier to critique someone else's map, than to draw an alternative map and subject it to critical review.

Ambiguity in the Interpretation of Districting Plans

The attempt to balance descriptive representation and competitiveness presents a clear example in which ambiguity about the terms "packing" and "cracking" become problematic.   The report by the petitioners' s' expert John J. Kennedy criticizes the 2011 Plan for packing certain populations and cracking others.   The problem is that any effort to group politically similar populations can be labeled as packing by this account.   Any effort to diversify the population of a district can be conversely derided as cracking.   But only two possibilities exist on this continuum between grouping and diversifying a district population.

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Any multiple district plan can be critiqued for having moved districts in one direction or the other.   One is always either packing or cracking.   To respect a community of interest, the author of a map will usually be engaged in grouping (packing).   To produce competitive districts, often the opposite will happen and the district will fit the characteristics of having been diversified (cracking) in some way. In this manner, the utility of the concepts of packing and cracking as they might pertain to tests for gerrymandering is eliminated.   Any critic of a plan can point to "packing" and "cracking" on a map they happen to dislike. What counts as an acceptable grouping or dispersion of a population is contestable, and the perspective one brings to a map may well influence a critic's judgment. The reality is that what is commonly called packing is usually essential to serve another redistricting value, while what is known as cracking – the diffusion of a population across more than one district -- may be exactly what is required to serve an alternative value.

A second important point is that certain possibilities for map drawing are constrained once initial districts are drawn with particular values in mind. Given the close association of race and ethnicity with party identification, when African Americans and Latinos are grouped into geographic blocs within districts they are removed from having influence on the outcome of elections in the adjacent districts.   The benefit of the majority-minority districts is descriptive representation for black and Latino voters. The cost is that other nearby districts are less likely to be competitive without the presence of those voters to support Democratic candidates.   With a sufficiently large minority population share, coupled with multiple districts promoting descriptive representation, the remaining seats could well become safe, or at least *safer*, for the opposing party, distancing the seat share from the vote share.   This is the sense in which the goals of descriptive representation and competitiveness come into conflict, and also how descriptive representation and proportionality come into direct conflict.

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Principles of fairness also regularly conflict with the requirement to hold together communities of interest that have formed over the course of state history.   There is no universal agreement on what makes a community-of-interest, probably because these vary with the unique histories of states and regional communities.   These communities of interest are sometimes conceived of as smaller official jurisdictions with well-defined boundaries such as counties or municipalities. By tradition, communities of interest are understood as counties and MCDs (municipalities or Minor Civil Divisions) with the goal of keeping these jurisdictions whole within congressional districts. Such a principle makes sense as counties and municipalities are often governing bodies in their own right, with a county council, a county executive, a clerk, a controller, and a litany of other elected officials. Larger towns and cities also have elected officers; including mayors, controllers, treasurers, city councils and school directors. Moreover, Pennsylvanians, like residents of other states, are known to identify with their counties and towns as places they originate from and dwell. They are not arbitrary lines drawn on a map, but have come to constitute discrete locations with well-recognized qualities, social attachments and affiliations. Place attachments define people who come to believe "they are part of the same coherent entity." (Stephanopolous 2012, 1385).

Preventing county and municipal splits is not the only possible way to measure the preservation of communities of interest.   A state legislature is certainly entitled to look at other criteria.   Many communities of interest have an economic thrust, such as ports, military installations, or commercial hubs.   Indian reservations and other areas of racial, ethnic and cultural importance may make reasonable claims to having a common interest.   These places are frequently without official boundary lines, but are well-known to local residents and officeholders who carry about a unique local expertise an insular map maker will lack.   A powerful argument in favor of state legislative involvement in the redistricting process is the impressive amount of local knowledge legislators amass in living out their lives in a particular place, running for office, and serving a particular geographic constituency over a

period of time.   A high level of local knowledge is required to develop the kind of following that

insulates a legislator from adverse electoral swings.   But this same kind of knowledge is what uniquely

enables legislators to draw maps encompassing interests known to belong together, as a territorial

community, rather than woodenly applying principles that would divide them, hampering the expression

of common values and aspirations.

This kind of familiarity recognizes important community-level details unknown and often

unknowable to the redistricting consultant; how neighborhoods relate to one another, how roadways

and waterways separate communities psychologically not just physically, and other borders that

distinguish interests that cannot be easily mapped relying on available boundary files.   Typically, a

redistricting consultant will gloss over communities of interest, not having the local expertise about

what to include and what to discount.   A state legislator, however, is apt to know every strip mall;

ethnic restaurant; road construction project; pipeline; water tower; neighborhood association; grain

elevator; intersection; power plant, and garbage dump.   Not all of these features are going to be

relevant to drawing boundaries, and clearly not everywhere, which is why a GIS specialist would not be

inclined to collect this information on a statewide basis.   Drawing upon local knowledge, however, on a

district-by-district basis, this kind of information can identify a community of interest invisible to

outsiders, but obvious to everyone occupying local ground.

Race-based districts aside, it takes little imagination to understand how achieving

competitiveness is frequently at odds with the goal of preserving communities of interest.   The

anthracite coal region of Northeastern Pennsylvania is well recognized as a historical and cultural region

distinctive from the rest of the state.   Northwestern Pennsylvania is also distinctive, with a

characteristically conservative brand of politics.   Given that the politics of the inhabitants of these

regions have developed hand-in-hand with their other cultural attributes, it is extremely difficult, if

current party allegiances endure, to create a competitive congressional district utilizing the turf lying

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wholly outside the city of Erie in District 3.   This difficulty also arises in other parts of the state, such as the South Central counties (i.e., Franklin, Adams, York, Cumberland, and Lancaster) given the way political party loyalty has long been expressed in local settlement (Frey and Teixeira 2008).

Finally, fairness criteria are often in conflict with the goal of maintaining stability and continuity in representation – also a longstanding value upheld as a priority in many legislative district maps. Sometimes this value is also known as incumbency protection, and cynically characterized as allowing politicians to pick their voters, but there are principled arguments for wanting to draw districts favorable to the reelection of officeholders.   Among them is the desire for continuity in a state's congressional delegation, perhaps because a state is well served by the accruing seniority of its delegation in the U.S. House of Representatives.   A state, through its legislature and governor, is in an authoritative position to decide if the promotion of incumbency through the redistricting process better serves state interests than having seats that can potentially change hands with even tiny shifts in public opinion. Redistricting maps that take the partisan tilt of districts into consideration are usually aimed at the goal of incumbency protection, though it is also unclear from existing research just how much redistricting contributes to promoting incumbency given that incumbents also have other advantages (McCarty, Poole and Rosenthal 2009; Abramowitz, Alexander and Gunning 2006).

A Statewide Overview of District Changes

Experts can examine districts one-by-one, in a kind of static or snap-shot approach, but this manner of analysis misses the interactive and dynamic nature of the way redistricting maps are drawn. Districts need to be considered at least in the context of their entire region, including the adjacent districts, and indeed the entire state. District drawing does not involve the sole consideration of the

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shape of a district and its population composition, but how the drawing of that district affects the lines of all the other districts (Tufte 1973, 554).   A study that relies on the boundary and shape of single districts lacks a sufficient appreciation for the way in which adding and removing units (precincts, blocks, municipalities, counties) from one district will affect the population of the adjoining ones.   Chiefly among the criteria that must be balanced across districts is that they be of equal population size, a principle so fundamental and so crucial that states routinely lose seats from one redistricting cycle to the next when districts lose even small portions of their population. Map makers therefore start with this standard and in interaction with the state's underlying settlement and growth patterns, the goal of creating equal population districts is remarkably determinative of a map's shape, including which communities remain intact and which must be divided.

Table 1 shows how the state's districts from the 2002 map increased/decreased in population by the time of the 2010 census (see also Figure 1).   The population losses across districts came from Western Pennsylvania, in and around Pittsburgh, from the 4th, 14th and 12th Districts shaded in gray (see Table 1 and Figure 1).   Although the 14th district experienced the greatest population losses, it has been a longstanding tradition in the state to award a single seat to Pittsburgh and the greater Allegheny County area.   Consequently, the 14th district is only marginally changed with some adjustment stretching up the Allegheny River to offset population loss. With only small changes made to the 14th District, the 4th District and the 12th District were quite obvious candidates for a merge, but with adjustments to the boundaries of the adjacent 18th and 3rd District (compare Figures 2 and 3).   The 3rd District also lost population, specifically from the northernmost tier (Erie) including from the city of Erie itself, and was adjusted southward to represent the population remaining from the erasure of the 4th District. In addition, Butler County is reportedly the only one of the ten westernmost counties that experienced population growth (+5.6 percent from 2000-2010), offering another explanation for the southward shift of the 3rd District.

The split in Erie County was implemented primarily to maintain population balance as the district was shifted southward to help absorb the population from the lost district. Erie County is quite sizable, home to an estimated 280,000 people in 2010, with about 101,000 living in the city of Erie itself. There is no way that the 3rd District could shift to the South and encompass all of Erie County while

| Table 1. Population Change from 2000 to 2010 within 2002 District Boundaries				
District	Total 2010	Total 2000	Difference 2000-2010	% Change
1	656,523	646,548	9,975	1.5
2	632,980	646,355	-13,375	-2.1
3	639,120	646,311	-7,191	-1.1
4	607,128	646,661	-39,533	-6.1
5	649,941	646,387	3,554	0.5
6	726,487	653,422	73,065	11.2
7	661,602	643,077	18,525	2.9
8	682,876	644,631	38,245	5.9
9	667,255	646,638	20,617	3.2
10	664,666	646,534	18,132	2.8
11	692,451	646,209	46,242	7.2
12	609,710	644,120	-34,410	-5.3
13	679,551	647,858	31,693	4.9
14	575,547	647,092	-71,545	-11.1
15	717,967	642,831	75,136	11.7
16	726,281	641,988	84,293	13.1
17	685,611	646,291	39,320	6.1
18	652,303	647,372	4,931	0.8
19	728,617	646,389	82,228	12.7
Source: U.S. Decennial Census				
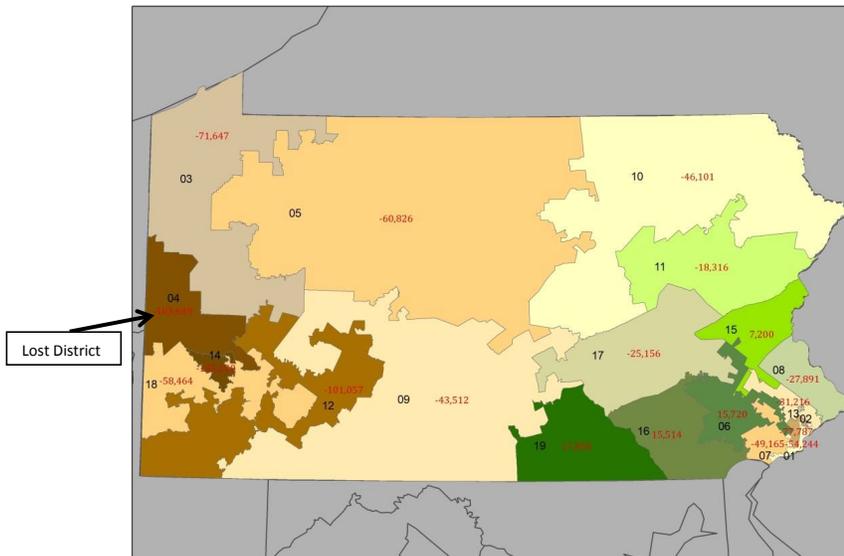
Figure 1. Population Deviation from Target Population Size (710,767) for the 2002 Pennsylvania Districts. (Figures in red shows by how much district population exceeded or fell below target size.)

remaining equal in population with adjacent districts. Erie County is considerably larger than

neighboring counties in Western Pennsylvania and dividing them would not have provided the numbers

that Erie offered. The decision to divide the city of Erie from smaller towns around it was made to

maintain the city as a community-of-interest represented by a single member of Congress   Looking at it

from the viewpoint of the 5th District to the west, as the 3rd District shifted southward, the 5th District

had to shift westward (and into Erie County), as the boundaries move in a kind of counter-clockwise

direction to cover the population no longer represented by the previous 4th District.

The shift of the 5th District to the West required the adjustments made to the 10th, 11th, 17th and

15th in the Northeast, and arguably the 6th in the Southeast, once the 15th was resized.   As Table 1

shows, the 6th, 11th and 15th also gained population, though the 11th still remained below ideal size

(Figure 1). Each of these districts required boundary adjustments to ensure equality.   In the South

Central region, the fastest growing locations were in the 16th and the 19th – the latter was renamed the

new 4th District in the 2011 Plan (for reference see Figures 1 and 2).   The loss of just one seat, in the far

western part of the state, in spite of rather modest population losses there, resulted in a chain reaction

of significant boundary shifts throughout the rest of Pennsylvania. The differential levels of population

growth in Eastern Pennsylvania also had to be accommodated.

One crucial aspect of the state's political development should be reckoned with as the 2011 plan

is compared with the previous one.   Changes in the balance of party registration have followed the

population growth in some areas and decline in others. Across the state, Republican electoral prospects

were strong throughout the decade leading up to 2011.   Even so, Republican registration has declined

in many Districts. Democrats have not always benefitted in direct proportion to GOP losses because an

increasing number of voters are registering as unaffiliated.   The increase in unaffiliated registration, and

the gulf between electoral performance and party registration, speaks to the fluidity of partisanship, a

subject to be addressed in more detail later.

The figures in Table 2 for a number of Districts that the petitioners complain were "packed" with

Democrats instead simply gained Democratic registrants in the intervening years.   Or, alternatively,

Republican registration dropped in these areas, important facts that the petitioners' reports fail to

mention.   Table 2 presents figures for change between 2001 and 2011 viewed from within the 2001

districts, so the differences are not as a result of boundary drawing, but because the underlying

population became more Democratic in its political preference. This is true in Districts 1 and 2, in

Philadelphia, where Democratic registration increased by 35,000 and almost 17,000 well before the

2011 maps were drawn.   In four districts shaded in gray, Democratic Party registration dropped.

When the petitioners complain about Democratic "cracking" or dispersion, they fail to account for the

possibility that in the districts, precincts and blocks where more Republicans emerge in 2011 it is

because Republican registration increased in the previous decade, as in the District 12 area, and in the

vicinity of the abolished District 4.

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Table 2. Change in Democratic Party Registration, 2001-2011 within the 2002 Congressional Districts			
District	Dem Reg 2011	Dem Reg 2001	Difference 2000-2010
1	346,581	311,034	35,547
2	372,293	355,379	16,914
3	186,424	183,897	2,527
4	209,030	225,120	-16,090
5	157,822	146,457	11,365
6	208,509	150,254	58,255
7	179,037	115,515	63,522
8	204,662	165,614	39,048
9	145,482	139,273	6,209
10	164,947	149,696	15,251
11	237,691	220,289	17,402
12	225,118	255,891	-30,773
13	227,883	185,832	42,051
14	307,221	337,671	-30,450
15	222,307	177,110	45,197
16	151,632	106,783	44,849
17	173,607	134,772	38,835
18	232,032	244,376	-12,344
19	162,974	128,250	34,724
Source: Pennsylvania Secretary of State			

The petitioners' experts uniformly ignore alternative explanations for the composition of the 2011 map that result from underlying growth and change in population subgroups including major voting blocs.   In their rush to conclude that partisan intent motivated the creation of the 2011 map, the petitioners' experts ignore the exigencies and constraints created by population growth and secular, district-specific trends in Republican and Democratic electoral strength. Most pointedly, they ignore the elimination of the previous 4th District and the attendant complications that followed from trying to parcel out more than 500,000 Pennsylvanians among nearby districts while meeting the ideal size of 710,767 residents each.   More detailed district level analysis follows:

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District 1

District 1 can be described as a "minority influence" district, in the sense that the minority population is a sufficiently large number to exert influence in an election, although not always a controlling influence (Kousser 1992; Pildes and Niemi 1993). This district was originally expanded into Delaware County in 1991 to address requirements of the Voting Rights Act so this is not a new development as the petitioners' expert, Professor Kennedy, appears to suggest. The district kept those areas and expanded to pick up additional population as Philadelphia's numbers continued to decline relative to other areas in the state. Notably, Philadelphia's Latino population is encompassed by this district as a community of interest. To make this district competitive, Republican voters would have to be added from Delaware County, while minority voters would have to be divided between two or more districts. The 2011 Plan divides the city of Chester because of its sizable population (34,000 in 2010). The minority population declines because the district had to incorporate additional population to meet population size requirements. Adding Republican areas would further dilute minority influence, generating the opposite complaint from the petitioners.

The Kennedy report complains about an appendage of the District that extends from the city of Chester outward to encompass Swarthmore College and other nearby (Democratic) boroughs. He interprets this to mean that these Democratic voting areas were "packed" into District 1 out of partisan intent. One gets the impression elsewhere from the Kennedy report that if Swarthmore would have been divided up among two or more districts he would reflexively conclude that it was cracked out of partisan intent. An alternative interpretation of the present District 1 configuration is that planners sought to preserve Swarthmore as a distinctive community of interest. Not every college community in the state can be accommodated in this way, but it is consistent with the multiple goals of redistricting to accommodate geographic interests whenever possible.

District 2

This district was redrawn to exclude Cheltenham Township, which voted overwhelmingly Democratic in the 2010 U.S. Senate race.   Lower Merion is entirely in this District except for parts of one precinct that were removed to meet population requirements.   Professor Kennedy suggests that the district was packed with Democrats, but this is an overstatement. The district is geographically surrounded by very Democratic areas and gained 16,914 Democratic registrants over the previous decade, while losing 20,525 Republicans. Very distorted line drawing would be required to reach the nearest Republican concentrations.   The district's political leaning simply reflects the underlying patterns of political inclination and population change in the area.

District 3

As indicated in the summary above, the major development here was the shift southward to incorporate populations that were in the eliminated district (see Figures 1 and 2).   Notably, in the 2001 map, Armstrong, Butler, Mercer, Venango and Warren Counties were split, and these county splits were eliminated in the 2011 map.   Crawford was also split in the 2001 map.   The question then arises as to why Erie County should be treated as a whole, while the other counties are split?   What makes more sense, to make one split of 50,000 people, or 10 splits of 5,000 each, or 20 splits of 2,500 each? These trade-offs constitute the reality confronted by map makers in the effort to achieve population balance.
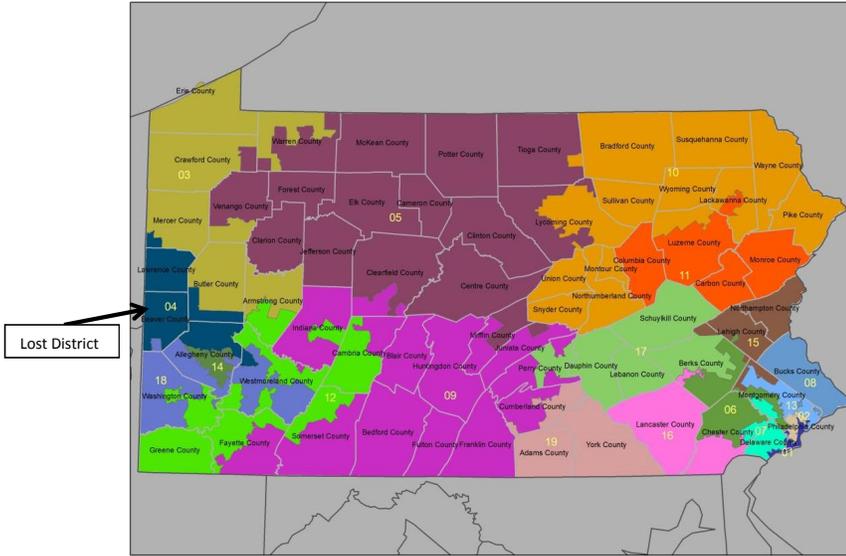
Figure 2. 2001 Pennsylvania Congressional Districts
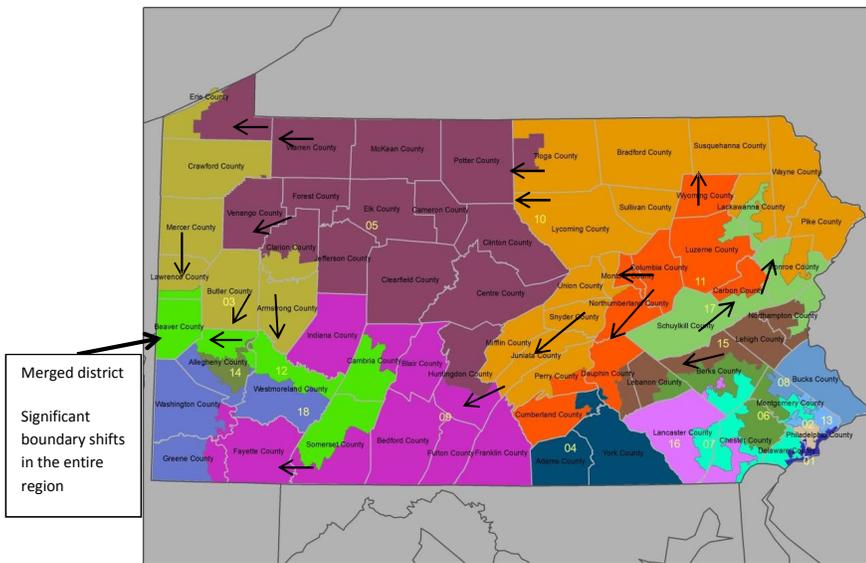

Figure 3. 2011 Pennsylvania Congressional District, (arrows show direction of major boundary shifts)

The new 3rd District does not extend as far south as Allegheny County.   The 2011 Plan made Butler County whole, but the 3rd District has extended into Butler County since the 1991 map.   The Kennedy report also fails to notice that a majority of Erie County's registered Democratic voters remain in District 3 (63 percent) and were not moved to District 5.   The Kennedy report speculates that there were Democratic voters in Mercer County who had to be counterbalanced elsewhere. Mercer County is a reliably Republican area where GOP candidates have frequently carried all but a few of the 48 municipalities.   There was no thought of a need to counterbalance or isolate Mercer's Democratic population when the 3rd District boundaries were redrawn.

In summary, a critic of the 2011 Plan can complain about the Erie metro having been divided, but keeping city and suburbs together in this case would result in considerable population imbalance between these two districts that would be more difficult to makeup elsewhere.   To be sure, one might have drawn the boundary in a slightly different place across Erie County, but making the split within the city most certainly would have produced complaints opposite to the ones the petitioners are now airing. In the end, readers of the petitioners' accounts obtain the impression that any dividing line will generate an objection.

District 4

This is the previous District 19, as shown in Figure 1. As Table 1 shows, the population of the 19th District grew substantially between 2001 and 2010, exceeding targeted population size (see Figure 1), necessitating a contraction of boundaries. Dauphin County and Harrisburg are divided to maintain population equality across the multiple districts that converge in this area. Harrisburg and the adjacent suburbs in Dauphin County constitute a sizable population center (Harrisburg is about 49,800; the balance of Dauphin County adds another 224,000) and it sits at the intersection of a number of districts

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that encompass rural areas and small towns, as in the northwest.   To achieve population balance across

Districts 4, 11 and 15 necessitates a split of Dauphin County because of its large and dense population.

Encompassing Dauphin County entirely within one of these districts, though desirable from one

standpoint, would almost certainly make it difficult to maintain equality of population across them. As in

the case of Erie, there may be room to argue about exactly where the divisions cut through the county,

but separating just two Harrisburg precincts from the rest is not a drastic split.   The Kennedy report

greatly exaggerates the extent to which Harrisburg was divided; making it sound like it was cracked

down the middle.   In reality, the division was quite limited.

District 5

As indicated above, the boundaries of District 5 were adjusted westward to accommodate the

shift of District 3 to the south (see Figure 2). In the adjustment, Armstrong, Warren, Venango and

Crawford Counties are kept whole but they had been split in the previous plan.

District 6

The 6th District grew by 73,000 voters between 2001 and 2010 (see Table 1) and also gained

58,255 Democratic registrants (see Table 2).   In the 2001 map, it contained parts of Berks, Chester and

Montgomery counties.   The 15th District was shifted to the East in 2011 (as was the 17th) and this

resulted in adjustments to the 6th District as parts of it were moved to the 15th.   The 6th wound up

incorporating parts of Lebanon and Berks Counties that were more similar to the areas it maintained.

The Kennedy report fails to note that Reading had been split in the 2001 map.   In the 2011 map Reading

is made whole and included in the 16th District.   The petitioners interpret this move in the most

negative possible light, as "packing," but had Reading been divided they would have complained that it

had been "cracked."

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District 7

Congressional District 7 did gain population from 2001 to 2010.   It also gained Democratic registrants over the same period.   In spite of its often noted non-compact shape, it is politically competitive according to party registration figures with only a slim Republican majority reported below (see Table 8). One would think that if partisan intent were the overriding factor in determining the shape of this district the map makers could have made it a much safer bet for Republican candidates than it is now. The most densely populated part of the district in Delaware County is substantially continuous with the boundaries of the previous district.   This House seat should draw able competitors from both political parties.

District 8

Bucks County is not sufficiently populous to warrant a single congressional district even with the population growth in the district from 2001 to 2010.   To meet population equality requirements one of the adjacent counties must be split.   Previously, the district included parts of Philadelphia and a piece of Montgomery.   The 2011 map eliminated the extension into Philadelphia and included a larger section of Montgomery, creating only two county splits from what had been three.   This version of the district is also consistent with history.   The 8th has included parts of Montgomery since 1971 and the only time it had extended into Philadelphia was in 2001.   Prior to 1971, Lehigh County was included with Bucks County to form the 8th District.

District 9

In 2001, the number of county splits was reduced from 9 to 6 even though the District had to shift westward to accommodate the seat loss.   This is why the 9th no longer encircles Mifflin, Juniata, Perry and Cumberland Counties.   Republicans gained ground over the decade measured in terms of

party registration. The 9th District drawn in 2001 (see Figure 1) gained 16,000 Republican voters from 2001 to 2011, while Democrats lost about 6,200.   As it was redrawn in 2011, the Democratic losses from the previous decade were reduced to about 2,200 and the Republican registration gains remained about the same, not an outcome one would expect from a purely partisan line drawing process.

District 10

With the 9th District moving out of Mifflin, Juniata, Perry and Cumberland Counties, District 10's boundaries were shifted to fill in this territory (see Figure 2).   This District has gradually expanded its geographic reach as Pennsylvania has lost House seats, moving from 25 in 1971, to 21 in 1991, down to 18 in 2011.   With the boundary adjustments, the number of county splits here was reduced from 5 to 4.

District 11

The Kennedy report complains that this district does not include the cities of Scranton and Wilkes-Barre.   The 2001 map is the only time District 11 incorporated both Scranton and Wilkes-Barre extending back to 1931.   Remarkably, this District was drawn to split only 4 municipalities out of 224, but the Kennedy report's slanted exaggeration makes it sound far more sinister.

As far as the geographic expanse of the district, Representative Barletta has been more than accommodating to his constituents, opening four district offices 9 to 5 weekdays, and meeting constituents for casework in additional offices throughout the district on a part-time basis. Many members of Congress serve in Districts far more expansive than the 11th with great competence and professionalism.   A district of this expanse is not an obstacle to representation, nor it is indicative of a partisan gerrymander, or many representatives in states lying to the west would be judged ineffectual and incompetent.

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District 12

As noted above, the 2011 reapportionment required the elimination of one seat. Past practice has been to merge adjacent districts so that two incumbents compete for the remaining seat, and usually they are of the same political party.   The new 12th district is drawn to encompass large sections of the abolished 4th District and the previous 12th District, both of which experienced population loss in the intercensal period (see Table 1).   Contrary to the characterization in the Kennedy report, there was nothing especially "meticulous" or "calculating" about it given that the 14th District – Pittsburgh and the bulk of Allegheny County – was to remain substantially unaltered.   A Republican now occupies this seat, but it *was certainly not constructed as a safe Republican seat*. The figures in Table 8 (below) show that Republican registration was only 37.4% at the time it was drawn, compared with 52.9% for Democrats. Democrats have lost registrants in the area encompassed by the previous District 12, as Table 2 indicates, but unaffiliated ranks have grown faster than Republicans.   The conclusion to be drawn is that the district is competitive, and may well move back to Democratic hands at some point in the near future.

District 13

This district had to be considered on a block-by-block basis to meet equal population requirements and to adjust for the growth in the Philadelphia suburban population. The previously drawn 13th District also grew by 42,000 Democratic registrants, while Republicans declined by 47,000. At the time of 2011 creation, the redrawn 13th District had a significant Democratic edge with 58 percent of the registrants, but it is not so lopsided so as to be uncontestable, even though the Democratic incumbent went unchallenged in 2016. In spite of its non-compact shape, Democrats were not excessively grouped ("packed"), nor were they unduly scattered ("cracked").

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District 14

The Kennedy report complains that municipalities are split in this district.   In fact, only *four* are split, all to achieve population balance. Township splits were reduced from 12 in the 2001 map to 4 in 2011, a substantial improvement.   Because this district lost 71,500 people, both Republican and Democratic registrants, over the course of the decade, it was expanded along the Allegheny River adding some small boroughs.   These particular towns form more of a community-of-interest than adding suburban areas further away.   This district encompasses many river communities on both sides of the Ohio and Allegheny Rivers.   It is about as safely Democratic as it was before the redistricting.

District 15

As noted above, District 15 was adjusted westward as other district boundaries were shifted in that direction.   From 1930 to 1970 Lehigh and Bucks County combined to form the 8th District. Northampton County was part of the 15th District that included Carbon and Monroe Counties – the former a coal county, the latter known for tourism in the Pocono Mountains.   The economic diversity in the district has some history.

When Lehigh and Northampton Counties were combined in the 1971 map, the Democrats held the seat for six terms, but Republicans have held it for sixteen thereafter.   Contrary to the impression conveyed in the Kennedy report, 79% of the population of Lehigh and Northampton counties remains in the 15th District indicating substantial continuity with the past

The city of Bethlehem is characterized by Kennedy as having been "cracked."   It is not cracked. Four census blocks in a single ward were removed for population equality purposes and placed into District 15.

The District is also mischaracterized by Kennedy as "extremely Republican."   At the time it was drawn, it was 46 percent Republican by registration, and 39 percent Democratic.   By no one's standard

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is this "extremely" Republican. Republican registration declined there between 2001 and 2011.

Judging by the close balance of party registration, this district should regularly draw viable candidates

from both parties.

District 16

Reading is singled out in the Kennedy report as having been "packed" into the 16th District.

First, the city is made whole as a community-of-interest in the 2011 map, whereas in the 2001 map it

had been divided.   Arguably this change results in improved representation for Reading, not diluted.

Furthermore, the reality of District 16's construction is more complicated than Kennedy's

misinformed characterization.   Population growth in the 1990s formed suburban settlements around

Reading as transportation networks into the city improved.   In the 2001 map, Reading was in a district

that included expansive farmlands and encompassed the coal counties of Schuylkill and

Northumberland, two counties that have little in common with Reading.

The Latino population in this area is also growing quickly. The Route 222 corridor connecting

the city of Lancaster and Reading, on its way north to Allentown, is considered a Hispanic boom area.

District 16 was drawn along Route 222 in a manner that joins up the Hispanic population of southern

Chester County and the Coatesville area.

Kennedy complains that Cumru township is split.   But it is divided this way because it is

noncontiguous. Placing all of Reading in one district and all of Cumru in another district will unavoidably

result in a split township.

District 17

District 17 encompasses an area historically anchored in the anthracite coal region: Schuylkill,

Carbon, Luzerne and Lackawanna Counties.   The district shifted to the northeast partly because the 11th

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and 10th District boundaries shifted north and west (see Figure 2).   As indicated above in the discussion of District 15, the city of Bethlehem is not "cracked".   Four census blocks in the 17th ward were removed to establish population equality.   The 17th tipped in a Democratic direction (55 percent) at the time of its creation but not overwhelmingly so (Table 8).

District 18

Like the other Districts in Western Pennsylvania, the 18th District's boundaries underwent a major shift to accommodate the seat loss.   In the 2011 map, District 18 splits fewer townships than the previous map, though the same number of counties.   In spite of the boundary shifts, the District shows a modest Democratic registration edge of 53 percent at the time it was drawn (Table 8).   If the intent was to draw a truly safe Republican district, then 53 percent falls well short of this goal.   The 18th District should draw lively and vigorous challengers from both political parties, and if it does not, it is not because of the way the lines have been drawn.

Summary of District Analysis

The burdensome task for Pennsylvania map makers in 2011 was how to rebalance the population of districts when one seat had been removed in response to a modest population loss, leaving more than 500,000 voters to be distributed across the remaining districts. This simply could not be done without some significant boundary alterations.   The changes made in Western Pennsylvania, in turn had a ripple effect on boundaries further away, clearly in the Northeast, but also in the South Central regions.   The stringency of the equal population criteria makes it surprisingly difficult to balance populations when a map maker is forced to move populations in pieces, by blocks and precincts, rather than individuals.   Under the constraint of minimizing split municipalities and counties, and the demand to draw districts largely continuous with the way they were drawn in the previous map, along with other

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considerations, the room to maneuver is not nearly as free and expansive as the petitioner's experts imagine.   Perhaps this is why none of them have presented an alternative map.

Critics of legislative districting plans regularly complain when counties, towns and other communities of interest are split by district boundaries as in the image of neighborhoods cut up to look like Swiss cheese.   One simple gauge of preserving communities of interest used by map makers in many states is to keep counties and towns wholly within districts, rather than dividing them.   But compact shapes do not always preserve communities of interest.

As for the plan Pennsylvania presently has in place, it does have the very desirable quality of having minimized county and municipality splits from the previous plan.   Analysis conducted by a GIS consulting expert indicate that the number of total splits in counties dropped from 42 to 39, and, more remarkably, the number of total splits in municipalities dropped from 97 to 73 (see Table 3). Not only were the total number of splits reduced, but the number of counties and municipalities with any split at all was reduced, from 29 to 28 for counties and from 94 to 68 for municipalities.   These are not easy achievements under the constraints posed by Pennsylvania's underlying population settlement, the demand for equal population districts, and the other goals of the redistricting process.

Table 3. Total Splits in Counties and Municipalities Under Recent Pennsylvania Redistricting Plans			
Plan Year	1992	2002	2011
Counties	27	42	39
MCDs (Municipalities)	17	97	73
Source: Legislative Reapportionment Commission website.			

The present Pennsylvania district shapes can be understood deploying alternative explanations not considered by the petitioner's experts, none of which go to extreme partisanship, but remain entirely consistent with the multiple goals of the redistricting process.   In some cases, non-compact districts are necessary to ensure that a politically balanced district can be drawn.   The petitioners desire competitive districts across the state, but drawing 11, 12 or more *compact* competitive districts is not at all a straightforward task in Pennsylvania, which is perhaps why neither the Kennedy report nor the other reports offer an alternative plan.

Variations in Partisanship within Districts

Partisan advantages are not always as enduring or permanent as the petitioners' experts want to claim.   Averages taken across a large number of elections and offices obscure the variability of political results within them.   Certainly party identity is a valuable piece of information to have about a voter, but there is a reason why political scientists prefer to place voters on a seven-point scale, ranging across the following values: Strong Democrat, Democrat, Lean Democrat, Independent, Lean Republican, Republican and Strong Republican (Carsey and Layman 2006; Lewis-Beck, Jacoby, Norpoth and Weisberg 2008).   The behavior and patterns of party support and loyalty across these categories are variable, predicting the propensity to vote at all, and to cast a ballot for the opposing party.   Even in a highly polarized era there is crossover voting reported in every major election, especially among partisans whose identities are less anchored in issue congruence with their usually preferred party (Hillygus and Shields 2008). Campaigning does turn out to matter as political parties and candidates adapt to the composition of districts, emerging to run competitive elections in redrawn districts. Political scientists do not fully understand persuasion, but it is observed in every election as voters cast ballots in support of candidates who are not of the same party as themselves.

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For evidence germane to Pennsylvania, we might consider the behavior of the state's voters grouped into the present eighteen congressional constituencies as they vote for different offices in the very same general election.   Table 4 shows results from the 2016 general election, with the Republican and Democratic percentage of party registrants captured in the columns headed "R Reg" and "D Reg". The columns headed "D Max" and "R Max" contain the maximum percentage across the listed offices for each of the Republican and Democratic parties.   So, for example, the maximum Republican vote across these offices in District 1 was 20% in the U.S. Senate race.   The far right columns headed "Dif R" and "Dif D" simply reflect the difference between the party registration percentage and the maximum Republican and Democratic percentages across offices.   In District 1, R Reg=15.2, and R Max=20.0.   In turn, 15.2 - 20.0 = the Dif R figure of -4.8.

What is notable about the differences is that they are quite substantial, in the double digits in 13 of the 18 districts for Republicans.   Differences for Democrats are not as high, but exceed 5 points in 8 of the 13 districts.   Generally, Republican candidates do far better in most districts than their party registration figures suggest.   In the aforementioned District 9, Republicans outperformed their party registration by as much as 21 points.   In District 17, lying northeast of Allentown, Republicans outperformed their registration percentage by a maximum of 19 points.   In District 18, on the opposite end of the state, Republicans outperformed their registration percentage by a maximum of 17 points. This clearly suggests substantial independence from partisanship, enough to indicate that party registration is a very imperfect indicator of partisan preference in actual elections.   Though it is certainly true that turnout levels vary across these districts, the gaps between party registration and party performance in elections cannot solely be attributed to differences in voter turnout. If some

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Table 4. 2016 Vote Percentages for Various Offices by Congressional District, and Comparison to Party Registration Figures

District	R% Pres	D% Pres	R% AttGen	D% AttGen	R% Treas	D% Treas	R% Aud	D% Aud	R% US Sen	D% US Sen	R Reg	D Reg	R Max	D Max	Dif R	Dif D
1	18.2	79.4	18.5	81.5	16.8	80.6	18.4	78.8	20.0	78.7	15.2	73.2	20.0	81.5	-4.8	-8.3
2	7.6	90.4	9.5	90.5	9.3	88.4	10.1	87.5	10.6	88.4	8.3	80.3	10.6	90.5	-2.2	-10.2
3	60.6	34.7	59.3	40.6	52.5	41.0	53.7	40.0	58.9	41.0	44.9	42.5	60.6	41.0	-15.7	1.5
4	58.2	36.9	60.8	39.1	55.6	37.6	52.0	42.5	58.5	37.6	48.0	36.6	60.8	42.5	-12.8	-5.8
5	61.7	33.1	60.8	39.1	55.6	37.6	55.9	37.1	59.4	37.6	47.0	38.6	61.7	39.1	-14.7	-0.4
6	47.6	48.0	52.5	47.5	48.5	46.5	51.1	43.6	52.1	46.5	43.8	39.6	52.5	48.0	-8.7	-8.4
7	46.8	49.2	52.0	48.0	49.7	47.1	52.4	44.0	53.1	47.1	49.0	36.5	53.1	49.2	-4.1	-12.6
8	48.1	47.8	49.9	50.1	48.8	48.3	51.2	45.6	52.5	48.3	41.8	42.1	52.5	50.1	-10.7	-8.0
9	69.3	27.0	64.3	35.6	57.8	35.5	58.6	35.4	63.8	35.5	48.6	40.1	69.3	35.6	-20.8	4.5
10	65.5	29.9	64.5	35.3	58.2	34.7	60.0	33.5	61.9	34.7	52.3	33.6	65.5	35.3	-13.2	-1.7
11	59.8	36.0	57.6	42.3	51.3	42.5	51.5	42.5	56.6	42.5	45.5	41.1	59.8	42.5	-14.3	-1.4
12	58.5	37.8	56.1	43.8	49.0	45.1	48.0	46.8	56.4	45.1	41.2	46.6	58.5	46.8	-17.3	-0.2
13	31.7	65.3	31.0	69.0	30.8	67.0	33.9	63.7	35.6	67.0	27.0	60.0	35.6	69.0	-8.6	-9.0
14	30.6	66.0	29.5	70.5	24.2	69.4	22.8	71.7	29.6	69.4	18.6	67.8	30.6	71.7	-12.0	-3.8
15	51.7	44.2	52.3	47.7	48.5	46.2	50.5	44.3	53.3	46.2	39.5	43.9	53.3	47.7	-13.8	-3.8
16	50.5	43.8	54.8	44.9	50.4	42.7	50.8	42.7	52.9	42.7	44.8	39.3	54.8	44.9	-10.0	-5.6
17	53.1	43.0	48.0	51.9	42.1	51.9	44.3	49.9	47.9	51.9	34.1	52.0	53.1	51.9	-18.9	0.1
18	57.9	38.4	56.1	43.8	49.6	45.0	47.8	47.3	56.2	45.0	41.1	46.8	57.9	47.3	-16.8	-0.5

Source: Percentages calculated from election returns provided by the Pennsylvania Secretary of State.

portion of the variability is accounted for by differences in turnout it only proves that the decision to turn out to vote or to abstain is itself a substantively important decision that contributes to the variability of a party's performance.   Moreover, voter turnout is a behavioral outcome that is mutable to campaign effort (Green and Gerber 2015).

Several interesting examples from Table 4 also show Democratic candidates outperforming their district registration figures in the 2016 elections.   In District 2, including Philadelphia and some of its suburbs, Democrats performed up to 10 percent better than a strict accounting by party registration would predict, giving nearly 91 percent of their vote to the Democratic candidate for Attorney General. No doubt it helped that the Democratic candidate, Josh Shapiro, was from Montgomery County, buoyed by a friends-and-neighbors vote.   Even so, there are other examples.   In District 7, Democratic registration was about 37 percent at the fall closing date, but Hillary Clinton won the district with 49.2 percent of the vote.   In District 13, covering parts of Philadelphia and Montgomery County, Democratic registration was at 60 percent, but the Democratic candidate for State Auditor won 69 percent of the vote, and Hillary Clinton won 65 percent.

These are comparisons biased against finding big differences because all of these elections are taking place at the same time, in November 2016.   There are no comparisons in Table 4 across election years, which would reveal even larger deviations from what could be described as party normality.   The upshot is that party registration is a valuable predictor of vote choice, but it is not unchanging, or all-controlling.

At the voter level, political scientists have long known that party identification as recorded in surveys does not explain the entirety of self-reported vote choice (Campbell, Converse Miller and Stokes 1980).   There is even some discrepancy between party identification and party registration.   For instance, in the 2016 Cooperative Congressional Election Survey of Pennsylvanians, conducted by the Palo Alto based firm, *YouGov*, comparing three-point party identification to party registration yields the

cross-tabulation reported in Table 5.   About 16 percent of the state's Republican registrants tell survey researchers that they identify as independents.   Among Democratic registrants, about 11 percent identify themselves as independents and another 2 percent report they are really Republicans, off-setting the 2 percent of Republicans who really identify as Democrats.   Without question party registration is probably the best predictor of party identification available, but even then there is not a perfect association.

Table 5. Association Between Party Registration and Party Identification for Pennsylvanians, 2016

Party Label	Democratic	Unaffiliated	Republican	Total
Democrat	86.7	8.3	2.4	43.3
Independent	11.4	85.3	16.1	22.3
Republican	2.3	6.3	81.5	34.4
Total	1,145	300	960	2,405

X^2=2,600.9; p≤.0001
Ø=1.01; p≤.0001
Source: 2016 YouGov Cooperative Congressional Election Study, Pennsylvania

Table 6. House Vote Preference and 7-Point Party Identification in Pennsylvania, 2016

Party Label	Strong Dem	Not Strong Dem	Weak Dem	Ind	Weak Rep	Not Strong Rep	Strong Rep	Total
Dem	90.8%	73.0%	80.9%	37.3%	7.2%	6.1%	3.3%	43.8%
Rep	9.2%	27.0%	19.1%	62.7%	92.8%	93.9%	96.7%	56.2%
N=2,097	553	270	141	153	180	345	455	2,097

X^2=1,270.6; p≤.0001
Ø=.778; p≤.0001
Source: 2016 YouGov Cooperative Congressional Election Study, Pennsylvania

Not surprisingly, when it comes to vote choice for various offices, the differences between party identification and candidate preference are more striking, especially when we consider the ambivalence of weak and leaning partisans – identifiers who sometimes call themselves independents but are still registered with one of the two major parties.   Table 6 (above) shows a cross-tabulation of 7-point party identification, including the weaker identifiers, with voter preference in the 2016 U.S. House elections in Pennsylvania.   *Strong* Democrats and Republicans reliably prefer to vote for candidates of their party.   But those who are *less* strong show greater tendency to defect, particularly on the Democratic side.   An estimated 27 percent of the Democrats who are "not strong" preferred Republican candidates, according to these data.   Republicans were less inclined to defect overall, although even six percent of the "not strong" Republicans preferred a Democratic candidate.   The conclusion to be drawn from voter self-reports of party identity is that partisan voting blocs cannot be identified, measured, and diluted in the same manner as racial voting blocs.   Partisanship is not the type of durable identity that one finds attached to race and ethnicity.

Partisanship and the Variability of the Efficiency Gap in Pennsylvania

Various redistricting experts have promoted the efficiency gap as a measure of proportionality between seats and votes, upholding that measure as an important standard by which to evaluate existing and proposed maps (Stephanopoulous and McGhee 2015).   In the view of proponents, redistricting plans should exhibit a match between votes earned and seats won -- proportionality.   A low score on the efficiency gap ensures that a properly balanced plan is in place.

Numerous criticisms have been advanced to show that the efficiency gap is a flawed measure (Cho 2017; Chambers, Miller and Sobel 2017; Cover 2017).   Among these weaknesses are the non-comparability of the measure across states and points in time; that the measure is sensitive to the size of the legislative delegation; that the measure is sensitive to the political data used to compute it; and

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that the measure does not capture the concept of "partisan fairness" in the way proponents claim (Cho 2017).   Below I will focus my attention on *one* of these criticisms consistent with my discussion of the mutability of partisanship in the foregoing pages; namely, that the measure is sensitive to the political data used to calculate it.

Because the efficiency gap is calculated using measures of partisan loyalty, and these measures fluctuate as voters change their minds, as turnout changes, and as political tides ebb and flow, a particular plan may have very different efficiency gap scores across a short span of time, or even at the very same time if we gauge party loyalty across offices that are voted on in the same general election. This raises the question of which measure really represents the true political identity of the electorate. Over the lifetime of a particular redistricting plan, the size of the efficiency gap can vary widely, as partisan tides raise the prospects for one party or the other.   The data presented in Table 7 show the efficiency gap calculation varies for the present Pennsylvania plan for each office, even for the same election year.   For a plan containing 18 US House seats, a greater than two seat advantage is considered imbalanced enough to reject a plan.   This means that for Pennsylvania's present map, values of the gap greater than 11 indicate a defective plan.

In Table 7, I also calculate a gap for the party registration balance only to show what gap would emerge if all voters voted and cast ballots strictly according to their party registration.   Even across the 2012-2016 period, the gap ranges from 4.2 to 17 (with positive values indicating a Republican advantage).   The gaps do vary in magnitude to a Democratic advantage of -7.3 in the 2012 Attorney General's race.   Although it is true that the efficiency gap exceeds 11 in most elections appearing in Table 7, certainly there are instances where the gap falls well below that level.   Viewed over the last decade, election returns in Pennsylvania suggest that the Republican tide has been gradually rising across the state as a secular trend, not that something specifically about the 2011 plan suddenly improved Republican prospects.   Under this same 2011 plan, we could well see this tide recede in the

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Table 7.   Efficiency Gaps Calculated Across Offices for Pennsylvania Under the 2011 Redistricting Plan, 2006-2016.

2016		2014		2012	
Party	17.7	Party	9.3	Party	4.2
US House	14.0	US House	11.2	US House	18.0
President	15.9	Governor	15.4	President	22.2
Atty General	19.5			Atty General	-7.3
Treasurer	28.9			Treasurer	25.5
Auditor	27.4			Auditor	25.6
US Senate	26.3			US Senate	9.2
2010		**2008**		**2006**	
Party	2.7	Party	2.9	Party	5.2
US House	9.5	US House	-1.1	US House	9.9
Governor	20.0	President	7.8	Governor	7.5
US Senate	5.9	Atty General	16.9	US Senate	-11.5
		Treasurer	-6.1		
		Auditor	-12.2		

Source: Author's Efficiency Gap calculations from data from the Legislative Reapportionment Commission website

Table 8. 2009 and 2010 Party Registration Percentages Calculated within 2011 Congressional Districts				
2011 District	R % Reg 2009	D % Reg 2009	R % Reg 2010	D % Reg 2010
1	18.32	72.57	18.17	72.38
2	9.20	81.51	9.28	81.10
3	41.05	48.29	41.54	47.49
4	46.89	39.46	46.92	39.01
5	44.99	43.03	45.05	42.54
6	44.57	40.21	44.31	40.03
7	51.86	35.49	51.43	35.55
8	42.21	43.14	41.97	42.99
9	42.28	47.80	42.61	47.15
10	50.24	37.11	50.39	36.75
11	43.75	44.69	43.87	44.24
12	37.02	52.92	37.36	52.30
13	30.47	58.37	30.09	58.22
14	17.55	71.76	17.66	71.14
15	39.12	45.93	39.19	45.64
16	46.31	39.46	45.95	39.51
17	32.20	55.93	31.92	56.06
18	36.40	53.33	36.82	52.64
Source: Author's calculations based on aggregating 2009 and 2010 precinct data to 2011 Congressional District boundaries. Blue shaded cells indicate Districts in which Democrats were at least a plurality of total registrants.				

2018 and 2020 elections, resulting in a declining gap, or lopsided Republican wins may well increase it. Neither of those results would be the consequence of a redrawn map. In this connection, we should also note that when the present Pennsylvania map was drawn, Democrats held the majority or plurality of party registrants in 12 of the 18 seats (67% of the total), as shown in Table 8 shaded in blue.

Since there is no certain way to assign voters to one of the two major parties; and with the voters moving in and out of the electorate, and voters changing their minds regularly enough to alter their political classification, the efficiency gap calculation is too undependable to be a guide. After all, who is being unjustly denied a voice in Pennsylvania? Is it the Democratic Party's registrants in the

state?   Is it the Democrats who voted for Auditor or Treasurer?   Or the particular group of people who voted for Hillary Clinton, regardless of their party identification? (Chambers, Miller and Sobel 2017, 30).   Twenty thousand African American voters in District 2 will be twenty thousand African American voters in District 7. But if a group of twenty thousand Republicans in District 2 becomes a group of thirteen thousand Republicans and seven thousand Democrats in District 7, it is absurd to say that the quality of the Republican Party's statewide representation was affected positively or negatively (Rush 2000, 250).   If the identification of the group depends upon the district in which they happen to reside, or the candidates they happen to face, then this this is not an identity group in the first place.   Racial groups are enduring, but a constituency's partisanship is not.

Minority Descriptive Representation and Competitiveness

Among other mandates, the Pennsylvania legislature labored to produce the 2011 Plan under the requirement that they provide for minority descriptive representation, following the precedent set by previous plans.   This is a serious constraint on the placement of congressional district boundaries in Southeastern Pennsylvania.   Philadelphia is home to a substantial African American population (44% in 2015) with a sizable Hispanic population (14%).   Adjacent Delaware County was reported to be 22% African American and 4% Hispanic.[1]   This extent of minority population concentration dictates that for any plan to be insulated from legal challenge as a violation of minority voting rights, the Philadelphia metro area should receive at least one seat highly likely to elect a minority member of Congress, and probably another with significant minority influence. The current plan reflects this reality, as District 1 is 36 percent African American and District 2 is 56 percent African American.

The legislature could certainly have drawn more African Americans into District 2 than it did.   The inevitable criticism had they done this would be that a greater degree of "packing" is in excess of

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[1] As reported in Census Quickfacts, based on 2016 estimates. https://www.census.gov/quickfacts/fact/table/delawarecountypennsylvania/PST045216, accessed 11/15/17.

what is needed to obtain descriptive representation for minorities.   In reality, it is not clear just what the appropriate population percentage should be given the uncertainty of black turnout across Democratic primaries and election cycles.   Any less than 56 percent and petitioner's experts would surely complain that the black population was being unlawfully "cracked."   In the face of these uncertainties, 56 percent is probably the narrowest acceptable threshold to avoid legal challenge.

Once these two districts were drawn, any map maker then faces the challenge that having removed large and reliably Democratic populations from the map, politically balanced districts will be difficult to draw in nearby areas in Eastern Pennsylvania.   By removing the precincts from the concentrated minority voter locations encircled by Districts 1 and 2, it becomes far more challenging to produce three, four or five competitive districts nearby.   An investigator need not remove the precincts just from Districts 1 and 2, in particular.   Removing clusters of contiguous high population African American precincts from other parts of Pennsylvania will make it harder to amalgamate adjoining areas so that they reflect political evenness, much less a Democratic tilt. Levitt (2016, 2) makes the same point about Arizona's congressional districts; competitive seats are hard to create if map makers also care about minority representation.

Competitiveness and Compact Shape

The standards to utilize to create a competitive district are confusing and unclear (Alexander and Prakash 2008).   Partisanship and competitiveness cannot be judged simply by measuring the balance of party registration or voting in a district, as has been suggested in various reports by petitioners.   The present understandings that rely on vote percentages for the major parties fail to offer any local baseline for what an acceptable distribution of partisanship should be.   For a party decisively in the minority in a location such as Republicans in the city of Philadelphia, creating one or two competitive districts will require an intensely partisan effort.   Some districts would rarely be

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competitive given the underlying concentration of the population settled there (Levitt 2016).   Given the current distribution of partisans in the densest parts of Allegheny County, the district there probably should not be highly competitive.   Not surprisingly, Districts 1, 2 and 14 are all considered safe Democratic districts in the 2011 plan.   A competitive map in these locales would reveal evidence of the ugliest kind of partisan map-drawing at work, turning the usual indicators for partisan bias and competition on their heads. Shape is once again a most unhelpful guide to the map maker's intent.

Repeatedly, however, the petitioners' expert reports rely on the non-compact shape of a district to draw a completely contestable inference about partisan intent.   Districts 12 and 9 are faulted for cracking Democratic constituencies for partisan ends but the net result is to create competitive districts judged by criteria accessible to the map makers at the time.   Even the much criticized District 7 contained a 51% (see Table 8) Republican majority by registration at the time of its creation, an edge hardly considered an unassailable party fortress by campaign professionals.   District 15 did not have a Republican edge according to party registration estimates at the time of its creation, but instead hads a Democratic plurality (45-46%, see Table 8).   Districts 17 and 18 both maintain Democratic majorities according to party registration figures in 2009 and 2010, though not insurmountable ones. Some extension outward from the cores of these districts was required to make them more competitive. Shape compactness will undermine competitiveness in many locations on the Pennsylvania map. Obtaining any large share of competitive districts in Pennsylvania will require extensions outward from larger towns and cities out to less densely settled territory, much as the current map shows.

In summary, the 2011 Pennsylvania map is a completely reasonable response to the multiple and contradictory demands of the redistricting process, including that of descriptive representation, preservation of communities of interest, the fundamental requirement for equal population, and the desire to maintain compactness of shape.   Even political competitiveness is preserved across a large number of districts, at least gauged at the time the maps were drawn by the balance of party

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registrants.   Remove descriptive representation and it is considerably easier to even out the balance of party identifiers across Eastern Pennsylvania's congressional districts (Levitt 2016; Nakao 2011). Draw a district that contains all of Harrisburg and it becomes considerably more difficult to equalize the population across the adjacent districts.   Under existing law, map makers are not free to sketch in the boundaries in order to satisfy only a single demand or priority.

Are the Officeholders More Extreme after the 2011 Plan?

The petitioners' complaint and the expert report authored by Christopher Warshaw make a point of arguing that the officeholders elected from plans such as the 2011 Plan are political extremists, and that they cannot obtain proper representation from such immoderate candidates, leading to the conclusion that partisan map drawing is a primary cause of institutional failure.

In this brief section, I will argue that the evidence for the extremism of the Pennsylvania delegation is unconvincing, and that there is considerable evidence that the Pennsylvania delegation isn't extreme at all.   In fact, Pennsylvania has a long tradition of electing practical, level-headed and ideologically moderate officeholders to Congress who pride themselves on constituency service.   Unlike members elected from states further south, they are usually not at the front of the ideological battle lines in Washington. Moreover, their election and reelection under the 2011 redistricting plan has not changed their sensible posture, nor is it likely to during the remaining years it is in place.

Roll call voting data based on recorded votes are commonly used to gauge political extremism, as they are in the petitioners' original complaint, as well as in the expert report by Warshaw.   These are not helpful measures, regardless of how widely they've been used and misused by political scientists. Measures such as the DW-Nominate scores are so general that they conflate party line voting on trivial measures with no policy content (e.g., procedural votes) with truly divisive ideological votes on substantive themes such as abortion rights, immigration control, defense spending and tax reform.   The

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best that can be said for such scores is that they measure some loyalty to a party and a member's

tendency to vote with their party's majority, but they say little or nothing about ideological polarization.

There are measures by individual interest groups that may come closer to gauging what is

meant by political extremism in the ideological or policy sense.   These are based on specific votes

selected by the group to represent their ideological agenda.   They are also based on questionnaires that

members fill out detailing their positions on specific issues important to the group.   There are numerous

examples of these specialized group ratings or scorecards, from organizations on the left, the right, and

center, but I will take up seven of them here all representing conservative causes with different issue

orientations.   I choose the conservative groups on purpose because it is the threat posed by increasing

ideological conservatism in the Pennsylvania delegation that the petitioners appear to fear most.   The

group scorecard/ratings are:

1. The American Conservative Union (Positions Score) 2011, 2016
2. The American Conservative Union (Lifetime Score) 2011, 2016
3. Eagle Forum (Positions Score) 2011, 2016
4. Heritage Foundation Action (Positions Score) 2011, 2016
5. The Club for Growth (Positions Score) 2011, 2016
6. Gun Owners of America 2011, 2016
7. Numbers USA (Positions) 2011, 2016

Like any voting or interest group scores, the ratings for any two years are not strictly

comparable because the same issues are not considered every year.   The fact of that difference,

however, should constitute a test for differences that would be biased *in favor* of finding a significant

difference before and after redistricting, not against it.   If we find that there is no difference between

the 2011 rating and the 2016 rating, then it would be especially remarkable given that the exact nature

of the immigration, or gun rights, or tax reform issues before Congress will change.   Finally, it's also

important to note that there are several membership changes between 2011 and 2016: Matt

Cartwright replaces Tim Holden in District 17;   Brendan Boyle replaces Allison Schwartz in District 13;

Keith Rothfus replaces Mark Critz in District 12, representing not only a member change, but a change in

party control; Scott Perry replaces Todd Platts in District 4, the former District 19; and Jim Gerlach is replaced by Ryan Costello in District 6.   All of these changes would predict that we should see major differences in the scores between 2011 and 2016 too!

Amazingly, what we find in the paired sample t-test of difference in means is that across these 126 pairings of scores listed in Appendix Table A.1, there is no statistically significant difference between scores in the two years (*Mean difference=1.45; SE=2.31; t=.628; p≤0.531*).   The biggest difference occurs in the party switch in District 12 from Critz to Rothfus. To be sure, this is a substantively large shift in a more conservative direction with this change in party control. But aside from this difference, even with the *intra*party changes in membership included, the differences do not become greater from 2011 to 2016. The Pennsylvania delegation is not becoming more conservative as a result of redistricting.

Finally, note in Table A.1. that the substantive scores for Republicans in the districts the petitioners complain about most are very moderate on the 0-100 scale.   The occupants of these seats: Patrick Meehan in the 7th; Ryan Costello in the 6th; Mike Kelly in the 3rd ; Bill Schuster in the 9th; and others – are not earning ratings way out on the extremes by these high profile conservative interest groups.   None of these incumbents are recognized as leading right-wingers in the Republican Conference on Capitol Hill.   They may look conservative to liberal extremists active in Democratic Party politics in Pennsylvania, but by objective standards they are not even close to the conservative extreme. The complaint that the 2011 Plan has generated some rightward lurch in the Pennsylvania delegation is not justified by the facts.

Conclusion

Redistricting plans have to satisfy many goals, and they always do this imperfectly because the goals are in conflict.   A district that preserves a territorial community quite well is likely to be politically lopsided on a number of other measures because proximity promotes homogeneity of interest.

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Conversely, competitive districts could well be disruptive of communities if they have to go out of their way to incorporate diverse interests.

Responsiveness, or "efficiency," is not the preeminent goal of redistricting any more than other values that could be elevated. Just as there are reasonable arguments for creating more competitive districts, there are equally reasonable arguments for desiring lower turnover in leadership. Some argue quite reasonably for representatives who will ignore the short-run impulses and protests of constituents in favor of policy that will serve the longer-term interests of the state. Expertise and seniority in Congress are also valuable resources in exercising oversight, and advocating on behalf of a state's voters. From this standpoint, having new and inexperienced leaders trading office in every election is not better than having a stable group of representatives in place to address the long-term interests of Pennsylvanians on Capitol Hill. Some would even insist that the U.S. House of Representatives is, by design, supposed to be a continuing and highly stable body, not subject to the whims of each new administration. The myriad conflicting redistricting criteria highlighted at the beginning of this report were all in place to make the Act 131 map what it is. In its inevitably imperfect balance of contradictory demands there are many aspects of the 2011 map that could be different than they are. But that does not mean that the map is unacceptable, or that it is unfairly partisan in inspiration or result.

All maps are imperfect, objectionable to someone. Representational gaps abound. Minority parties; independent voters; women; Catholics; coal miners; people of Dutch ancestry, and many other identity groups fail to find representation in the legislature proportional to their voting presence in elections. Some popularly elected legislative body has to be awarded the authority to adjudicate among these contending claims and priorities. These state legislators may well try to advantage themselves by drawing districts favorable to their reelection, but those legislators can also be defeated because voters come to disapprove of this practice. Voters, in the end, have control over whether there are competitive elections.

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Appendix

Table A.1. Conservative Interest Group Scorecards or Ratings for the Pennsylvania Delegation in 2011 and 2016			
Member Name	**Rating or Scorecard Name**	**Score 2011**	**Score 2016**
Brady 1	American Conservative Union - Positions	0	6
	American Conservative Union - Lifetime Score	6	4
	Eagle Forum - Positions	38	14
	Heritage Action for America - Positions (House Only)	11	16
	The Club for Growth - Positions	1	0
	Gun Owners of America	0	0
	NumbersUSA - Positions	28	10
Fattah 2	American Conservative Union - Positions	0	3
	American Conservative Union - Lifetime Score	2	12
	Eagle Forum - Positions	15	13
	Heritage Action for America - Positions (House Only)	0	16
	The Club for Growth - Positions	2	0
	Gun Owners of America	0	0
	NumbersUSA - Positions	21	10
Kelly 3	American Conservative Union - Lifetime Score	80	70
	American Conservative Union - Positions	80	72
	Eagle Forum - Positions	61	73
	Heritage Action for America - Positions (House Only)	57	67
	The Club for Growth - Positions	54	71
	Gun Owners of America	75	90
	NumbersUSA - Positions	57	71
Platts/Perry 4	American Conservative Union - Positions	48	96
	American Conservative Union - Lifetime Score	72	96
	Eagle Forum - Positions	53	100
	Heritage Action for America - Positions (House Only)	52	85
	The Club for Growth - Positions	48	91
	Gun Owners of America	75	90
	NumbersUSA - Positions	86	89
Thompson 5	American Conservative Union - Lifetime Score	85	71
	American Conservative Union - Positions	68	84
	Eagle Forum - Positions	69	46
	Heritage Action for America - Positions (House Only)	48	49
	The Club for Growth - Positions	48	62
	Gun Owners of America	75	10
	NumbersUSA - Positions	57	38
Gerlach/Costello 6	American Conservative Union - Positions	52	20
	American Conservative Union - Lifetime Score	62	29
	Eagle Forum - Positions	64	33
	Heritage Action for America - Positions (House Only)	47	33
	The Club for Growth - Positions	48	35
	Gun Owners of America	93	90
	NumbersUSA - Positions	71	24
Meehan 7	American Conservative Union - Positions	52	32
	American Conservative Union - Lifetime Score	52	46
	Eagle Forum - Positions	53	40
	Heritage Action for America - Positions (House Only)	38	36
	The Club for Growth - Positions	42	42
	Gun Owners of America	75	50
	NumbersUSA - Positions	57	38
Table continued			

Table A.1. Conservative Interest Group Scorecards or Ratings for the Pennsylvania Delegation in 2011 and 2016 (continued)			
Fitzpatrick 8	American Conservative Union - Lifetime Score	57	47
	American Conservative Union - Positions	64	39
	Eagle Forum - Positions	53	46
	Heritage Action for America - Positions (House Only)	52	40
	The Club for Growth - Positions	43	42
	Gun Owners of America	75	40
	NumbersUSA - Positions	71	30
Shuster 9	American Conservative Union - Lifetime Score	92	72
	American Conservative Union - Positions	75	82
	Eagle Forum - Positions	100	100
	Heritage Action for America - Positions (House Only)	65	53
	The Club for Growth - Positions	54	58
	Gun Owners of America	75	80
	NumbersUSA - Positions	57	71
Marino 10	American Conservative Union - Lifetime Score	84	86
	American Conservative Union - Positions	84	72
	Eagle Forum - Positions	53	73
	Heritage Action for America - Positions (House Only)	71	61
	The Club for Growth - Positions	60	60
	Gun Owners of America	75	80
	NumbersUSA - Positions	71	91
Barletta 11	American Conservative Union - Lifetime Score	76	64
	American Conservative Union - Positions	76	72
	Eagle Forum - Positions	53	61
	Heritage Action for America - Positions (House Only)	47	50
	The Club for Growth - Positions	47	59
	Gun Owners of America	75	70
	NumbersUSA - Positions	93	93
Critz/Rothfus 12	American Conservative Union - Positions	16	84
party change	Concerned Women for America - Positions	33	92
	Eagle Forum - Positions	46	93
	Heritage Action for America - Positions (House Only)	0	79
	The Club for Growth - Positions	12	81
	Gun Owners of America	25	80
	NumbersUSA - Positions	57	83
Schwartz/Boyle 13	American Conservative Union - Positions	0	9
	American Conservative Union - Lifetime Score	3	8
	Eagle Forum - Positions	7	14
	Heritage Action for America - Positions (House Only)	10	14
	The Club for Growth - Positions	6	0
	Gun Owners of America	0	70
	NumbersUSA - Positions	29	1
Doyle 14	American Conservative Union - Positions	8	15
	American Conservative Union - Lifetime Score	17	0
	Eagle Forum - Positions	23	13
	Heritage Action for America - Positions (House Only)	0	14
	The Club for Growth - Positions	12	0
	Gun Owners of America	0	10
	NumbersUSA - Positions	21	10
Table continued			

Table A.1. Conservative Interest Group Scorecards or Ratings for the Pennsylvania Delegation in 2011 and 2016 (continued)			
Dent 15	American Conservative Union - Lifetime Score	63	59
	American Conservative Union - Positions	52	40
	Eagle Forum - Positions	46	85
	Heritage Action for America - Positions (House Only)	38	29
	The Club for Growth - Positions	46	59
	Gun Owners of America	75	70
	NumbersUSA - Positions	57	8
Pitts 16	American Conservative Union - Lifetime Score	96	96
	American Conservative Union - Positions	84	93
	Eagle Forum - Positions	100	53
	Heritage Action for America - Positions (House Only)	90	65
	The Club for Growth - Positions	76	89
	Gun Owners of America	100	80
	NumbersUSA - Positions	57	30
Holden/Cartwright 17	American Conservative Union - Positions	37	4
	American Conservative Union - Lifetime Score	28	7
	Eagle Forum - Positions	45	13
	Heritage Action for America - Positions (House Only)	43	12
	The Club for Growth - Positions	8	0
	Gun Owners of America	0	10
	NumbersUSA - Positions	57	10
Murphy 18	American Conservative Union - Lifetime Score	73	70
	American Conservative Union - Positions	76	76
	Eagle Forum - Positions	53	60
	Heritage Action for America - Positions (House Only)	61	46
	The Club for Growth - Positions	69	10
	Gun Owners of America	75	80
	NumbersUSA - Positions	79	13
Sources: Project Vote Smart and Group Websites. Notes: Several members left Congress at the end of 2016, including Pitts, Fitzpatrick and Schwartz. Fattah and Murphy have recently resigned their seats. Fitzpatrick's seat is now occupied by his brother.			

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EXHIBIT B

REPORT ON PENNSYLVANIA'S

CONGRESSIONAL DISTRICTS

BY

JOHN J. KENNEDY, PhD

November 27, 2017

I have been retained as an expert to provide analysis relevant to the composition of Pennsylvania's congressional districts.

I am employed in the Department of Political Science at West Chester University (WCU) where I am a Full Professor. My full curriculum vitae is attached as Exhibit 1. I have written three books on state politics, *The Contemporary Pennsylvania Legislature* (1999), *Pennsylvania Elections* (2005, revised edition 2014), and *Pennsylvania Government and Politics* (2017). I teach a number of classes relevant to American Government, in particular a course entitled Pennsylvania Government and Politics every spring semester. Part of my service to the university includes previously holding the title of faculty advisor for the political science club the College Republicans, and currently, the College Democrats.

I am currently an editorial advisory board member for *Commonwealth, A Journal of Pennsylvania Policy and Politics*. I have also served on the Executive Board of the Pennsylvania Political Science Association (PPSA) and was a charter member of the Pennsylvania Policy Forum. In 2012, I was chair and a panelist for the PPSA plenary session on redistricting in Pennsylvania. From 2004-2016, I was the WCU chair of the Association of Pennsylvania State Colleges and University Faculties and co-chair of the committee in the past year. I was also the statewide chair of the same committee from 2005-2006. From 2000-2004, I served as a political analyst for NBC-10 Philadelphia and also was the co-director of a number of statewide public opinion polls that WCU's Center for Social and Economic Research conducted. During the period 2004-2008, I served in the same capacity for WHYY-PBS 12 National Public Radio. In 2015, I was selected as Keynote speaker at the Undergraduate Research at the Capitol–Pennsylvania (URC-PA) Poster Conference held in the state capital. I was especially honored to have been selected by the Office of Pennsylvania's Speaker of the House to be one of the guest speakers assigned to discuss the history of the Pennsylvania Legislature in 2006, marking the centennial for the state capitol building.

I am being compensated at a rate of $220 per hour by the firm Arnold & Porter Kaye Scholer LLP.

I. SUMMARY OF KEY FINDINGS AND CONCLUSIONS

A. Key Concepts

1. Redistricting and Gerrymander

Following the nationwide census which is mandated every ten years, each state is responsible for drawing its state legislative and congressional districts based upon how many it is assigned by the Department of Commerce relative to its population. The decision to award a particular state a certain number of seats is known as apportionment. Pennsylvania was given 18 congressional seats following the 2010 apportionment.

Once a state has been allocated its share of the congressional seats, it is up to each state to draw the lines outlining the districts. This process is known as redistricting. A gerrymander is when a legislature seeks to advance certain political goals through the redistricting process, often by ignoring natural geographic and cultural distinctions.

2. Communities of Interest

Among the many consequences of gerrymandering is the splitting of counties and other communities of interest. This has real consequences for those communities and for the members of Congress who represent them. For example, the current map splits Montgomery County into five congressional districts, while Berks and Westmoreland Counties have each been divided into four. And some small municipalities – the Caln, Cumru, and Spring townships along with the city of Monroeville – have been divided into three different congressional districts. This can cause confusion and impede effective representation – for example, it is not clear to which member of Congress residents and officials in Montgomery, Berks, or Westmoreland County should go when those residents and officials need federal government representation.

3. Cracking, Packing, and Hijacking

As to how gerrymanders take place, there are two prevalent techniques that ignore natural geographic boundaries. These are *cracking* and *packing*.

Cracking involves splitting voters of a particular party across several districts in order to dilute their overall voting power. Cracking "wastes" the votes

2

of voters of a particular party by intentionally placing them in a district where they are outnumbered by voters of the opposing party. By cracking generally like-minded voters throughout several congressional districts in a state, it is unlikely that such voters can elect candidates of their choice in any of the districts, even though these voters likely could have elected a candidate of their choice in one or more districts had they not been cracked.

Packing involves drawing lines to squeeze in as many partisans of one side as possible, providing that party with a safe or giveaway seat, but weakening that party's support throughout a larger area, thereby creating more seats for the party drawing the map. The party handed a packed district will waste votes in that district, decreasing its likelihood of success elsewhere.

There is also a technique that has been referred to as "hijacking." *Hijacking* involves combining two districts controlled by the opposite party, forcing their incumbents to run against one another in a primary election and thereby ensuring that one will be eliminated. Extended further, hijacking may result in a district that leaves one of the two incumbents surviving a primary election in a more difficult position in the general election. Hijacking is a less commonly implemented technique because the opportunities are more limited.

B. Summary of Key Findings and Conclusions

1. Splitting Communities of Interest

In the 23 election cycles which occurred between the first redistricting map of the modern era in 1966 and the last one prior to the current map in 2011, the margin between Democratic and Republican seats was +1 in either direction in over half (13 cycles).

In the three election cycles that have taken place since the last redistricting, however, Democrats have won only five of 18 seats, and not one seat has changed party hands at all. In other words, the status quo has held in all 54 races.

**Table A: Partisan Distribution of Seats in Pennsylvania's
Congressional Delegation, 2012-2016**

Year	Districts	Democratic Seats	Republican Seats	Democratic Vote Percentage[1]	Republican Vote Percentage
2012	18	5	13	50.8%	49.2%
2014	18	5	13	44.5%	55.5%
2016	18	5	13	45.9%	54.1%

Source: The Pennsylvania Manual

In order to accomplish the 13-5 split that has existed since the first election under this map in 2012, the congressional districts splintered Pennsylvania's geographic landscape dramatically. In particular, the current district map splits more counties and municipalities into separate congressional districts than any prior map (save one the General Assembly enacted in response to a court order).[2]

Table B: Split Counties and Municipalities by Decade[3]

Year	Split Counties	Split Municipalities
1966-1972	7	2
1970s	9	4
1980s	16	3
1990s	19	14
2000s	25	67
2010s	28	68

Source: The Pennsylvania Manual

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[1] The Democratic and Republican vote shares measure each party's share of the two-party vote across all congressional elections in the state. These vote shares are calculated using data from the Pennsylvania Department of State.

[2] Following the 2000 census, the General Assembly enacted a map intended to govern Pennsylvania's congressional elections for the next decade. That map governed the 2002 elections. In response to a court order, the General Assembly enacted a new map that changed the district boundaries in minor ways to accommodate population equality. Unless otherwise indicated, references in my report to the 2000s map are to the General Assembly's original map.

[3] Details of these figures are provided in the Appendix.

The current map also splits considerably more census blocks – the smallest geographic unit for which the Census Bureau collects data – into separate congressional districts than any previous map. In other words, this map split people who reside in the same neighborhoods to a far greater extent than any prior Pennsylvania congressional districting map.

Table C: Number of Municipalities
Split at the Block Level by Decade

1970s	1980s	1990s	2000s	2010s
0	0	3	6	19

Source: The Pennsylvania Manual

Census Blocks are classified by the US Census Bureau as "the smallest geographic area for which the Bureau of the Census collects and tabulates decennial census data," and are formed by "streets, roads, railroads, streams and other bodies of water, other visible physical and cultural features, and the legal boundaries shown on Census Bureau maps."[4]

Census blocks are generally defined as containing between 600 and 3,000 residents. Reviewing these census blocks highlights the disruption to some communities by carving up neighborhoods into different congressional districts. As Table C notes, for the first two decades of the modern redistricting era, there were no municipalities divided at the block level. The next two decades, the 1990s and the 2000s, possessed only a few divided blocks within municipalities – three and six divided blocks, respectively. In this most recent round, however, the number increases to 19, over three times that of the map used during the 2000s.

At least one Republican member of the Pennsylvania congressional delegation has personally expressed to me his concern that splitting communities in this way impedes effective representation. On February 22, 2012, then-Congressman Mike Fitzpatrick was a guest speaker for my Pennsylvania Government and Politics class. When asked by my students about gerrymandered districts, I vividly recall his response that he did not understand how some of his colleagues could properly represent the many diverse interests across such broad geographic areas in their districts.

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[4] Geographic Area Reference Manual, United States Census Bureau.

2. Cracking, Packing, and Hijacking

The 2011 plan also cracks and packs Democratic voters in an egregious manner. One example of cracking is the division of Reading in Berks County. Prior to the 2000 map, Berks County had never been split and was located exclusively within the 6th District. Now, Berks County is divided up into four districts, the 6th, 7th, 15th, and 16th. Rather than Reading being located in a district in which it shares interests of commonality, this county seat is separated from the rest of Berks and tacked on as an appendage to the 16th Congressional District, a Lancaster County-based district populated with small rural farming communities. This wastes the Democratic votes in Reading in an otherwise overwhelmingly Republican district.

Another example of cracking is in Dauphin County, which contains the city of Harrisburg. Once a bastion of GOP domination, Dauphin County has recently been trending Democratic. It had never been divided in any of the maps prior to the current one, resting entirely within the previous 17th Congressional District. The county is now split into three congressional districts, the 4th, 11th, and 15th, each with a strong Republican tilt, thereby diluting the county's overall impact. Harrisburg itself is cracked, divided between the 4th and the 11th districts.

Yet another example of cracking in this map is in the 15th Congressional District, which traditionally was a Lehigh Valley-based district and one of the most competitive and compact in the state prior to the current districting. However, for the first time since the modern era of redistricting began, Northampton County was split, with areas of Democratic Party strength such as parts of the city of Bethlehem and the entire city of Easton removed. The district itself was pushed further west and now includes parts of Dauphin and Lebanon counties, both considerably distant from the Lehigh Valley.

An example of packing, the 1st Congressional District corrals Democratic pockets of voters in Pennsylvania's southeastern corner, packing the Democratic votes in cities like Chester and Swarthmore with Democratic votes in Philadelphia. This creates an extremely Democrat-friendly 1st District, while diluting the surrounding districts of Democratic votes. Similarly, the 14th District packs the Democratic areas along the Allegheny River in the northern reaches of Allegheny and Westmoreland counties with Pittsburgh, removing the Democratic votes in Allegheny and Westmoreland from the more competitive district to the north.

As for hijacking, the 2011 map provides one example in the form of the new 12th Congressional District, which was created by dismantling the old Beaver County-based 4th District and pushing boundaries far enough to the east to merge with the old 12th District based in Cambria County. By merging these two congressional seats held by Democrats Jason Altmire and Mark Critz, it automatically eliminated at least one Democratic seat. The two incumbents were subsequently pitted against one another in the 2012 primary, which Critz narrowly won. In the general election, Critz was then defeated by Republican Keith Rothfus in this more GOP-friendly redrawn 12th District. Rothfus had originally lost to Altmire in the 2010 general election in the old 4th District. Combining communities in southern Lawrence County with those in Somerset County as the 12th District does makes little sense geographically. In fact one would need to drive through three other congressional districts – the 9th, 14th, and 18th – to journey from one county to the other.

II.   ANALYSIS

A. Pennsylvania's Redistricting History and the Splitting of Communities of Interest

1. Pre-Modern Era of Redistricting: The 1960s Map

The modern era of redistricting in Pennsylvania effectively starts with the redistricting process in the late 1960s. This followed the landmark US Supreme Court decisions of the previous decade. The Supreme Court first ruled in *Baker v. Carr* (1962) that redistricting was a justiciable issue, leading to *Wesberry v. Sanders* (1964), where the Court held that all US congressional districts must be as nearly equal in population as is "practicable."

In the last round of redistricting that took place prior to these decisions, there were no counties which were split and there were wildly divergent populations within districts across the Commonwealth. The largest gap was that between the 7th District, based solely in Delaware County, which had 553,154 residents, and the 15th District, located in Carbon, Monroe, Northampton, and Pike counties, which had just 303,025 residents, a difference of 250,129.

2. The 1966 Map

With the "one person, one vote" principle established, state legislatures in Pennsylvania and elsewhere were required to redistrict mid-decade. On March 8,

1966, the Pennsylvania General Assembly approved a revised map taking into consideration the US Supreme Court's guidelines. This map (Map 1) was the first in modern times to actually split counties and municipalities. Still, efforts were made to minimize how many counties were split and the final number was just seven split counties (Appendix, Table A1). It should be noted that four of these counties (Allegheny, Delaware, Montgomery, and Philadelphia) had populations that were too large to fit into just one congressional district. Furthermore, only two municipalities were split, Philadelphia and Pittsburgh, each too large to be contained in just one congressional district (Appendix, Table A2). Thus, there were no unnecessary divisions of any municipalities in the state.

Map 1
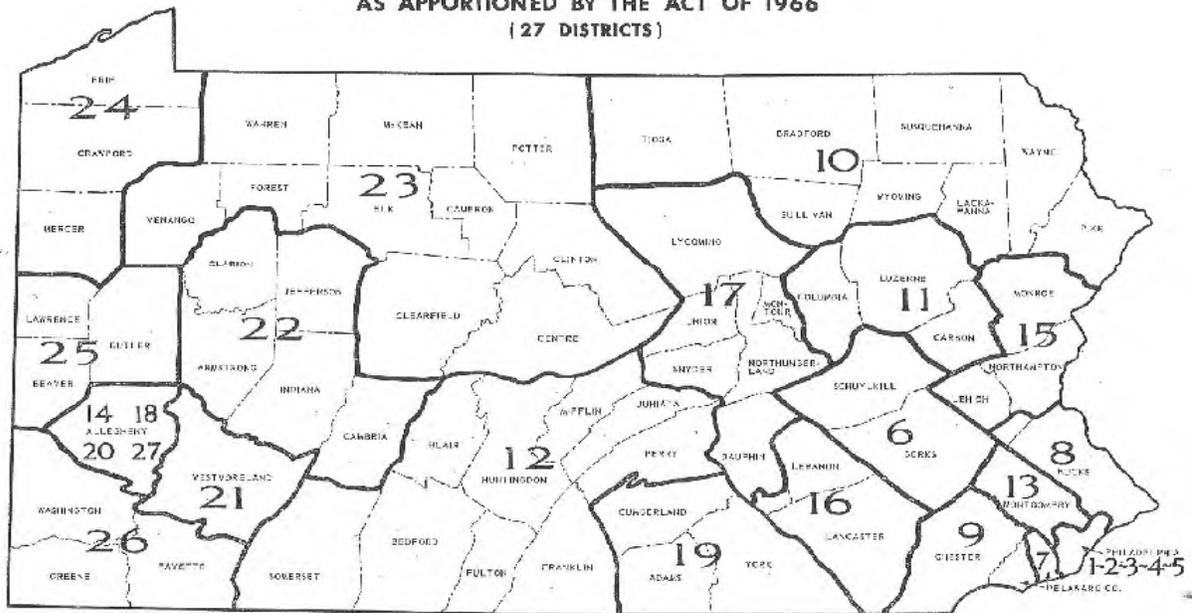
Source: The Pennsylvania Manual

In the three election cycles that occurred between the first redistricting map of the modern era in 1966 and 1970, the margin between Democratic and Republican seats was +1 in either direction.

8

Table D: Partisan Distribution of Seats in Pennsylvania's Congressional Delegation, 1966-1970

Year	Districts	Democratic Seats	Republican Seats
1966	27	14	13
1968	27	14	13
1970	27	14	13

Source: The Pennsylvania Manual

3. The 1970s Map

A few years later, at the start of a new decade, the state was once again required to redistrict and the 1970s map (Map 2) departed only marginally in terms of split jurisdictions, possessing two additional split counties (for nine in total) (Appendix, Table A3) and two extra split municipalities, Telford and Trafford, which are both split between two counties (Appendix, Table A4).

In the 1970s map, only one district, the 5th, contained as many as three split counties. The City of Philadelphia was carved into five congressional districts, while Pittsburgh, Telford, and Trafford were divided into two. It is worth noting that although the small municipalities of Telford and Trafford were divided, the fact that they are already split into two different counties reduced the impact of splitting them into two congressional districts.

Map 2

9
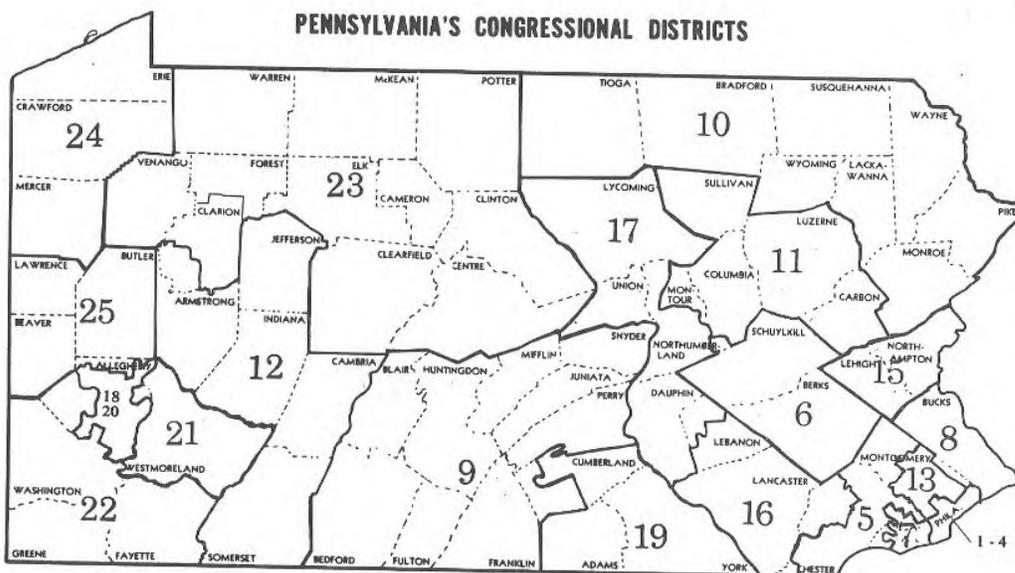
With possession of both houses of the state legislature and the governorship, the Democrats controlled the process during the 1970s cycle. Act 3 passed in the Pennsylvania Senate by a 48-1 vote and the House of Representatives by a 104-87 margin. However, the net change in the delegation from the 1970 congressional election to the 1972 election was nil, going from 14D-13Rs to 13D-12Rs (the state lost two seats). The political impact of the Watergate scandal and the resignation of President Richard M. Nixon provided Democrats in Pennsylvania and nationally a considerable boost, but those gains were temporary and by the end of the decade, the previous balance had returned (Table E).

Table E: Pennsylvania's Congressional Delegation, 1972-1980

Year	Districts	Democratic Seats	Republican Seats
1972	25	13	12
1974	25	14	11
1976	25	17	8
1978	25	15	10
1980	25	13	12

4. The 1980s Map

For the 1980s cycle, the Democrats were again in control of the Pennsylvania House of Representatives, however this time the Republicans held both a majority of the State Senate and the Governor's mansion. The final map (Map 3) ultimately passed 186-7 and 28-22 in the House and Senate, respectively. This time, the partisan delegation marginally changed from 13D-12Rs in 1980 to a 13D-10Rs ratio following the 1982 midterm. By the end of this cycle the GOP had regained a one seat advantage (Table F).

Map 3

CONGRESSIONAL DISTRICTS
(REAPPORTIONMENT OF 1982)
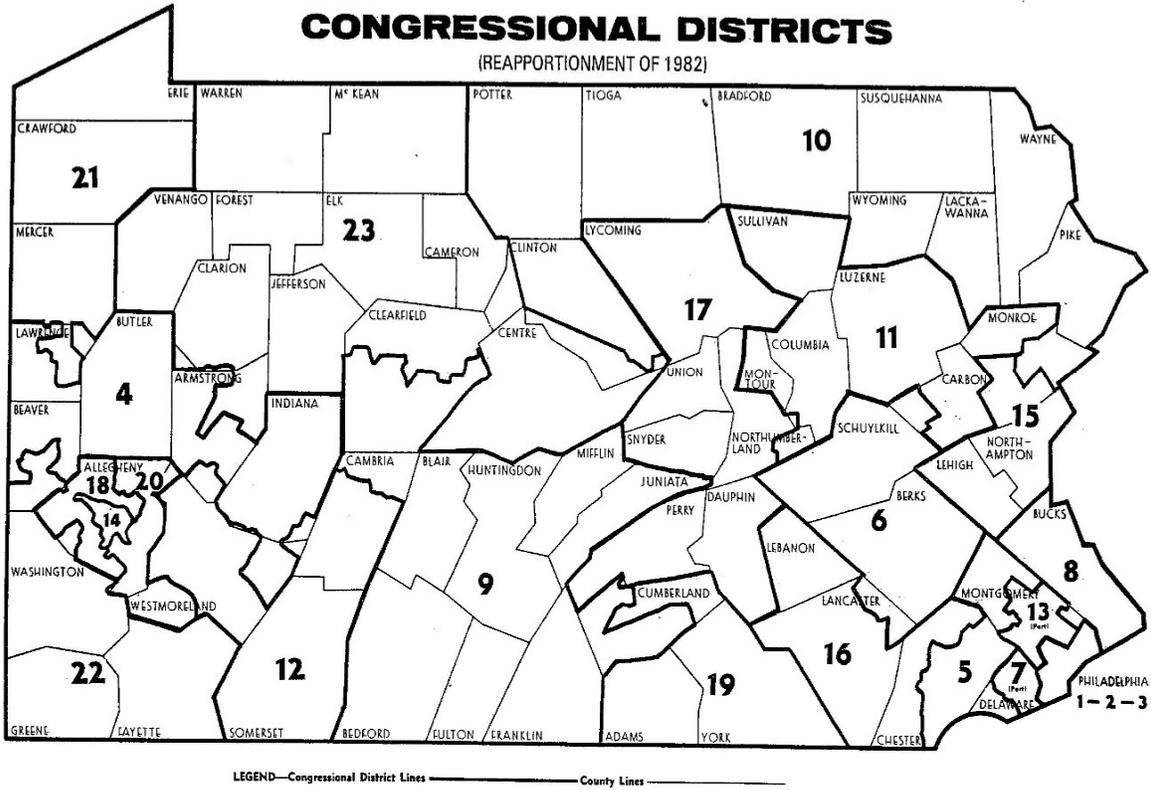
Source: The Pennsylvania Manual

Table F: Pennsylvania's Congressional Delegation, 1982-1990

Year	Districts	Democratic Seats	Republican Seats
1982	23	13	10
1984	23	13	10
1986	23	12	11
1988	23	12	11
1990	23	11	12

Source: The Pennsylvania Manual

While there was an increase to 16 in the amount of counties that overall were split (Appendix, Table A5), the number of split municipalities was just three, with Philadelphia, Telford, and Tunnelhill (Appendix, Table A6). At the county level, four congressional districts, the 4th, 5th, 9th, and 11th, contained as many as three split counties. As for municipalities, once again, Tunnelhill, a small borough like Telford and Trafford, was already divided along county lines, in this case Blair and Cambria. Philadelphia was split into five congressional districts, while Telford and Tunnelhill were split into two. The state's second largest city, Pittsburgh, resided entirely within the 14th District.

5. The 1990s Map

The 1990s redistricting process was more contested than those previously as the Democratic-controlled House and the Republican-controlled Senate were unable to agree to a compromise. The dispute was ultimately settled by the Pennsylvania Supreme Court. The party ratios were only marginally impacted under the new plan (Map 4), going from 11D-12Rs in the last cycle under the 1990 map to 11D-10Rs following the 1992 election. The map of the 1990s also produced the most evenly competitive cycle to date, with neither party able to gain more than a one seat advantage throughout the ten year period (Table G)

Map 4

PENNSYLVANIA CONGRESSIONAL DISTRICT MAPS
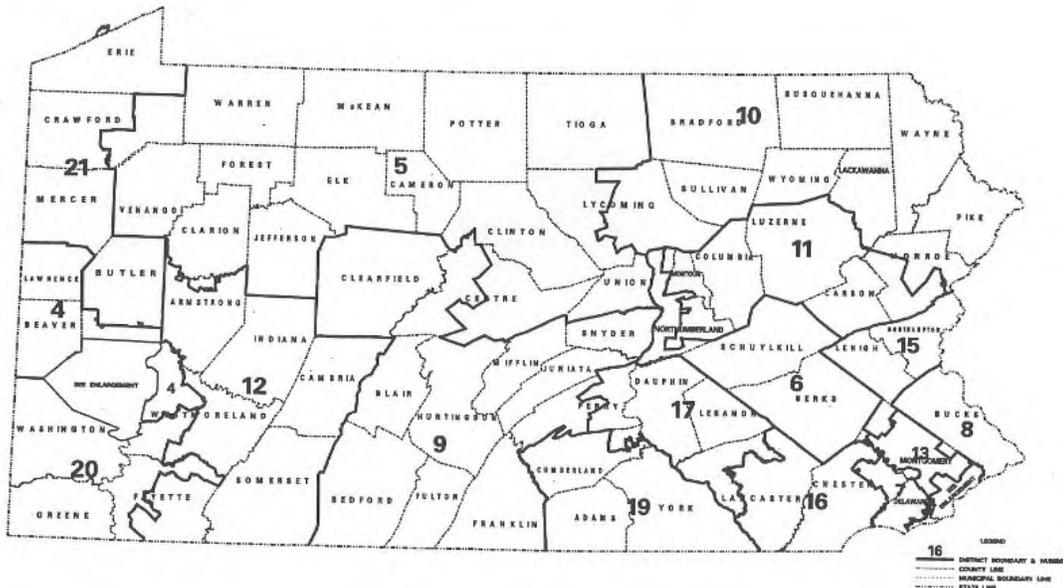
Source: The Pennsylvania Manual

Table G: Partisan Distribution of Seats in Pennsylvania's Congressional Delegation, 1992-2000

Year	Districts	Democratic Seats	Republican Seats
1992	21	11	10
1994	21	11	10
1996	21	11	10
1998	21	11	10
2000	21	10	11

Source: The Pennsylvania Manual

There was a slight increase in the number of counties split in this decade, increasing to 19 across the Commonwealth (Appendix, Table A7). While the number of municipalities splintered did increase, the overall number (14) was still relatively small (Appendix, Table A8). Philadelphia was once again the only municipality divided into more than two congressional districts (1st, 2nd, and 3rd). Again, Pittsburgh was placed wholly within the 14th District.

6. The 2000s Map

With control of the Governor's mansion and both branches of the General Assembly, the Republicans controlled the process entirely in the 2000s and were subsequently able to construct the most partisan gerrymander to date at that time (Map 5). This contributed to a marked shift in the Pennsylvania congressional delegation from 10D-11Rs following the 2000 election to 7D-12Rs after the 2002 cycle, a +4 increase in Republican advantage in just one cycle.

Map 5

PENNSYLVANIA CONGRESSIONAL DISTRICTS
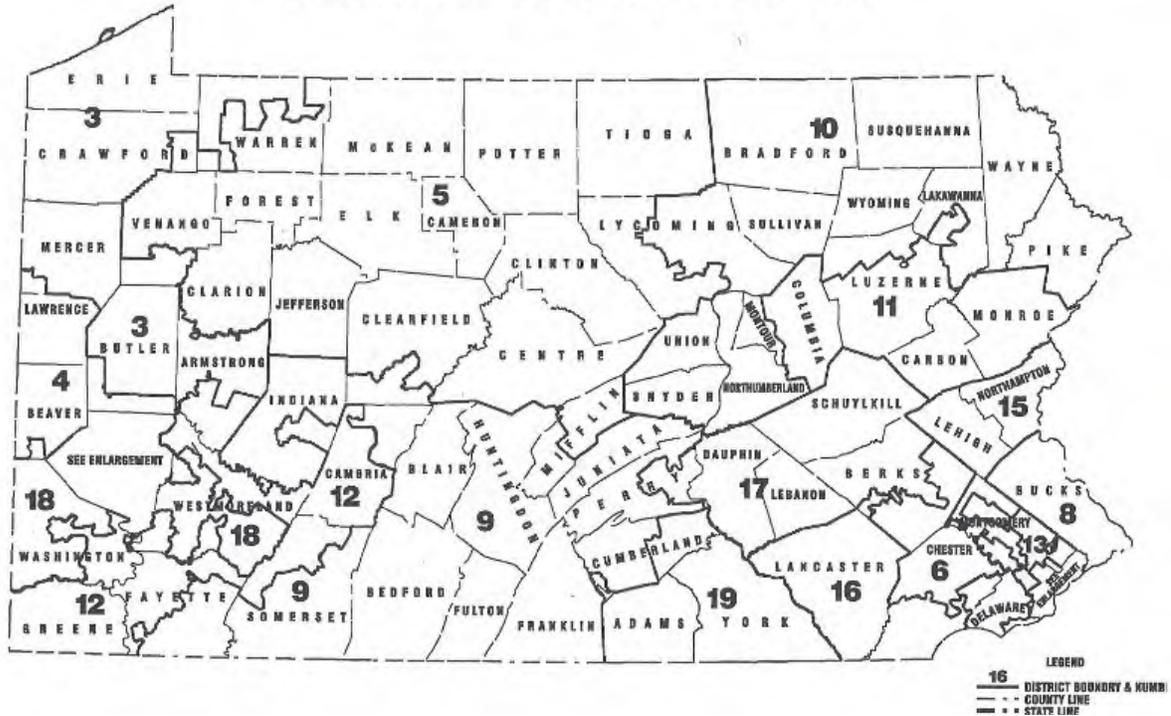
Source: The Pennsylvania Manual

In order to accomplish this political maneuver, it was necessary to manufacture districts that belied the normal geographic landscape and instead put more emphasis on packing and cracking voting blocs along partisan lines than previous plans. There was a noticeable increase in the number of split counties, jumping from 19 to 25 (Appendix, Table A9). But even more dramatically, the number of split municipalities skyrocketed from 14 under the 1990s plan to 67 under this plan (Appendix, Table A10).

There was also an increase in the number of split counties within certain congressional districts. Most of these splits occurred in the western part of the state. For the first time, one district (12th) contained eight counties that were split between the 12th and another district, while the 9th had eight such counties, and the 3rd and 5th had six each. In addition, the 12th contained 26 split municipalities while the 18th contained 24 municipalities that were divided between that district and another one.

14

The decade was marked by political turbulence leading to considerable shifts within the delegation. In 2006, the Democrats rode a national wave to pick up four seats, while in 2010 the Republicans picked up five. But the results from the 2004 election are a good indicator of the effects of the gerrymander: even though the vote was roughly evenly split, Republican won 12 of 19 seats that year.

Table H: Partisan Distribution of Seats in Pennsylvania's Congressional Delegation, 2002-2010

Year	Districts	Democratic Seats	Republican Seats	Democratic Vote Percentage[5]	Republican Vote Percentage
2002	19	7	12	42.0%	58.0%
2004	19	7	12	49.1%	50.9%
2006	19	11	8	56.2%	43.8%
2008	19	12	7	56.0%	44.0%
2010	19	7	12	48.2%	51.8%

Source: The Pennsylvania Manual

7. The Current Map

With complete control over the process once again following the 2010 midterms, Republicans constructed the most partisan gerrymander to date, and which by many accounts is one of the worst gerrymanders in the nation (Map 6).

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[5] *See* footnote 2, supra.

Map 6
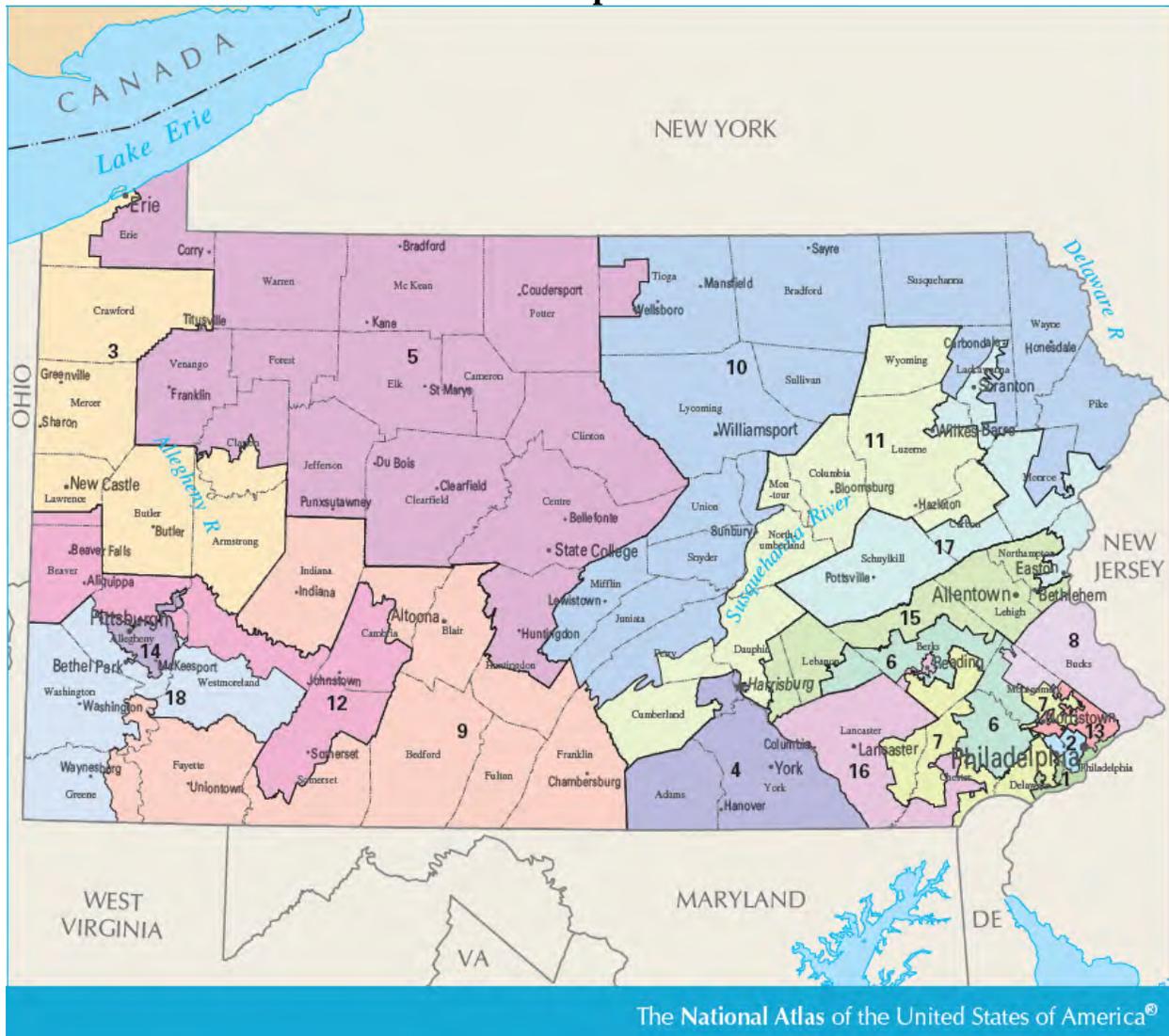
Source: The National Atlas[6]

As mentioned previously, under the current map, the degree to which counties and municipalities are carved up is greater than in the past, even more than under the 2002 map. The current plan splits 28 counties and 68 municipalities overall (Appendix, Tables A11 and A12).

Additionally, more congressional districts than ever before contain at least three counties that are split between that district and another one, with 11 of the 18 (61 percent) of the districts containing three or more split counties.

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[6] Available at
https://nationalmap.gov/small_scale/printable/images/pdf/congdist/pagecgd113_pa.pdf.

The 1st District, which historically was confined to Philadelphia, now contains 7 municipalities split between the 1st and another district. The 6th District, which pushes out from the northwest suburbs of Philadelphia into central Lebanon County, is home to 15 municipalities that are split between the 6th and at least one other district. The 13th District, which includes parts of Philadelphia and Montgomery County, serves as a repository for packed Democratic votes and contains 15 municipalities that are split with another district. However, the district which contains the most split municipalities, with 28 overall, is the 7th Congressional District, arguably the most contorted in the entire nation.

While a number of counties are splintered into only two congressional districts, others are more extensively divided, as Appendix Table A11 shows. Montgomery County (pop. 799,814, based upon the most recent US Census data), is split into 5 congressional districts, while the Democratic-leaning Berks County (pop. 411,442) and Westmoreland County (pop. 365,169) are each divided into 4 congressional districts, despite having relatively small populations.

At the municipal level there are several communities that are especially impacted by the current congressional map:

- Bethlehem is split, with part of the city moved from the previously-Lehigh Valley-based 15th District to the 17th District.

- Easton has been moved entirely out of its traditional home, the previously competitive Lehigh Valley-based 15th District, and pushed into the Democrat-packed 17th District. Easton, as the county seat of Northampton County, is thereby isolated from the majority of the rest of its home county residents.

- Reading is another county seat separated from most of its home county, in this case Berks. Reading has been moved into the more rural and traditionally Lancaster County-based 16th District.

- Coatesville has been moved into the 16th District and split from most of the rest of Chester County.

- Chester is splintered, with most of the city packed into the Philadelphia-based and Democratic dominated 1st District and a smaller portion placed in the 7th District.

- Harrisburg is sliced between the 4th and the 11th districts.

- Monroeville, Allegheny County (pop. 28,386) is split between three congressional districts, the 12th, 14th, and the 18th. It is 19.9 square miles (US Census Bureau).

- Wilkes-Barre is cut out of the traditional Luzerne County seat (now the 11th) and packed with other Democratic bastions in the 17th District.

However, it is not just cities that have been excessively divided by this particular map. Consider the following examples:

- Caln Township (Chester County, pop. 13,817) is split between the 6th, 7th, and 16th districts. It is 8.8 square miles (US Census Bureau).

- Cumru Township (Berks County, pop. 15,147) is also split between three congressional districts, the 6th, 7th, and 16th. It is 20.9 square miles (US Census Bureau).

- Spring Township (Berks County, pop. 27,119) is split between the 6th, 7th, and 16th districts. It is 18.3 square miles (US Census Bureau).

These features of the 2011 map have important and profoundly negative representational consequences for Pennsylvania's voters. It is puzzling how voters in these cities and townships can even know who their congressional representative is. One can imagine the confusion in some of the neighborhoods. The residents of Caln Township, Chester County cannot be expected to relate to their member of Congress when there are three representing their municipality, which is less than 9 square miles. Even if they could relate to their Congressional representatives, they cannot expect meaningful representation in this scenario. Consider also the dividing of counties and municipalities, such as Montgomery County, which is represented by five members of congress (none of whom actually reside in Montgomery County) and Berks County, which is represented by four members.

These communities cannot effectively seek federal government assistance from several different lawmakers, none of whom represents them completely.

***

In Pennsylvania, with its Quaker beginnings emphasizing tolerance and equality and later the evolving cultural pluralism that came with subsequent immigration, there are important regional and local identities with which voters associate their interests. These local identities are tied to Pennsylvanians' counties and municipalities of residence, and so those identities suffer as a matter of political representation when local jurisdictions are split. As Pennsylvania historian Dr. Philip S. Klein once noted, Pennsylvanians "lack a real sense of identity, because traditionally people's allegiance has centered around their home towns rather than the total entity of the state…Ask a Texan where he comes from and he'll almost always say 'Texas.' But a Pennsylvanian is more likely to respond with the name of his home town…"[7]

This remains the case, as Pennsylvanians continue to identify with their local communities, whether they live in the Lehigh Valley or the Monongahela Valley or South Philadelphia. It is therefore important to the citizens of this state that their government also reflects this identity. The one level of government that everyone in the state belongs to are its counties. Pennsylvanians are already accustomed to dealing with counties as a unique entity, be it for human services, public health, community colleges, or libraries. Considerable effort therefore should be made to preserve the integrity of counties in drawing Pennsylvania's congressional districts. The current congressional map not only fails to do this, but seems to go out of its way to do just the opposite, dividing 28 counties overall.

Additionally, at the local level, municipalities are also excessively splintered, 68 in all, with communities such as Caln, Cumru, Spring townships, and the city of Monroeville bearing a particular burden. Such divisions further confuse, divide, and potentially isolate the Commonwealth's citizens from their members of Congress and the federal government.

B. Analysis of Pennsylvania's Current Congressional Districts

In this section, I analyze the composition of each of Pennsylvania's current 18 congressional districts.

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[7] Paul B. Beers, *Pennsylvania Politics, Today and Yesterday*. University Park: Pennsylvania State University Press (1980), p. 1.

District 1



1st Congressional District
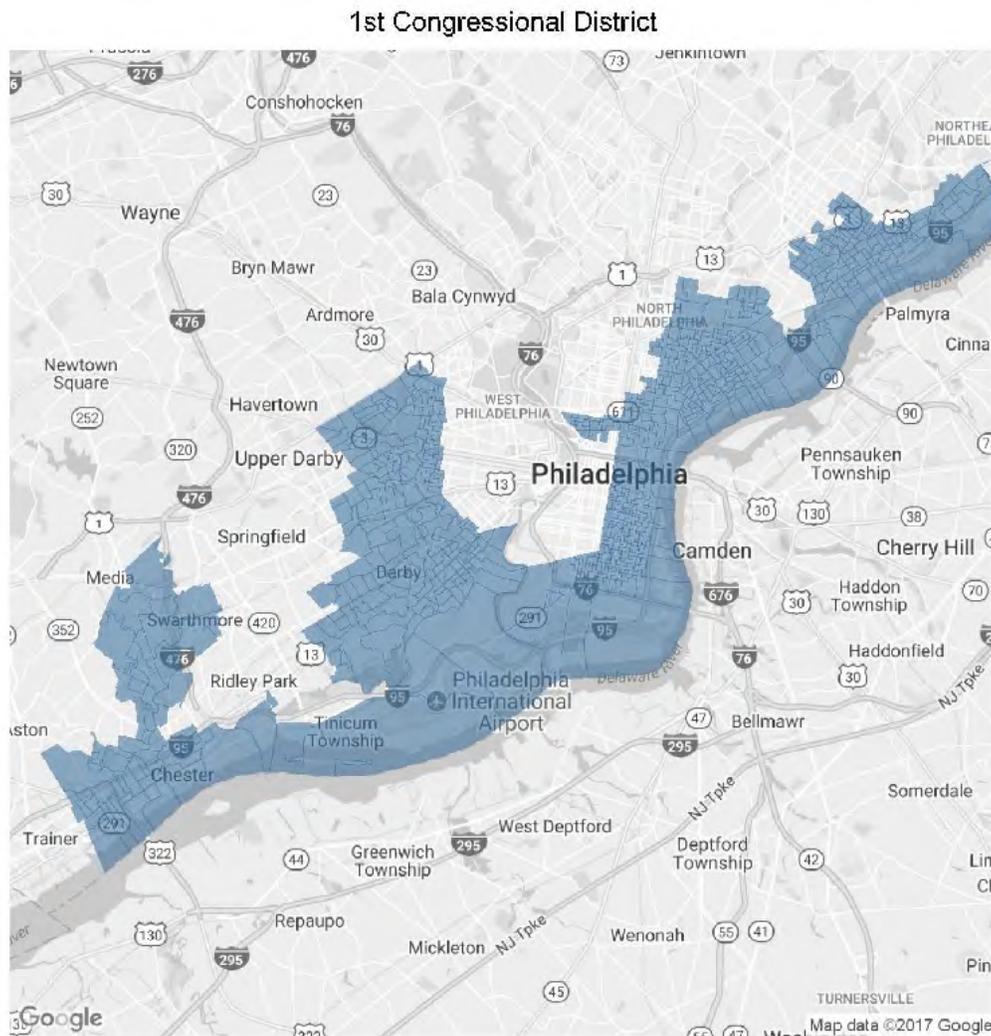
Historically based within the state's largest city, Philadelphia, the 1st District in Pennsylvania has expanded in the last several decades. As demonstrated in the map below, the 2011 map packs highly Democratic municipalities from outside Philadelphia into the 1st District. These include a number of Delaware County municipalities, which were taken out of the 7th Congressional District, traditionally a Delaware County-based seat, thus making the 7th more GOP friendly. These Delaware County municipalities overwhelmingly voted for the Democratic candidate in the 2010 US Senate race, including the boroughs of Collingdale (62 percent voted for the Democratic candidate), Colwyn (85 percent), Millbourne (80 percent), Sharon Hill (78 percent), Swarthmore (82 percent), and Upland (62 percent), as well as the city of Chester (89 percent) and Upper Darby Township (60 percent). Chester, where 89 percent of votes went to the Democratic US Senate candidate in 2010, was formerly split between this safe Democratic 1st District and

the more competitive 6th District. However, all but three divisions of one ward (there are 11 wards total) were put into the 1st District in the 2011 map. It is also worth noting that while the 1st District has a significant numbers of African-Americans, the overall number of African-Americans dropped relative to the population within the previous boundaries of the 1st District.
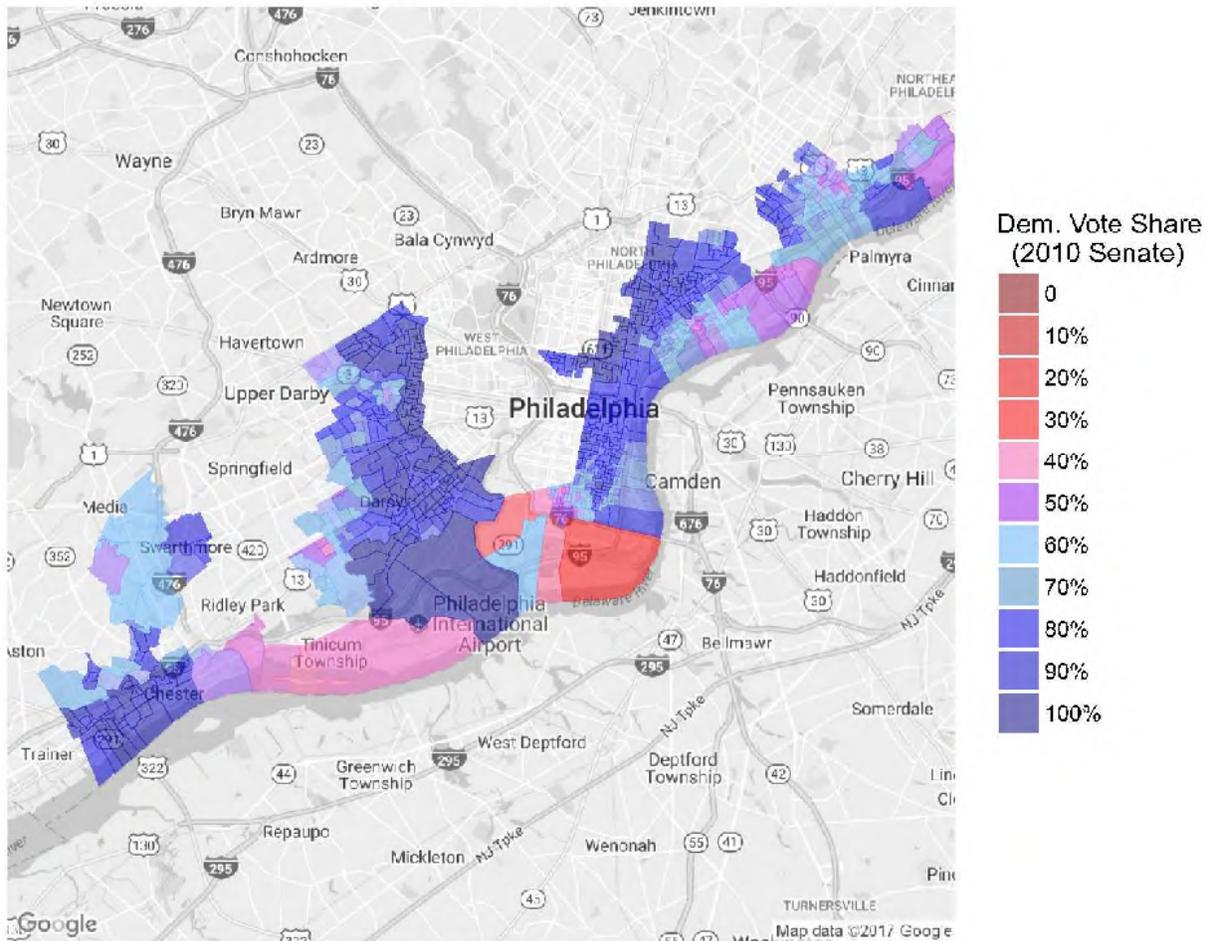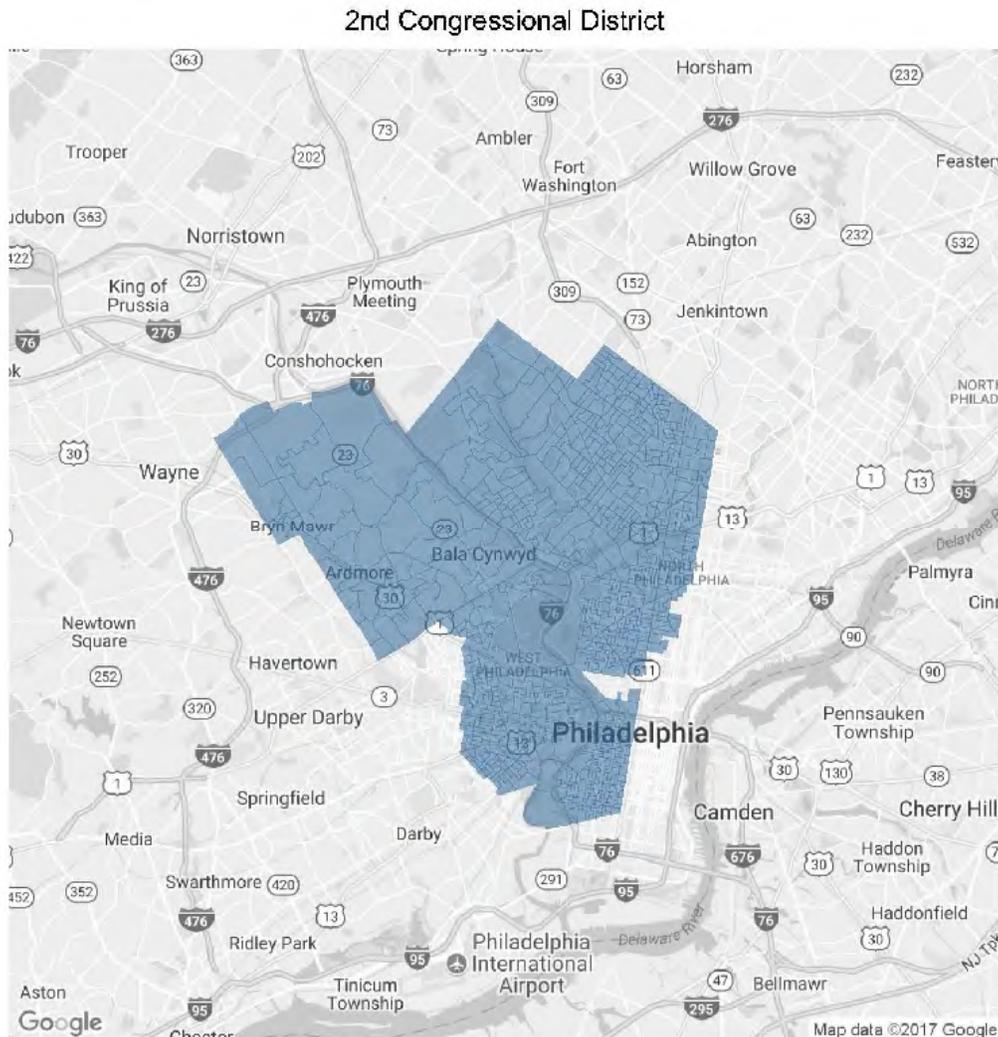
District 2

The 2nd District is another district historically based in Philadelphia and continues to be so under the latest map. However, in 2011, the 2nd District also gained Democratic-leaning municipalities within southeastern Montgomery County, including Narberth Borough (which voted 73 percent for the 2010 U.S. Democratic Senate candidate) and Lower Merion Township (67 percent), removing both Democratic-leaning municipalities from the competitive 6th District. Narberth was pushed into the 2nd District, while Lower Merion was split between the Democratic dominated 2nd and 13th districts. These changes had the effect of packing Democratic voters from Montgomery County with other Democratic voters in Philadelphia, removing them from the more competitive 6th District.

District 3
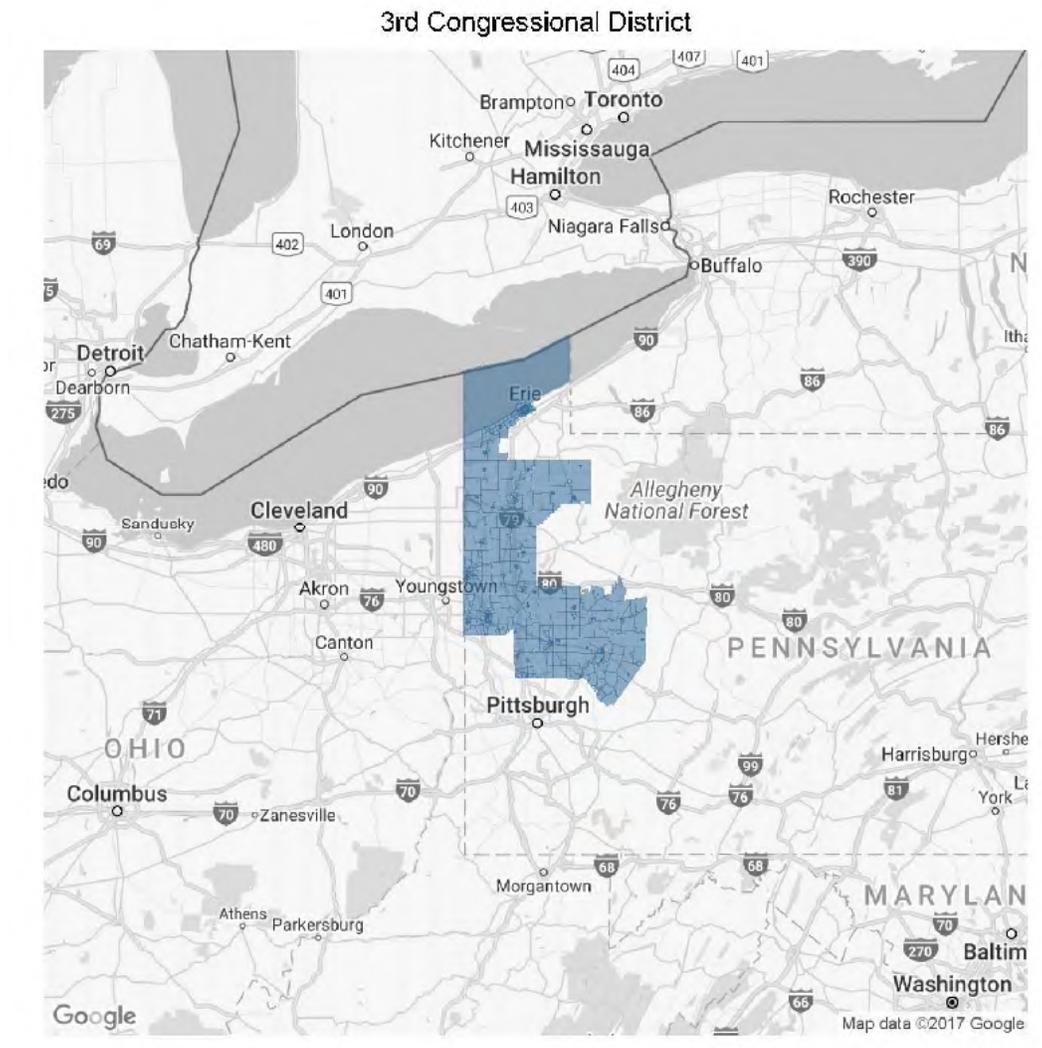
There has always been a congressional district comprised of Pennsylvania's northwestern corner, which includes Erie County, the most populated within the region. Until 2011, heavily-Democratic Erie County was never split between congressional districts. However, in the 2011 map, Erie County is cracked practically right down the center, with the eastern half moved into the GOP-dominated 5th Congressional District.

With Erie County's location in the far northwest corner, bordering New York, Ohio, and Lake Erie on three sides and abutting only two other Pennsylvania counties (Crawford County to the south and Warren County in the southeast), there are no seeming imperatives to split this county based on geography or other practical considerations. In other words, there is no apparent non-partisan

explanation as to why the western part of Erie County was separated from its eastern half.

The 3rd District also stretches south to include the Republican-dominated suburbs north of Pittsburgh, thereby counteracting the Democratic leaning voters of Mercer County. This shift of the 3rd District's boundaries to the south thereby replaces the Democratic voters who were cracked from Erie County with Republican voters from Butler County.


3rd Congressional District
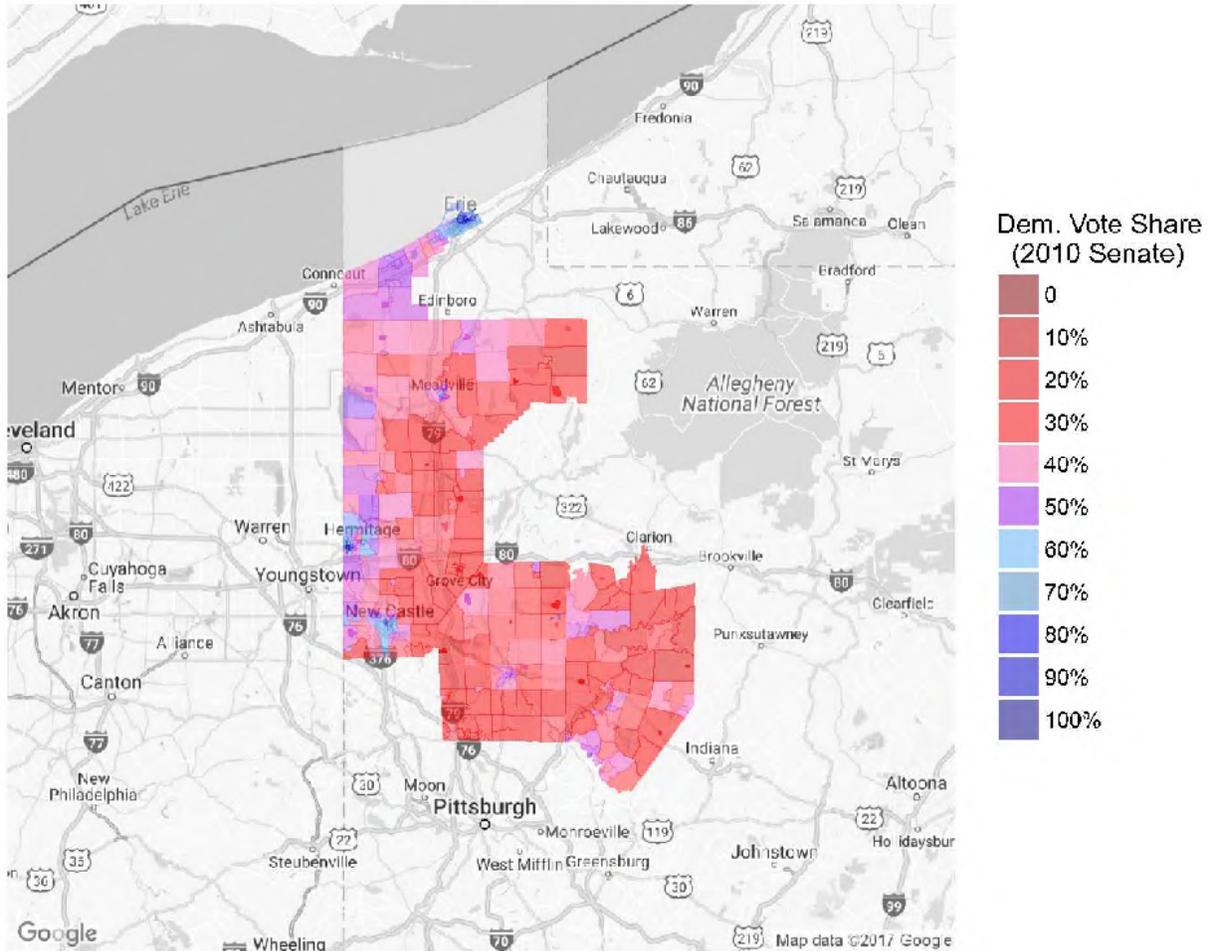
District 4
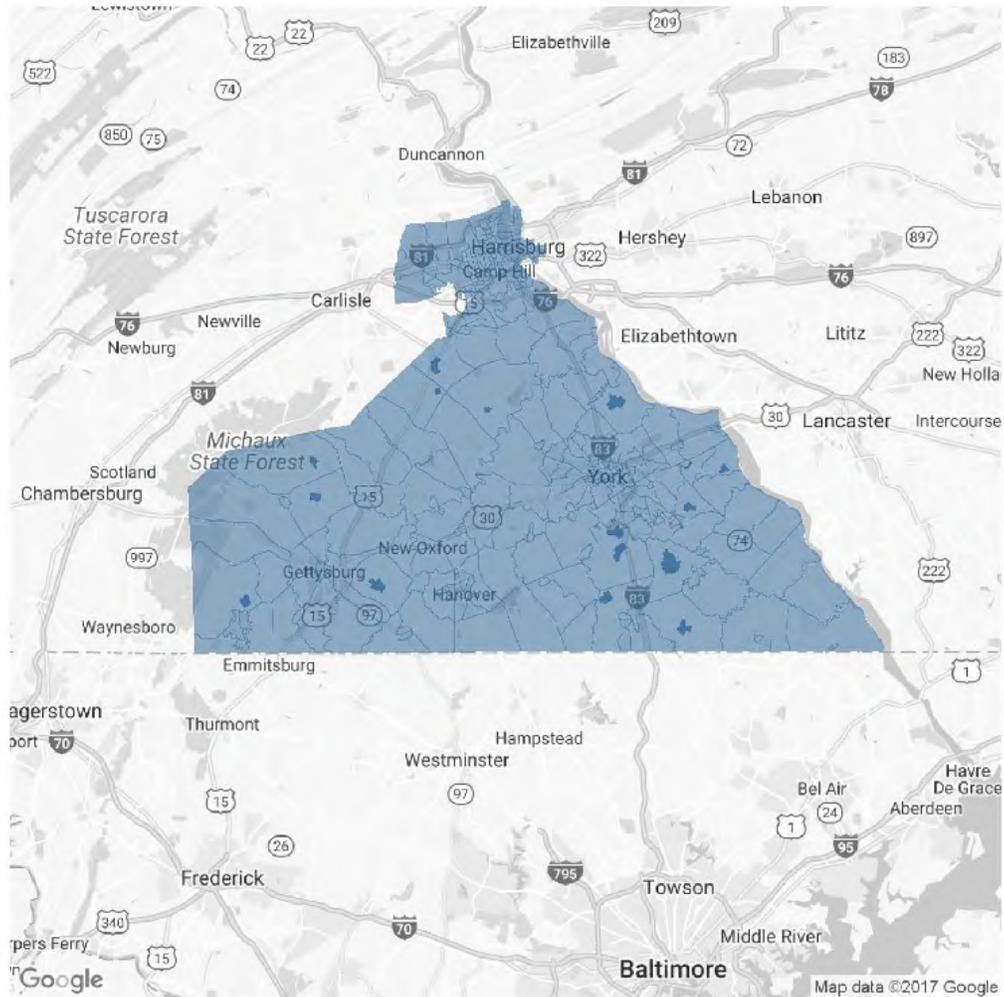
This Republican dominated district, which includes the counties of Adams, Cumberland, Dauphin, and York, appears less manipulated at first glance since it is generally contiguous and the number of divided counties (two) and municipalities (four) is relatively small. However, the 4th District is also home to a large portion of Harrisburg, a now solidly Democratic municipality. As depicted in the image below, the boundaries of the 4th District cut through Harrisburg, cracking the Democratic voters in the city (between the 4th and 11th districts) and its environs (between the 4th and 15th districts), thereby diluting their power in this and neighboring districts.

4th Congressional District

Dem. Vote Share
(2010 Senate)

- 0
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%

District 5

5th Congressional District
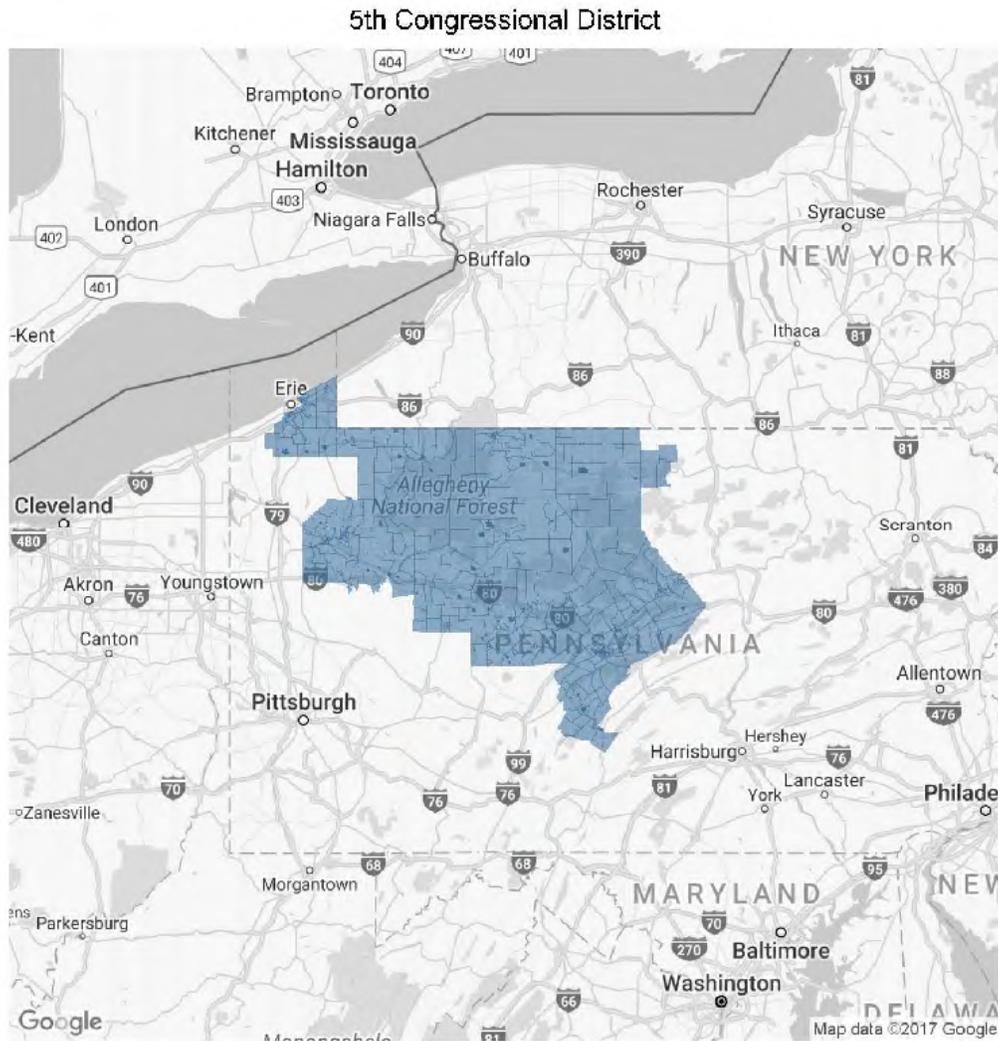
Containing 15 counties, the 5ᵗʰ Congressional District has historically been the most expansive within the state and that remains the case (though the new 10ᵗʰ District now rivals it). While its sprawling expanse may be necessitated, in part, by its rural nature, as previously mentioned, the conspicuous inclusion of eastern Erie County in this district does not seem to serve any purpose other than to reduce the weight of Erie's voters. The voters in the eastern side of the Erie metropolitan area have been cracked from the 3ʳᵈ District and placed in the 5ᵗʰ, an overwhelmingly Republican district that stretches from Pennsylvania's northwestern corner halfway across the state.

District 6

6th Congressional District
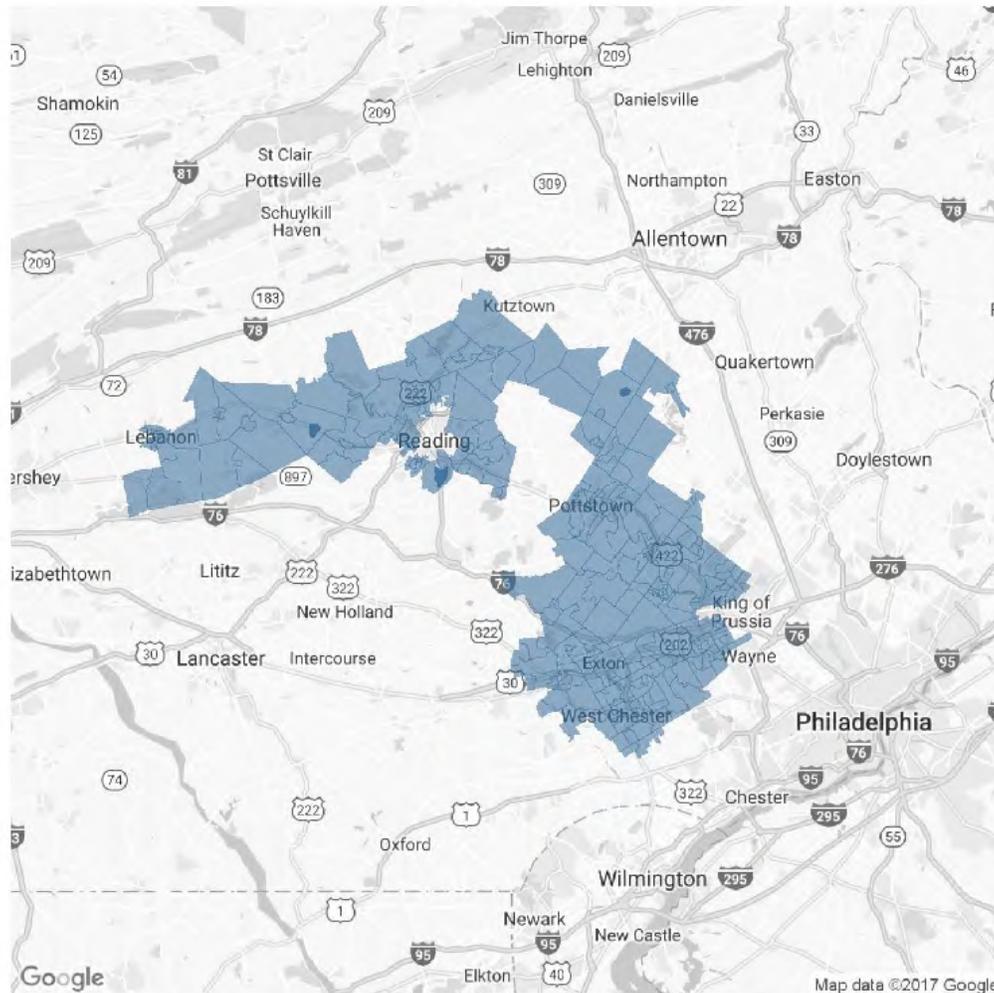
The shape of Pennsylvania's 6th Congressional District speaks for itself. There can be no logical explanation for a district that begins in Thornbury Township, located in lower Chester County, heads north into Upper Hanover Township, located at the northwestern tip of Montgomery County, before cutting a swath through the middle of Berks County to the west (though noticeably omitting Reading) until reaching West Cornwall Township in the middle of Lebanon County. This oddly-shaped hodgepodge of municipalities disrespects any and all natural boundaries and appears to serve no purpose other than a partisan one. In service of achieving this shape, the 6th Congressional District includes four counties that are split between the 6th and another district and 15 split municipalities.

The most conspicuous aspect of the 6th District is the incision into its northern portion, which allows it to avoid encapsulating the city of Reading, a Democratic Party stronghold and the county seat of Berks. Reading is isolated from the rest of its surrounding areas in order to crack its Democratic voters and place them within the more safely GOP terrain of the 16th Congressional District.


6th Congressional District

District 7
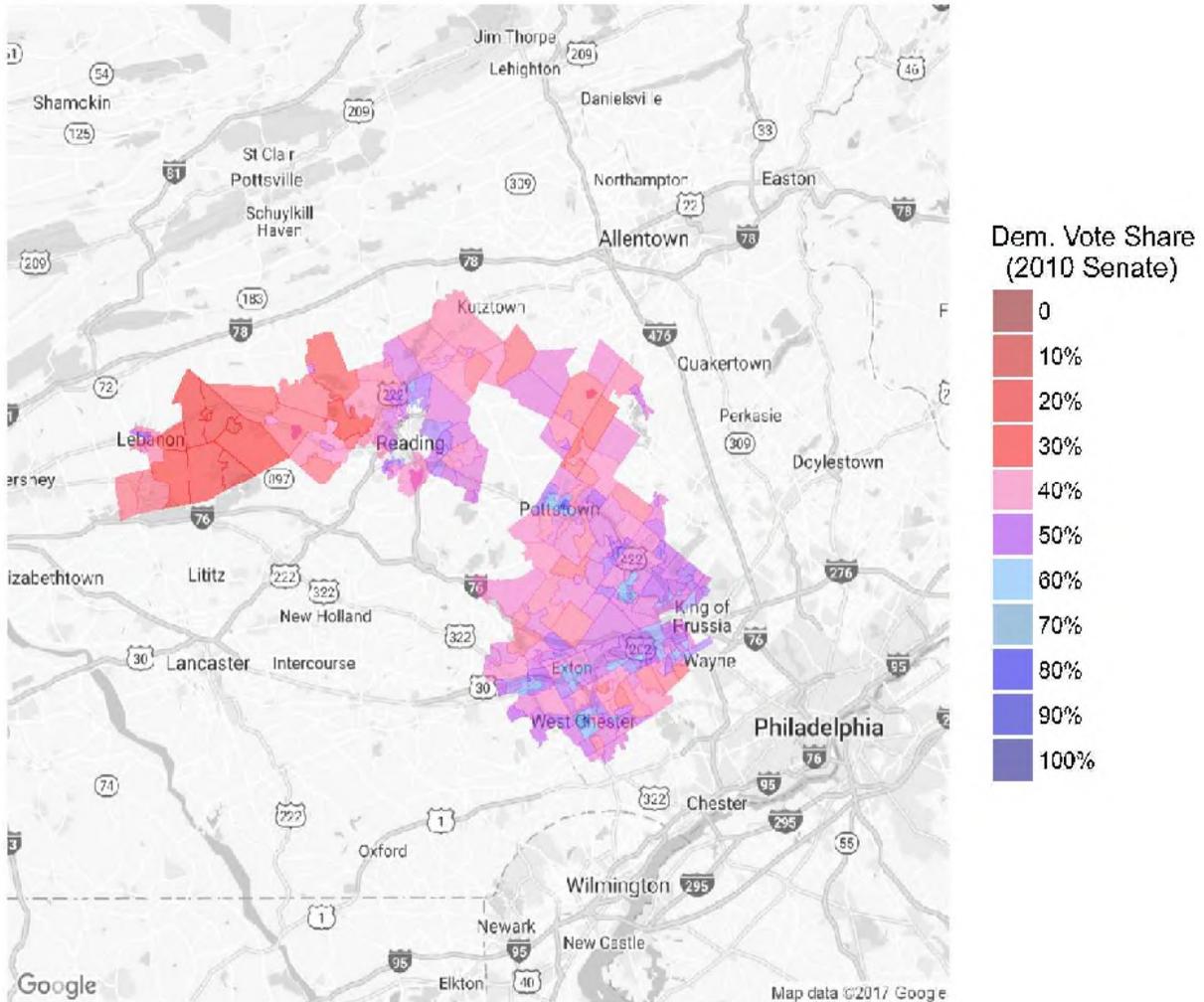
7th Congressional District
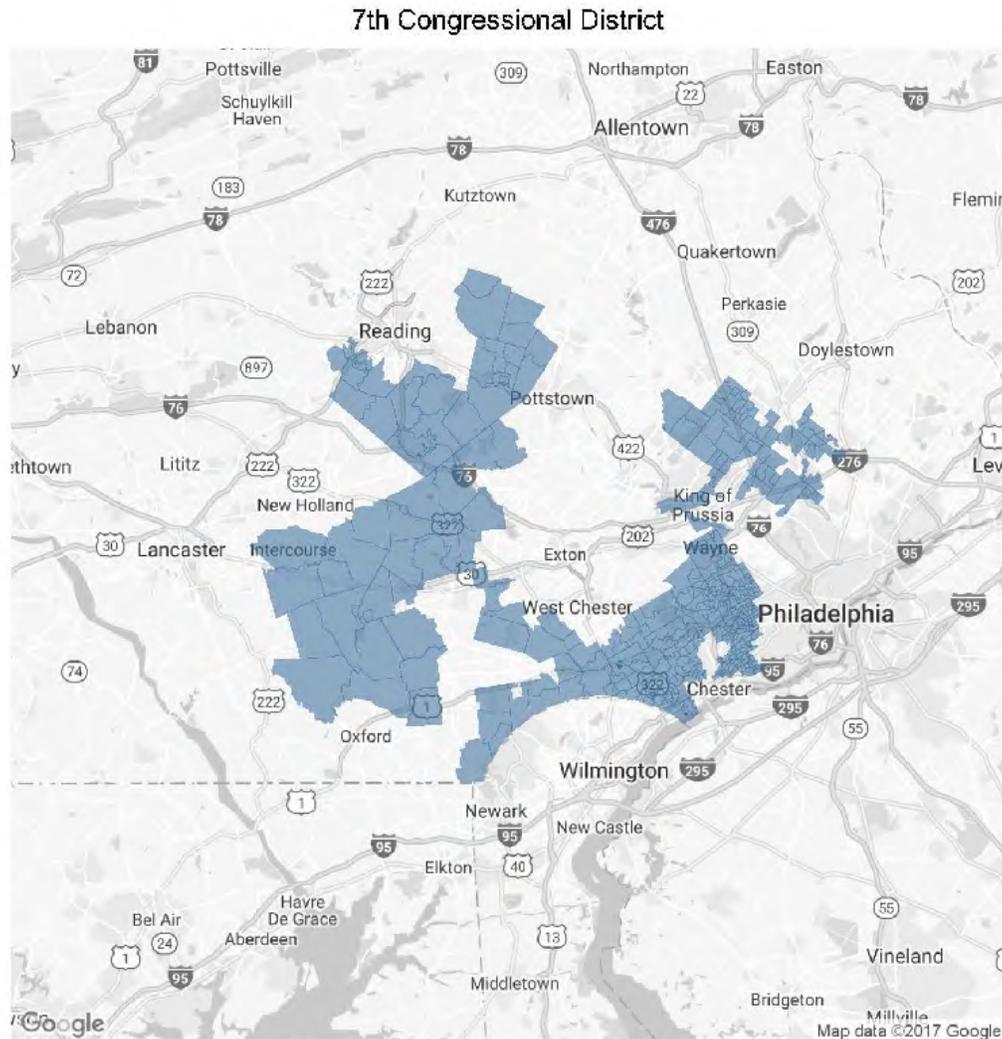
As bizarre as the 6th District appears, it almost pales in comparison to its neighboring district, which is arguably the most absurdly drawn congressional district in the nation. Known by many as the "Goofy kicking Donald Duck" district, it ultimately splits five counties and 26 municipalities in a way that results in a reasonably safe Republican seat. Essentially its shape is that of two different districts separated by the 6th Congressional District and connected only by a small piece of tract along Route 30. As it winds its way from eastern Delaware County into both Berks and Lancaster counties, it also manages to avoid Democratic pockets such as the boroughs of Downingtown and West Chester and the city of Coatesville. To drive from the 7th District's eastern half in Thornbury Township, Delaware County to Wallace Township, Chester County, one would need to drive through approximately 21 miles of the 6th District.

As demonstrated in the image below, the evolution of the 7th District over time demonstrates that the current shape bears no resemblance to earlier maps and has no historical rationale.

THE EVOLUTION OF PENNSYLVANIA'S SEVENTH DISTRICT
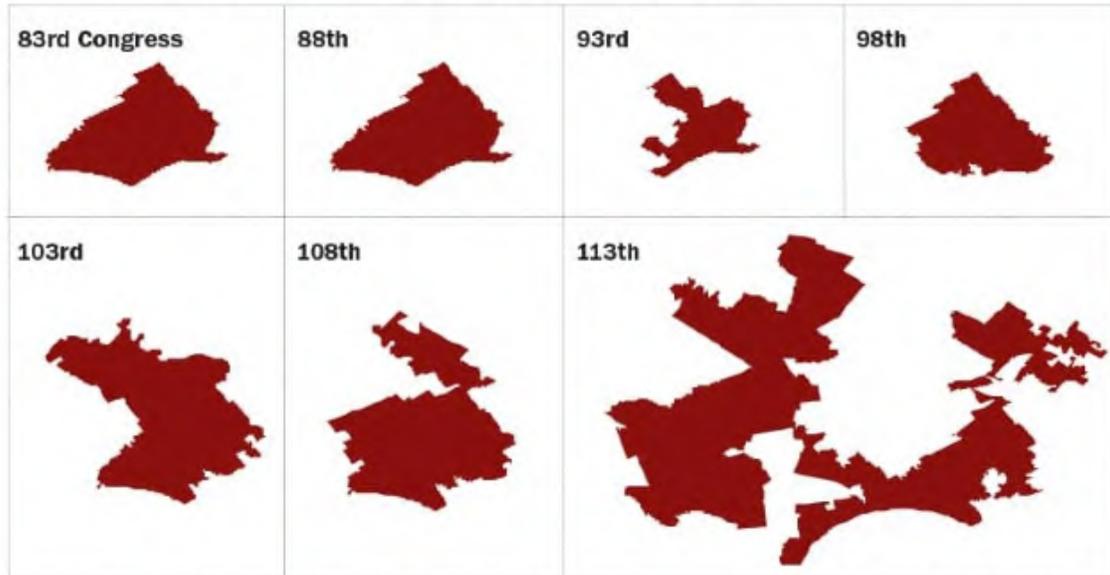
SOURCE: Shapefiles maintained by Jeffrey B. Lewis, Brandon DeVine, Lincoln Pritcher and Kenneth C. Martis, UCLA. Drawn to scale.
GRAPHIC: The Washington Post. Published May 20, 2014

The irrational boundaries of the 7th are also laid bare at other points within the district. Perhaps the most absurd example is a point within the 7th where the district is held together solely by Creed's Seafood & Steak, near the King of Prussia Mall in Upper Merion Township.


Creed's Seafood & Steaks
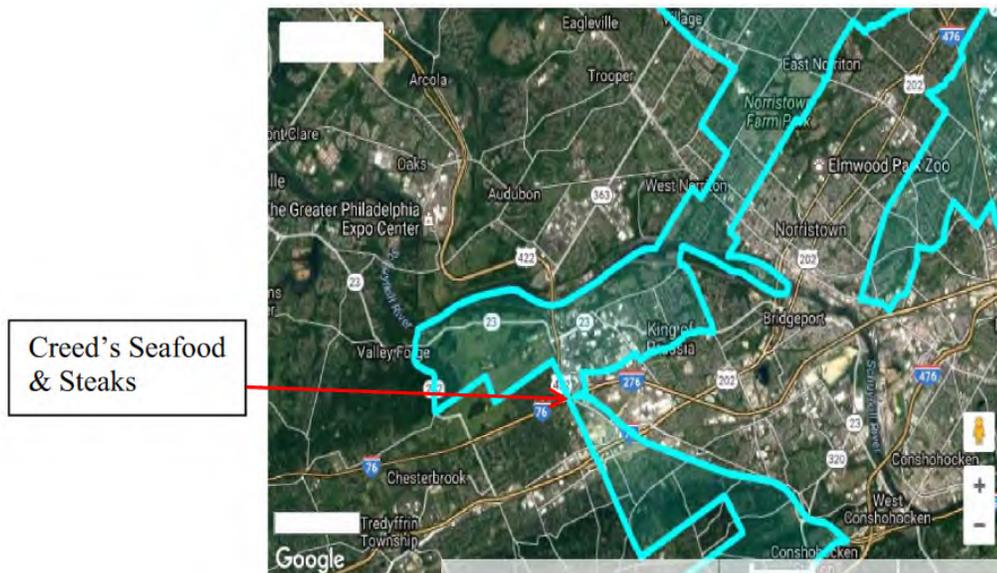
At another point, the District is connected solely by Brandywine Hospital, which though it has a Coatesville mailing address, is actually located in Caln Township. This is an indication of how the boundaries of the 7th District appear to go out of their way to avoid a small pocket around Coatesville, a Democratic city. Brandywine Hospital functionally serves as a bridge between the otherwise disconnected northern and southern Republican-leaning portions of the 7th District – a bridge that avoids Coatesville to the west and the Democratic communities of Downingtown and Exton to the east.

Brandywine Hospital

7th Congressional District

Dem. Vote Share
(2010 Senate)

0
10%
20%
30%
40%
50%
60%
70%
80%
90%
100%
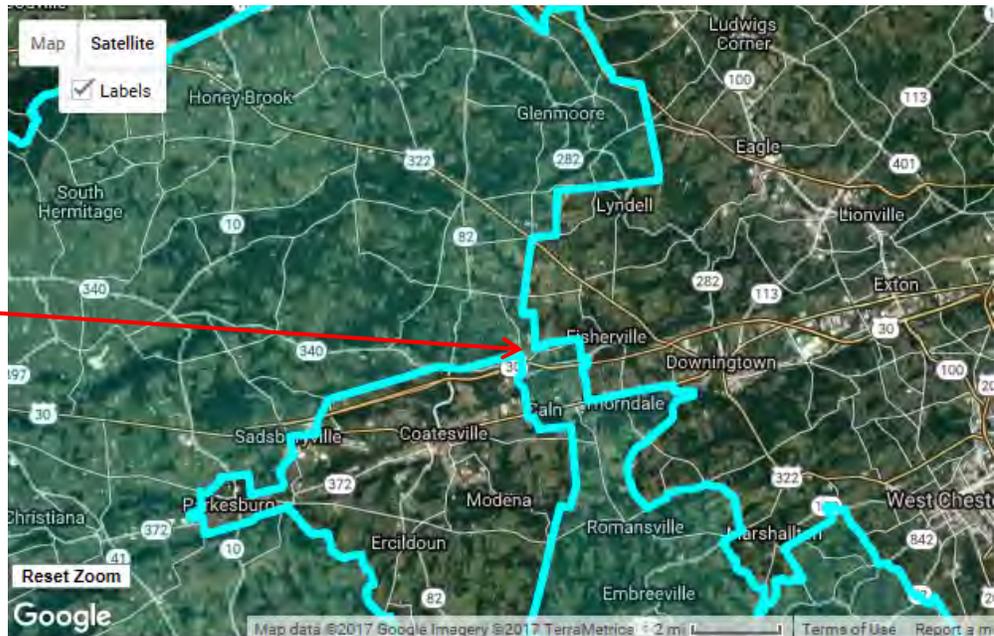
District 8

8th Congressional District
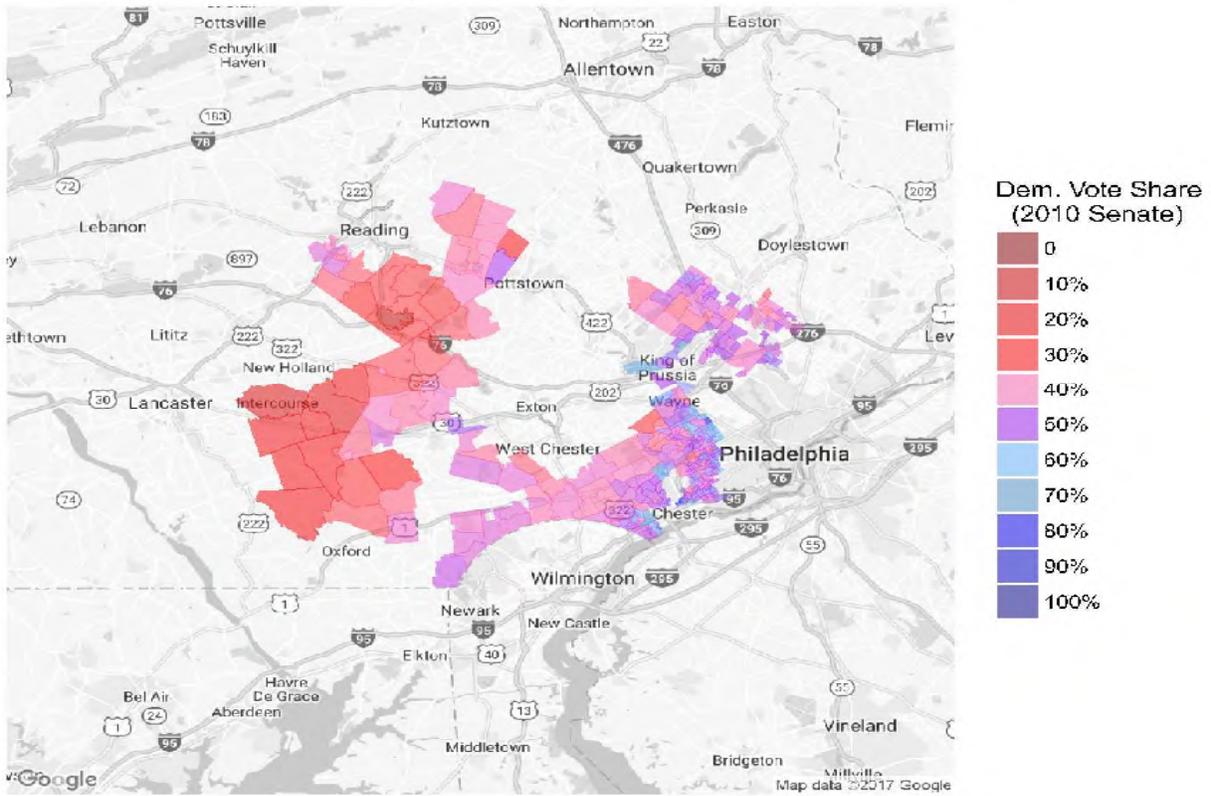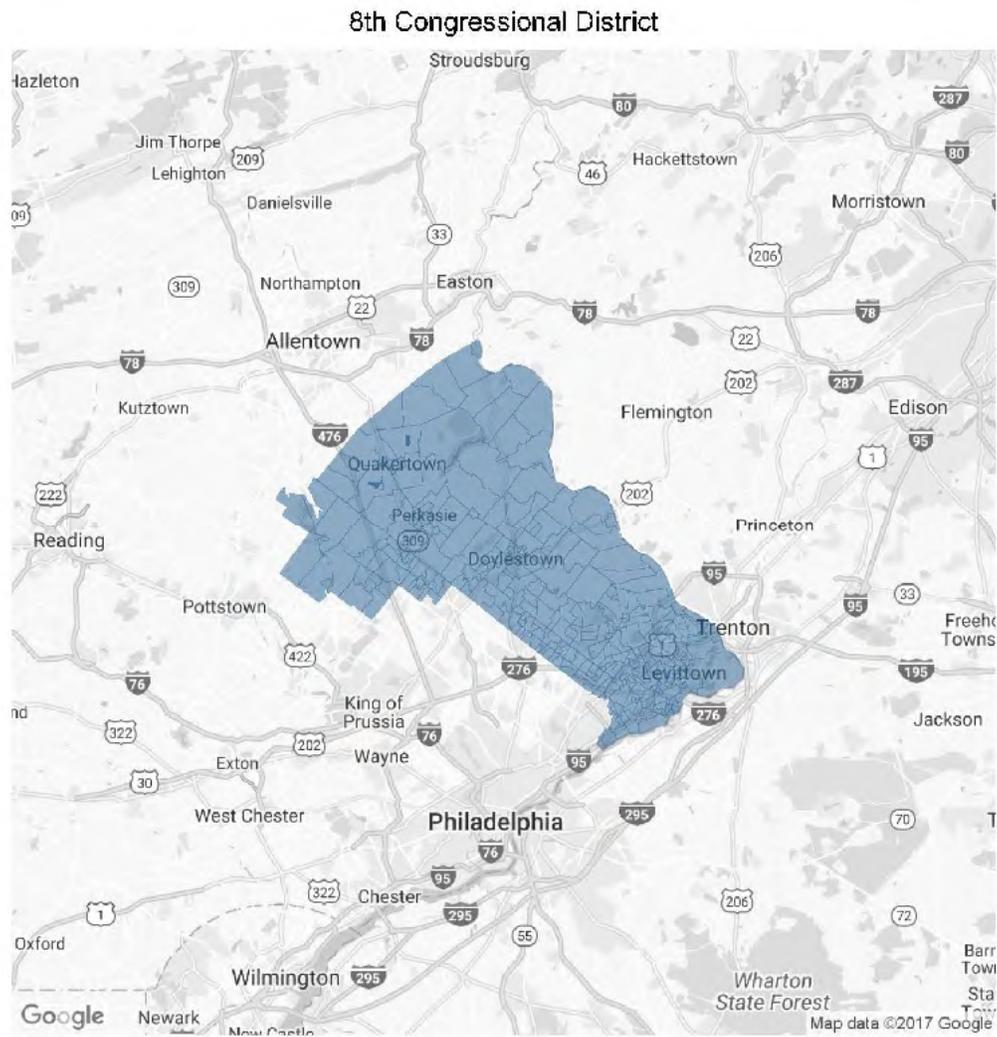
The 8th District splits only three municipalities, Hatfield, Upper Hanover, and Telford, the latter of which is already divided between Bucks and Montgomery counties. However, the 2011 boundaries have expanded south to encompass the GOP-dominated, northeastern portion of Montgomery County within the 8th District. As demonstrated in the image below, this helps offset the influence of the Democratic voters in the Levittown area, in the southern portion of Bucks County. Of course, the additional portion of Montgomery County could only be added by splitting up that county and cracking its Democratic voters between four other districts.

8th Congressional District

Dem. Vote Share
(2010 Senate)

	0
	10%
	20%
	30%
	40%
	50%
	60%
	70%
	80%
	90%
	100%
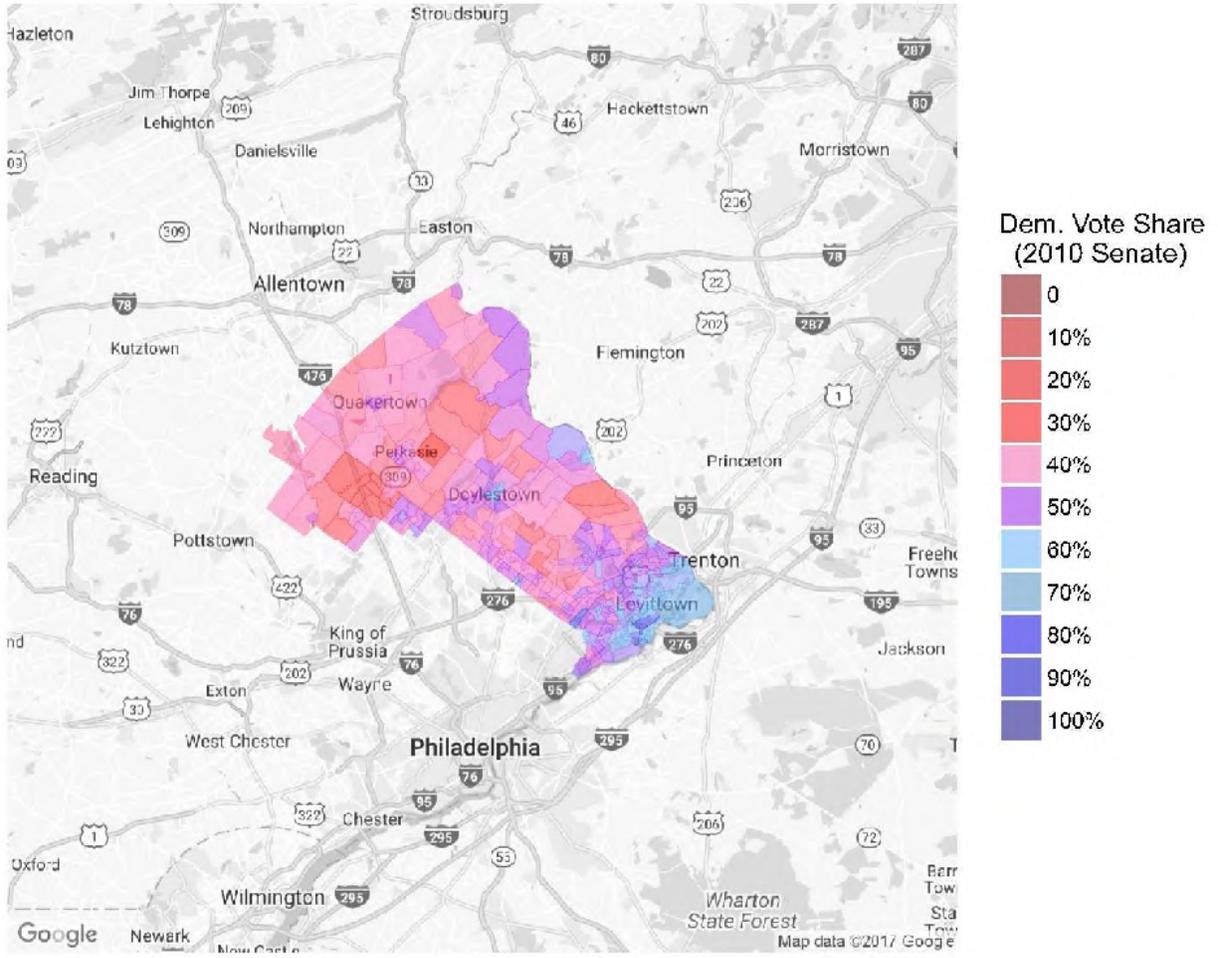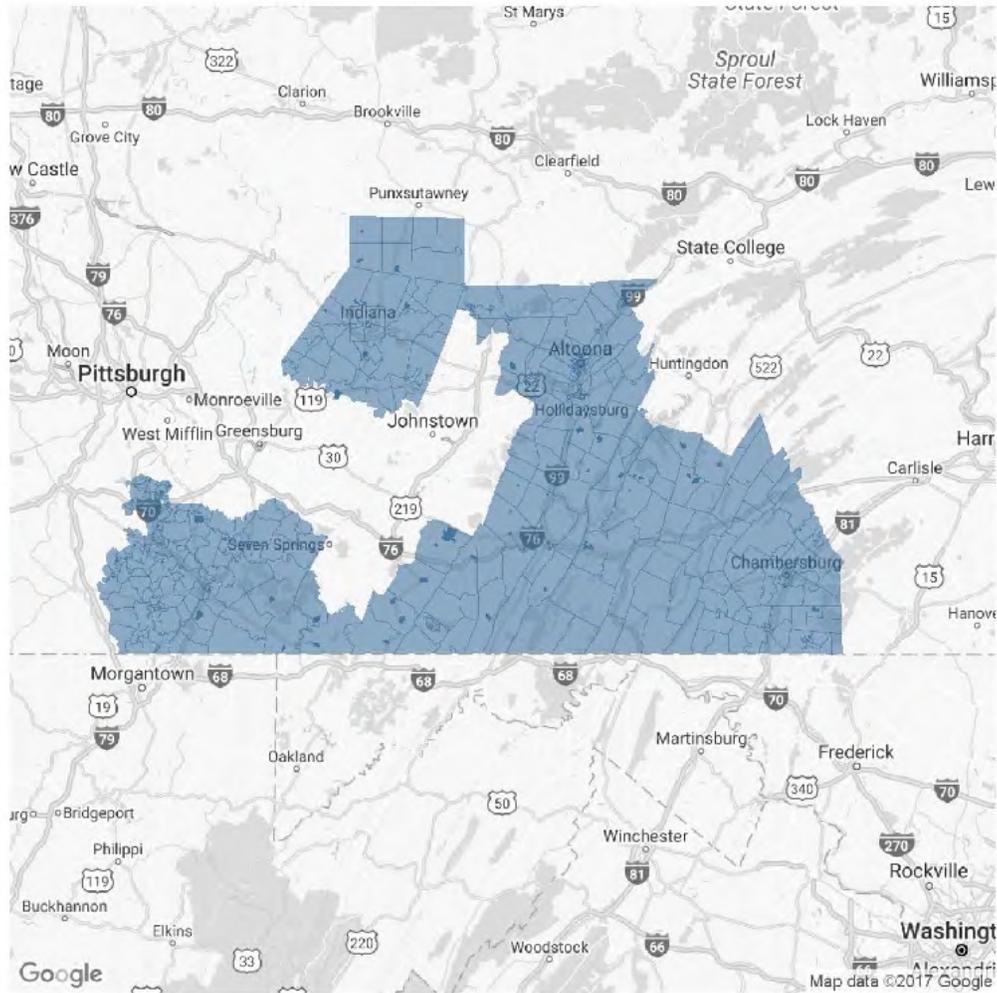
District 9

Containing 12 counties, the 9th Congressional District is located along the southwest-central border of Pennsylvania. Six of the counties within the 9th District are split and four of its municipalities are split. Appearing like a claw with blue tips, the 9th District includes traditionally Democratic areas south of Pittsburgh in the Monongahela Valley such as Fayette County and parts of Greene and Washington counties, while at the same time incorporating Democratic areas in southern Indiana County. In such a way, the 9th District cracks these Democratic voters from the neighboring 3rd and 12th Districts and places them with Republican strongholds in Bedford, Blair, and Somerset counties to the east.

9th Congressional District

District 10

10th Congressional District
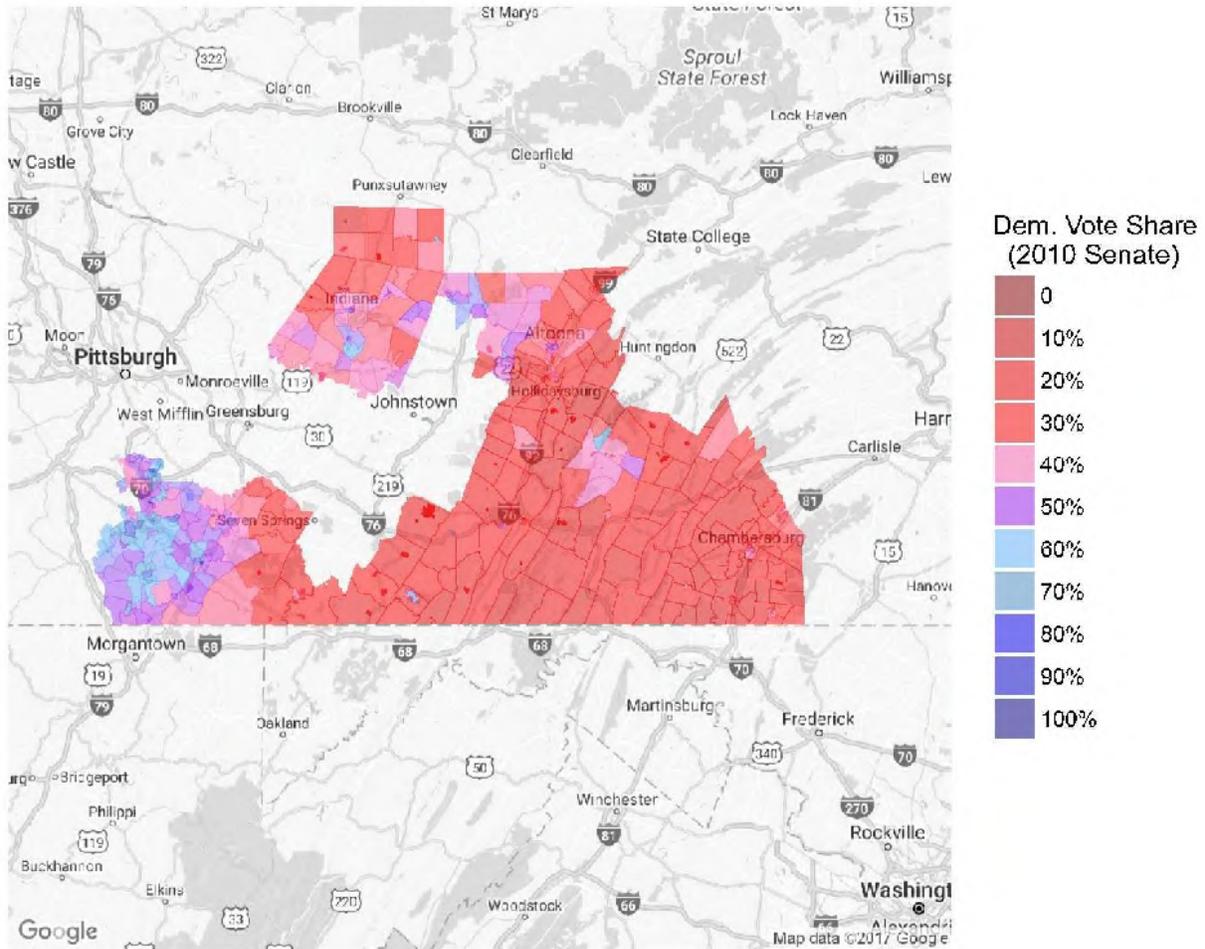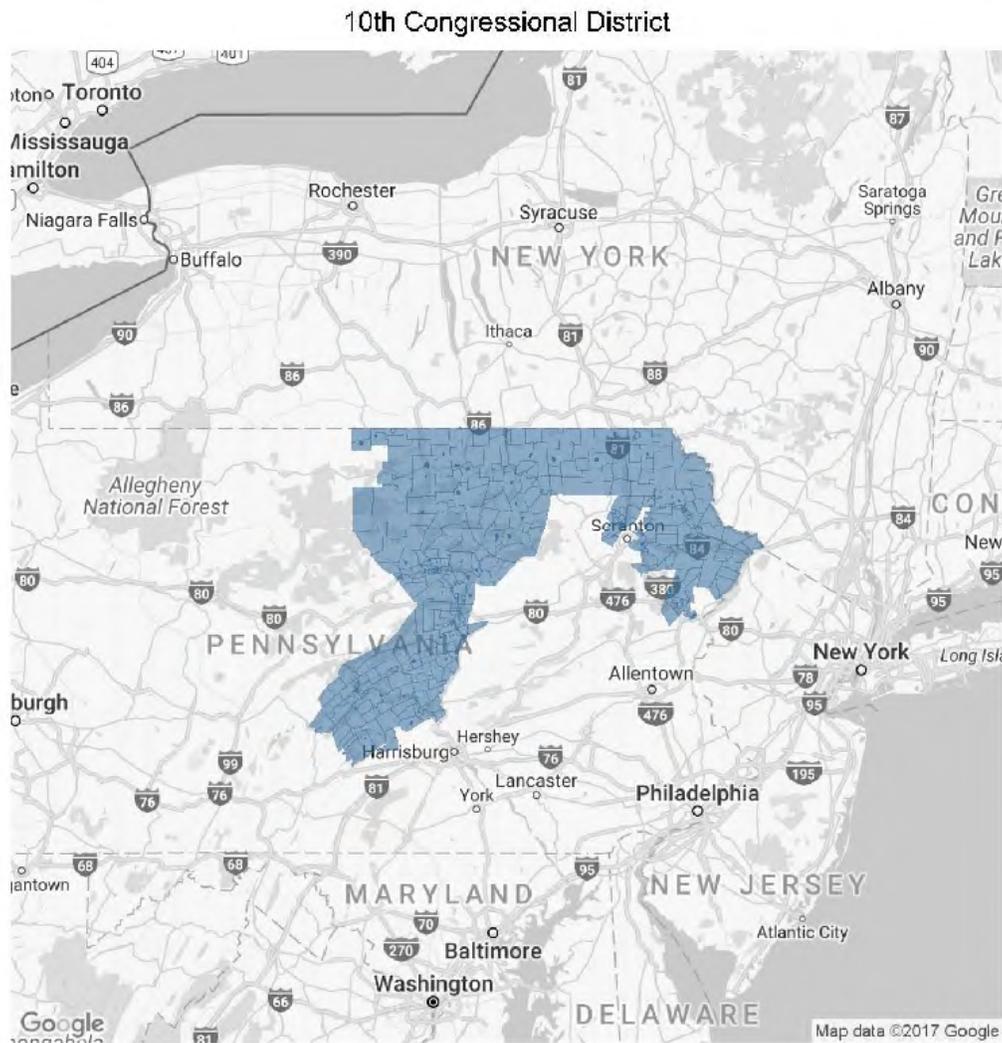
Unlike some of the other more rural districts in Pennsylvania, the 10th District was politically competitive in the previous decade and, in fact, elected a Democrat in both 2006 and 2008. The current Congressman, Republican Thomas Marino, was elected in 2010 under the previous boundaries, but the Democratic share of the vote dropped from 45% in 2010 to less than 35% in 2012 under the current boundaries.

The current 10th District's boundaries stretch from Westfall Township in the far northeast corner of the state down the western side of the Susquehanna River until ending at the bottom of Perry County in Toboyne Township, a distance that measures slightly over 200 miles. As it makes this journey across northeastern Pennsylvania it also manages to skirt Democratic areas such as Scranton and

Wilkes-Barre before veering far to the west and then south. The geography of these boundaries produces an unnecessary hardship as far as constituent service is concerned. An individual residing in the borough of Sayre, located at the tip of Bradford County, would need to travel roughly 75 miles to visit the nearest office of the current congressperson, Representative Thomas Marino.

District 11

11th Congressional District
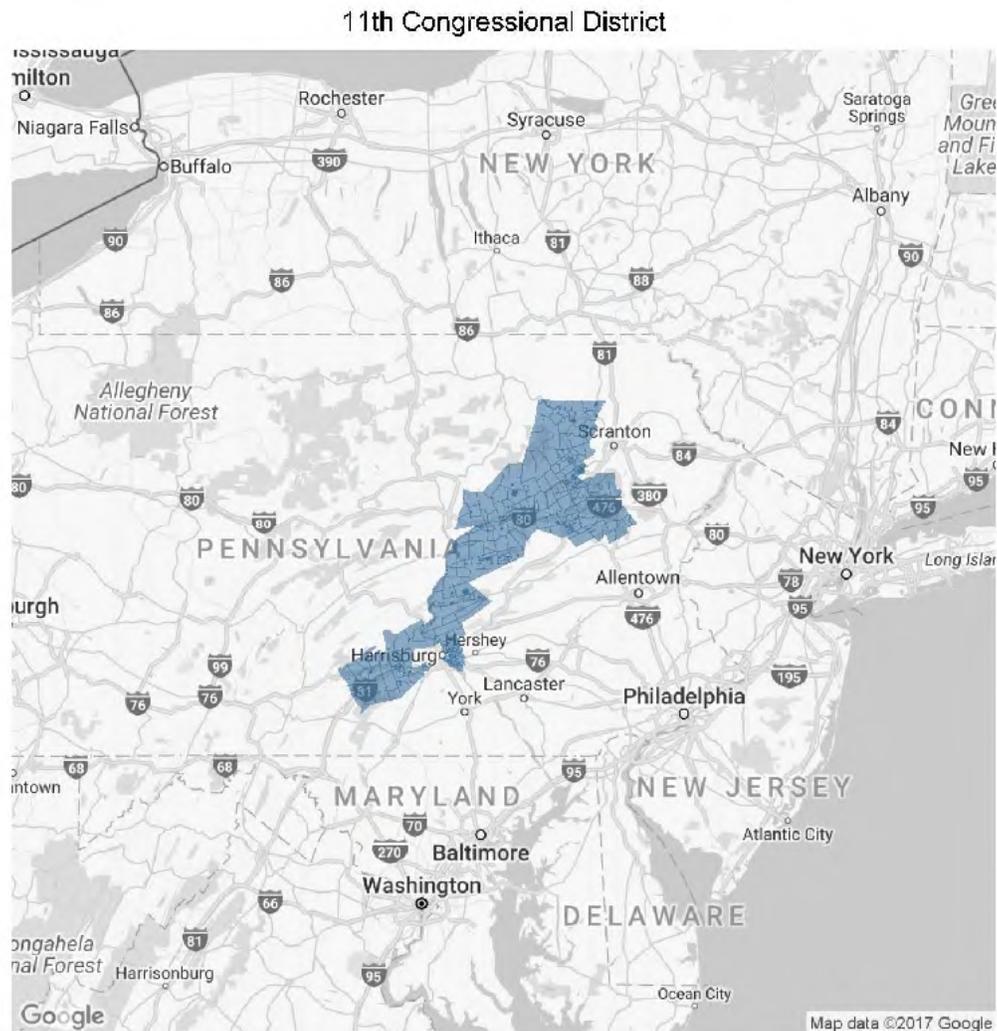
Historically, the 11th District had been dominated by the Democratic Party, which had held it since 1955 (with the exception of a two year period from 1981-1983) until the GOP wave of 2010. Irish and Eastern European immigrants arrived here a century ago to work in its industrial plants and coal mines while belonging to their associated labor unions. In fact, Lackawanna (Irish) and Luzurne (Polish) counties are two of only four counties in the entire state in which German ancestry is not the plurality (the others are Delaware, where those of Irish descent are the plurality, and in Philadelphia, where African-Americans are the plurality). Lackawanna and Luzurne have also been Democratic strongholds, for reasons associated with this history and their demographic compositions. However, the current boundaries of the 11th District do not incorporate Scranton and Wilkes-Barre, the Lackawanna and Luzern county seats. The voters from these two

Democratic municipalities are cracked from the 11th District and packed with other Democratic strongholds such as Easton in the 17th District.

To achieve this cracking, the 11th District boundaries split six counties and four municipalities. The almost total vertical geographic nature of this district creates a distance of over 200 miles from the borough of Nicholson at the northern tip of Wyoming County to Southampton Township at the southern end of Cumberland County. An individual from Nicholson would need to travel approximately 80 miles just to get to the nearest district office located in Hazelton.

District 12

12th Congressional District
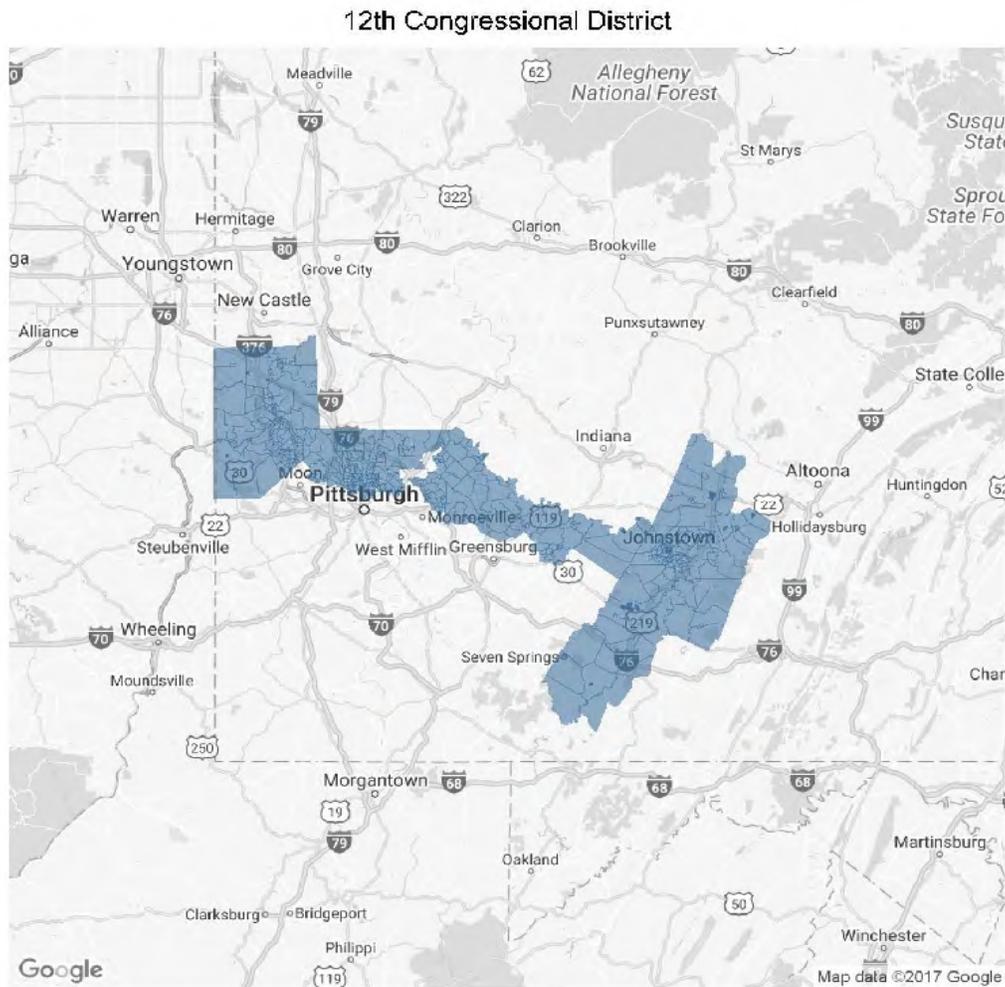
Containing six counties, only one of which (Beaver) is completely included, the 12th District changed considerably from its pre-2011 boundaries, with its southern part removed and its western side elongated. Now, the 12th District runs from the southern end of Lawrence County, incorporating Beaver County before it slices eastward through the northern parts of Allegheny and Westmoreland counties and concludes at the eastern end of Cambria and Somerset Counties. In doing so, it borders four other congressional districts, the 3rd, 9th, 14th, and 18th districts. The odd shape of the 12th District appears meticulously calculated to merge two former Democratic seats – the old 4th and 12th districts. As mentioned earlier, these two Democratic incumbents, Jason Altmire and Mark Critz, were subsequently forced to face off against one another. The driving distance from Little Beaver Township, Lawrence County to Windber Township, Somerset County is approximately 120 miles.

District 13
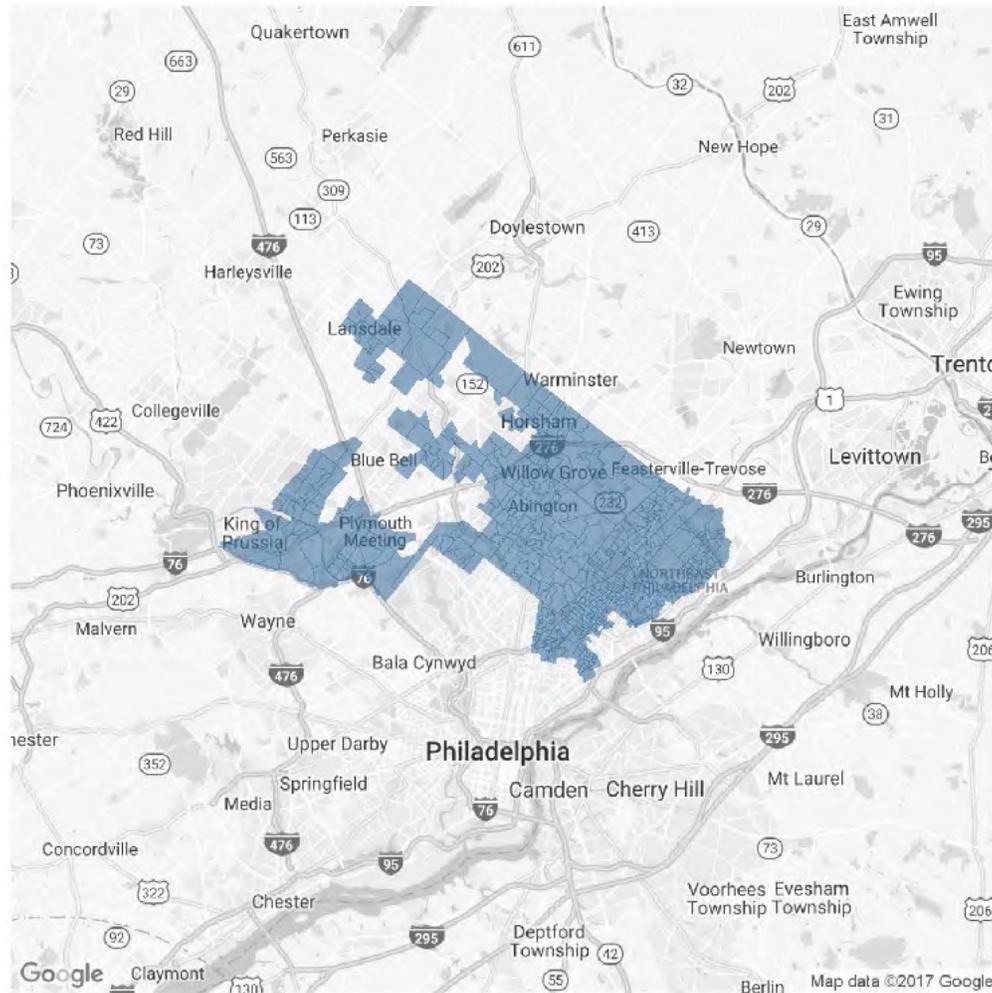
The eastern half of the 13ᵗʰ District includes northeast Philadelphia and eastern Montgomery County, both Democratic-leaning areas. Its boundaries also encompass portions of Montgomery County in Plymouth Meeting via a narrow strip of land, thereby packing even more Democratic voters and allowing for the adjacent districts to push further westward so they are more conducive to a Republican lean. The oddly shaped chunk that appears to be missing from the middle of the 13ᵗʰ District is in the sprawling 7ᵗʰ District, where it results in the odd appendage that appears to be "Goofy's head."

The disruption that this produces for voters in the area is made clear by the treatment of Montgomery County, the third largest county in the Commonwealth, which is divided into five different congressional districts. This suburban county

43

was once a linchpin of Republican support until it began trending more Democratic in the mid-1990s. A decade ago, the Democrats finally overtook the GOP and their advantage has only accelerated in recent years. With the declining Republican influence it was a natural target to be carved up. Additionally, the 13th District also contains 14 municipalities that are split between the 13th and another district. The degree to which some of the communities are carved up is particularly excessive, with three being split at the census block level. In fact, Hatfield Township is split such that only one census block is included in the 13th District. Similarly, in Horsham Township, only two blocks are included. There are other block-level divisions in Lower Merion Township.

District 14
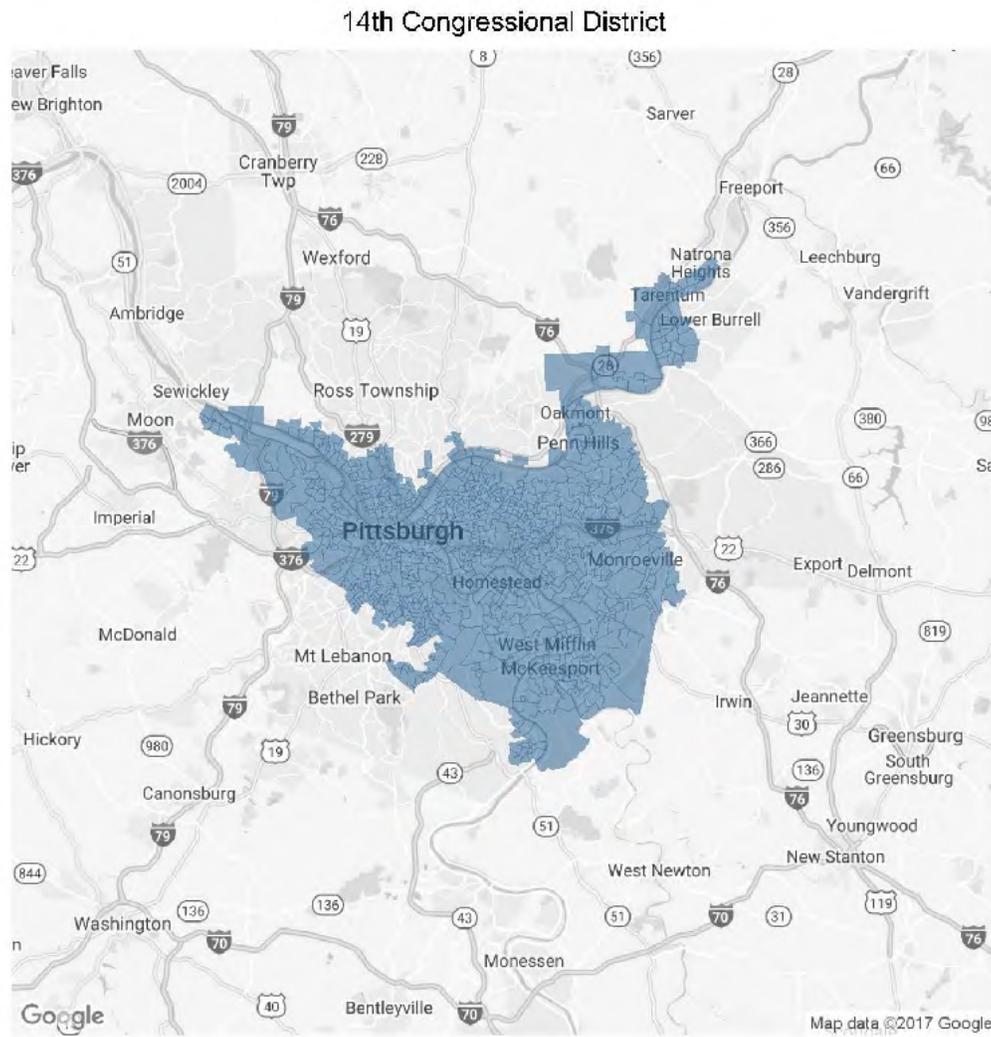
The 14th District is based around the state's second largest city, Pittsburgh, which is just a little less than half of the district's overall population. The district also packs in Democratic voters from outside this Democratic urban center by splitting outlying municipalities of Pittsburgh. For instance, Monroeville Township is split into three congressional districts, one of which is the 14th District. There are several other municipalities that are significantly splintered, such as Whitehall Township and Harrison Township. The northeastern "horn" of the district stretches north to capture Democratic-leaning voters near Tarentum and Natrona Heights, packing those voters into the 14th District and removing them from the 12th District to the north.

14th Congressional District

Dem. Vote Share
(2010 Senate)

- 0
- 10%
- 20%
- 30%
- 40%
- 50%
- 60%
- 70%
- 80%
- 90%
- 100%

District 15

15th Congressional District
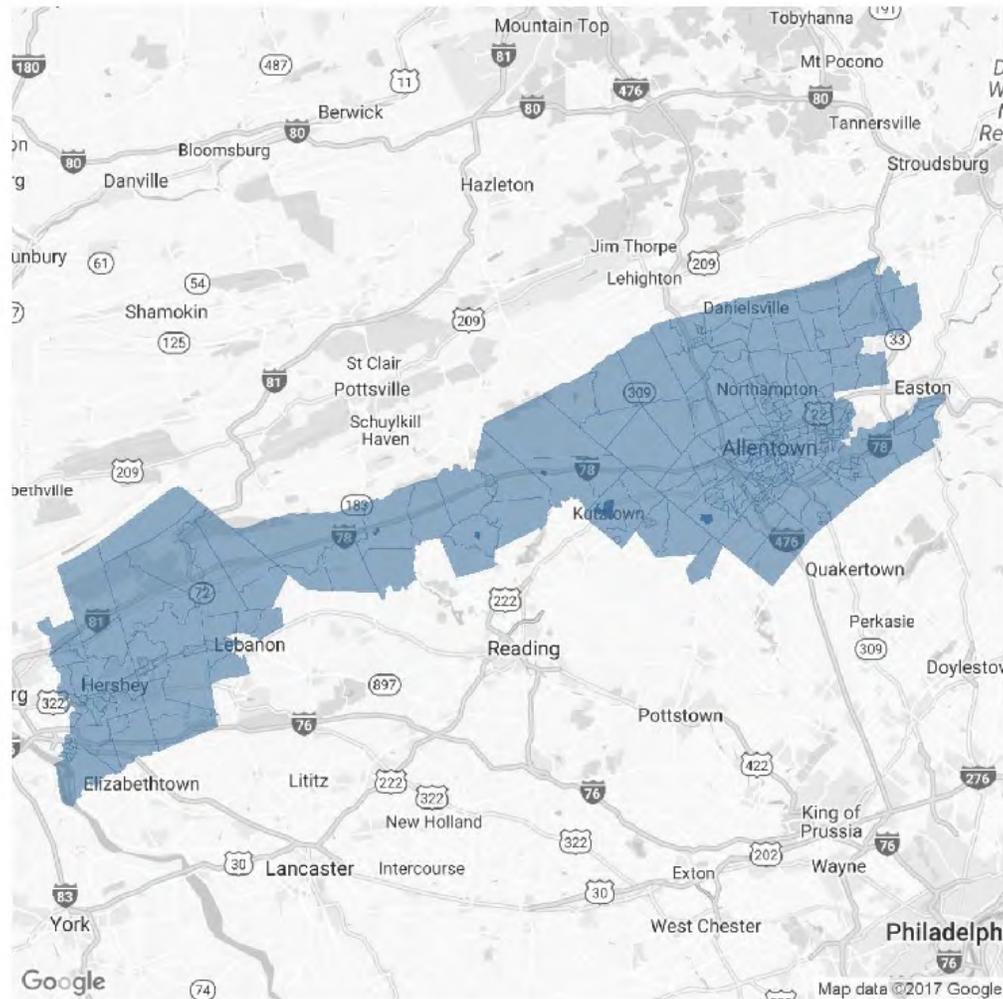
      The current borders of the Lehigh Valley-based 15th District leave out Easton, the county seat of Northampton County, and pack its Democratic-leaning voters into the heavily-Democratic 17th District. This fundamentally changed the partisan makeup of what was historically one of the most competitive districts in the state to the detriment of Democratic voters in Lehigh Valley. Since Democrat Francis E. Walter was elected in 1952 until the reelection last year of incumbent Republican Charlie Dent, both parties have held this Lehigh Valley district exactly 16 terms apiece. However, by stripping away Easton, a Democratic Party stronghold from its traditional home and pushing it further west, the 15th District is now safer for the Republicans. The Democratic voters cracked from Easton have been packed into the 17th District along with the Democratic voters in Wilkes-Barre and Scranton, which were themselves cracked from the 11th District.

As a historical note, the 1970s map contained just Lehigh and Northampton Counties in the 15th District. In the 1980s, this district again left these two counties undivided, while also adding a small portion of Monroe County. In the next two decades, the 1990s and 2000s, the 15th District again included the entirety of Lehigh and Northampton Counties (except a single township district of Lehigh County), while also adding a slice of northern Montgomery County. These boundaries all made sense in the context of ensuring there was a "Lehigh Valley district." In general, residents of the Lehigh Valley, the state's third largest metropolitan area, identify themselves with the overall region and this is manifest in a variety of ways, governmental and otherwise. For instance, this area is home to the Lehigh Valley International Airport (LVIA), the Lehigh Valley Planning Commission (LVPC), the Lehigh and Northampton Transportation Authority (LANTA), the Lehigh Valley Chamber of Commerce (located in Easton), and even the minor league baseball team, the Lehigh Valley Iron Pigs. In the current map, however, the 15th District now includes parts of Berks, Dauphin, and Lebanon counties, communities that have little in common with what once was the base of this district. While Lehigh County is included and intact, its sister county within the Lehigh Valley, Northampton, is split. Namely, parts of Bethlehem and Easton have been removed from the 15th District.

Additionally, without any apparent reason other than the removal of Democratic voters, the city of Bethlehem is split between the 15th and 17th Districts. While the majority of Bethlehem remains in the 15th District, this municipality has been splintered down to the census block level. The 15th District now includes just one intact Democratic area—the city of Allentown. Thus, as shown below, the Democratic voters in this city are cracked into a district that, given the other changes referenced above, is now extremely Republican.

15th Congressional District

District 16

16th Congressional District
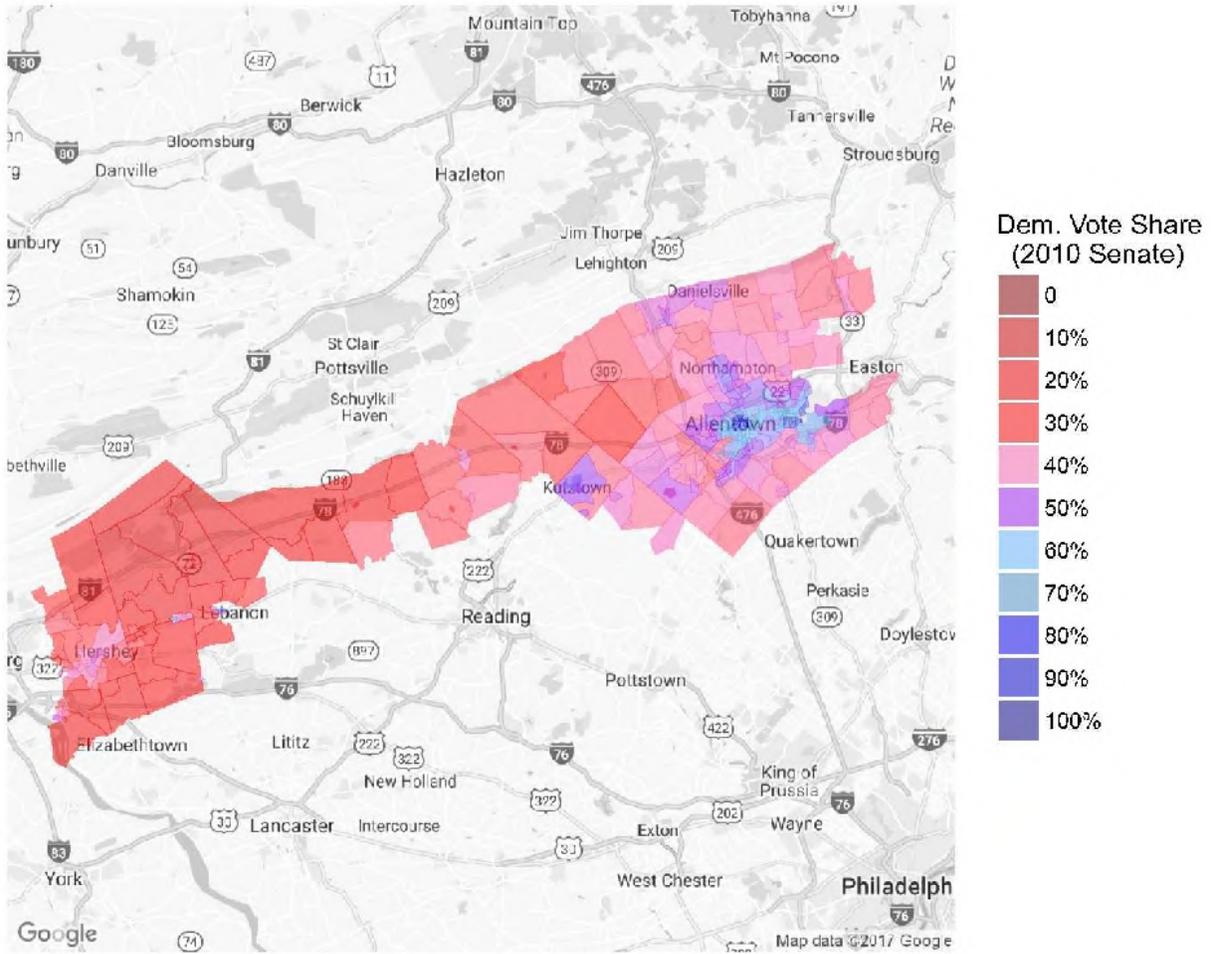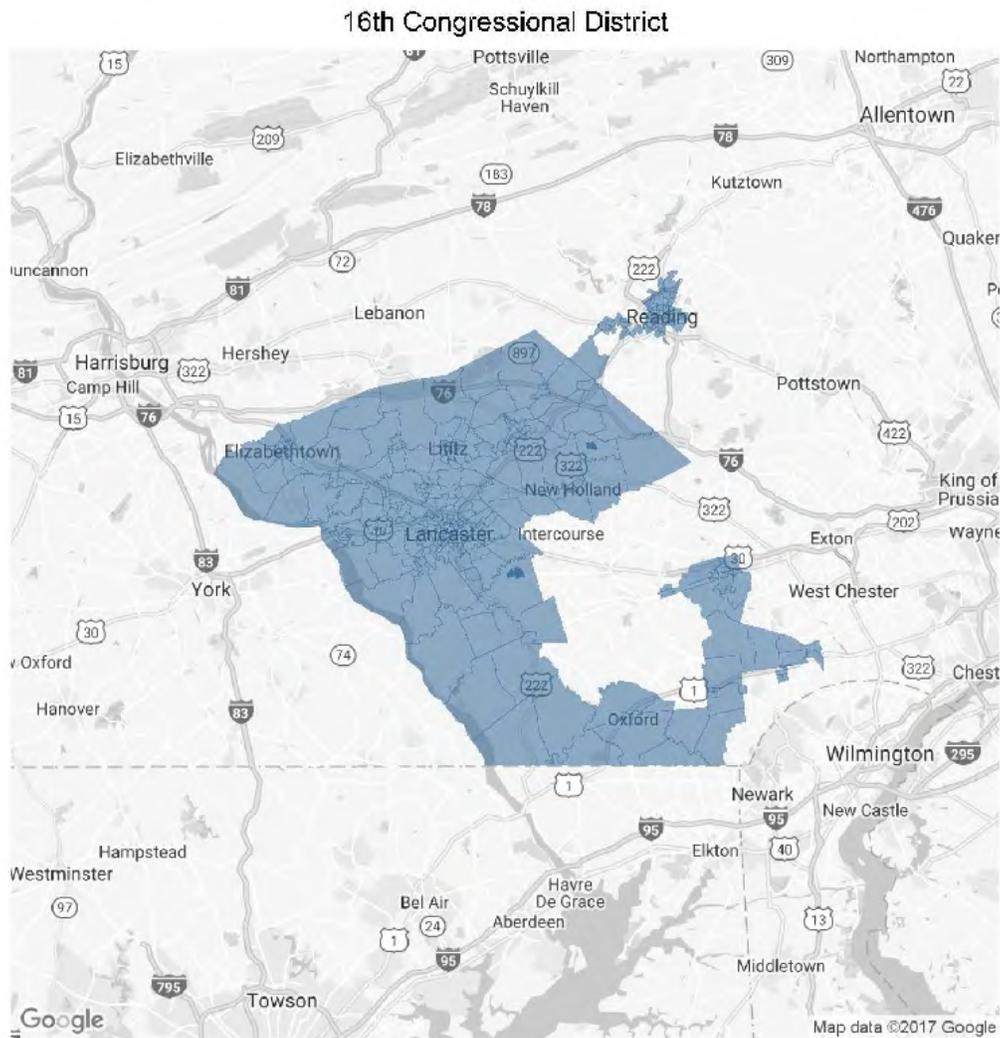
As previously mentioned, moving the heavily-Democratic city of Reading from its traditional Berks County home and placing into the Lancaster County-based 16th District has no other explanation other than the deliberate cracking of Democratic voters. Many of the issues and challenges faced by what is one of the most economically challenged cities in the state have little in common with the farming interests present in the remainder of the district, which includes the heart of Amish country. The tortured shape of this district, including a land bridge to Reading that is no more than the width of a mulch store and service station, cracks the city away from the rest of Berks County.

16th Congressional District
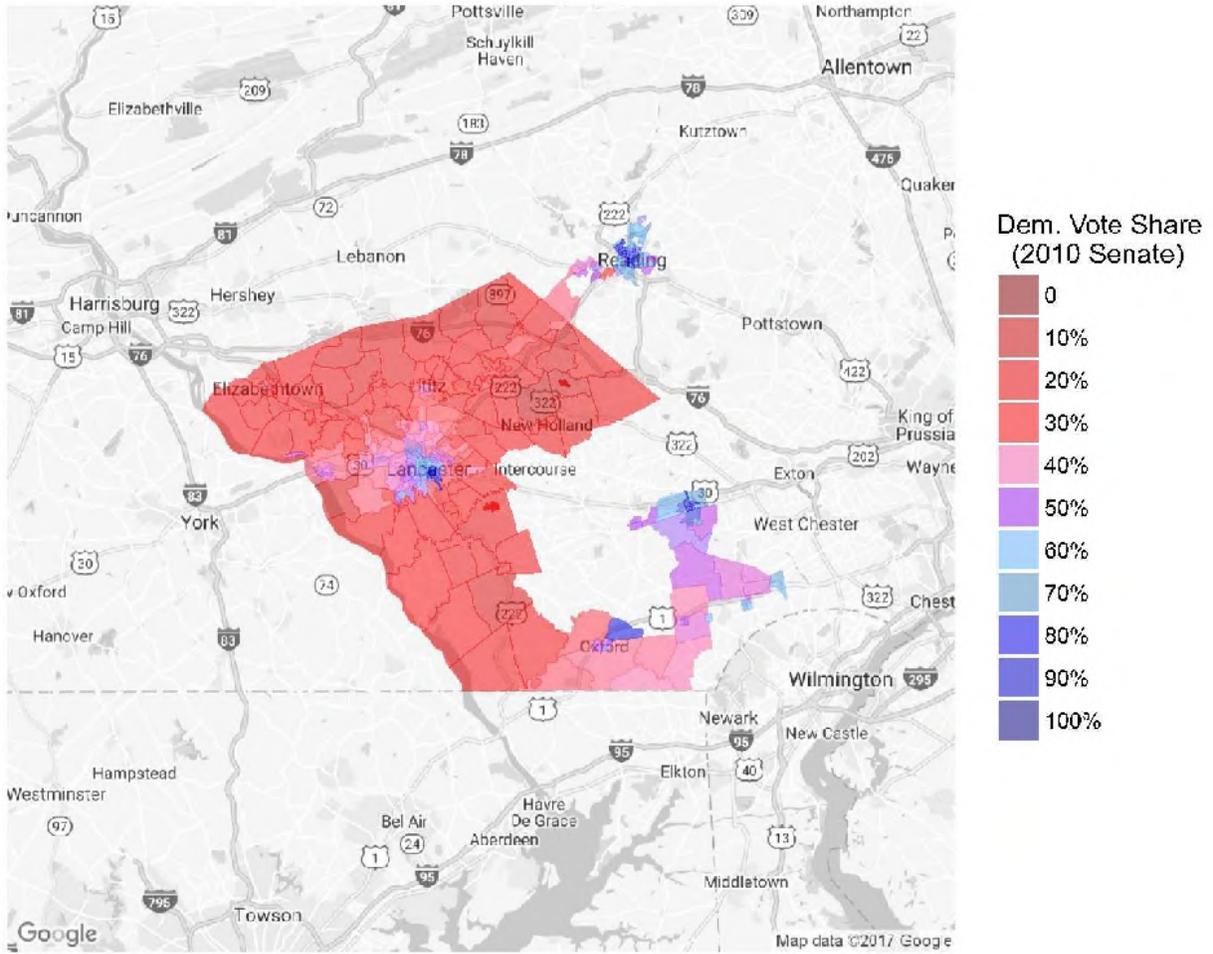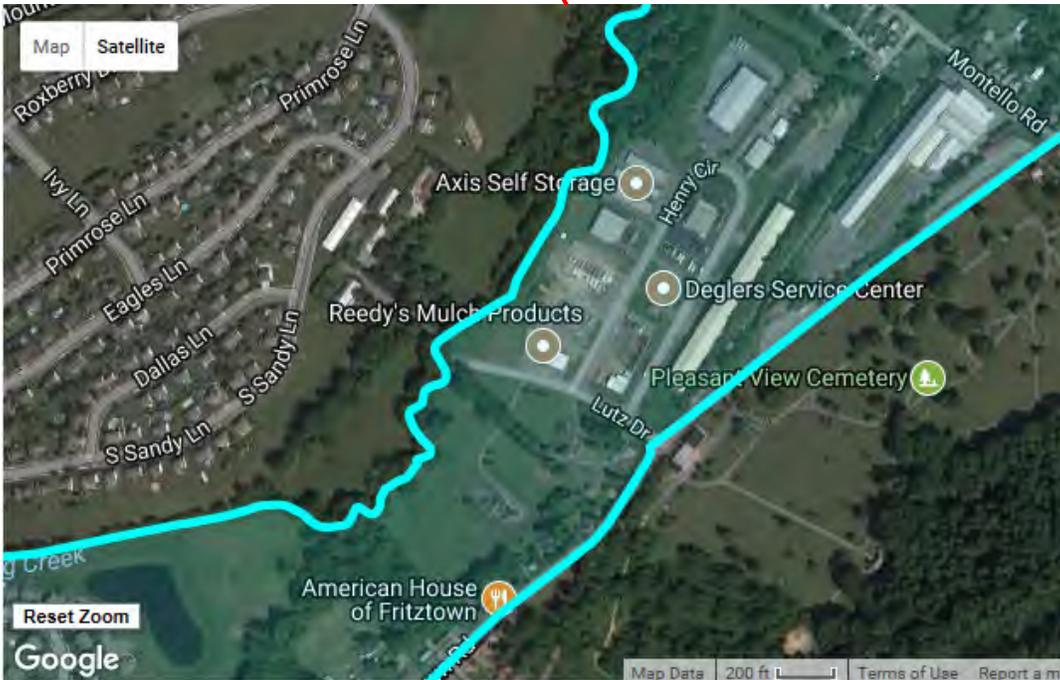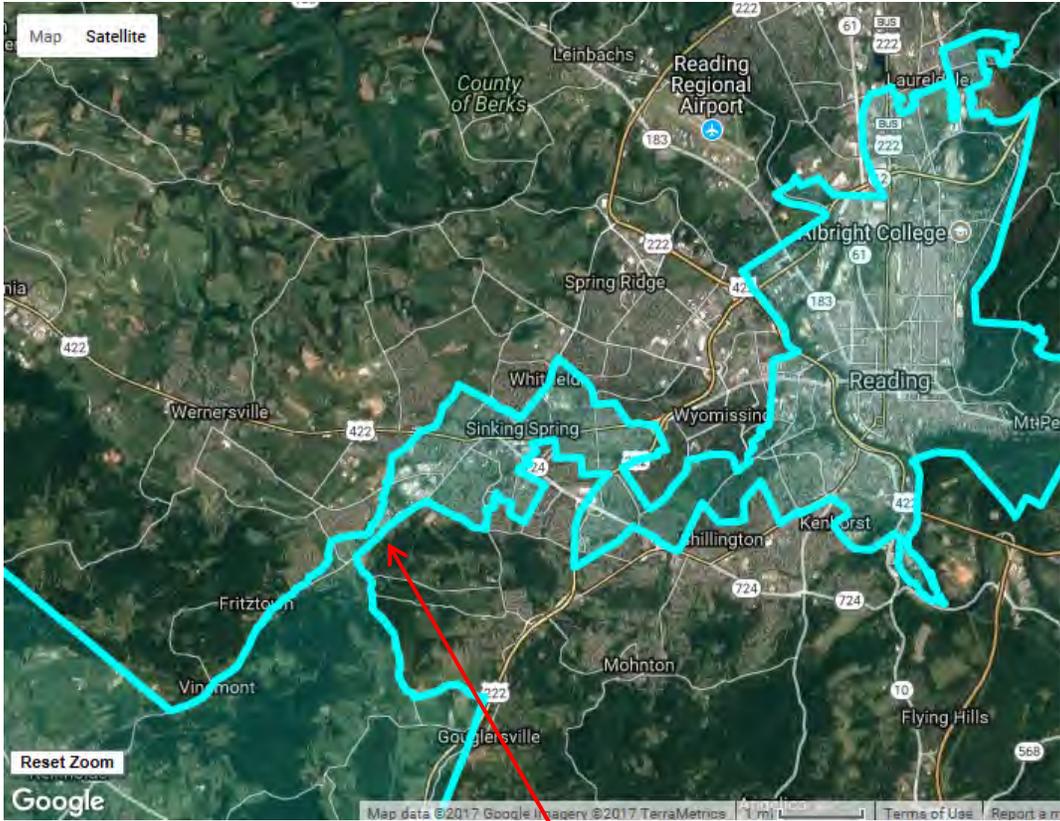
Berks County is itself divided into four different congressional districts and splintered more per-capita than any other area of the state. This district also contains parts of Cumru and Spring townships, both divided into three different congressional districts, with the former also divided at the census block level. Laureldale Township in Berks County, as well as Kennett Township in Chester County, are also subdivided down to the block level. The borough of Kennett Square is also corralled into this district by virtue of a land bridge that consists of nothing but a cemetery and an adjacent park. It should be noted that Kennett Square is the residence of former Congressman Joseph Pitts, a longtime Congressman who held office from 1997 until his retirement in 2016.

District 17
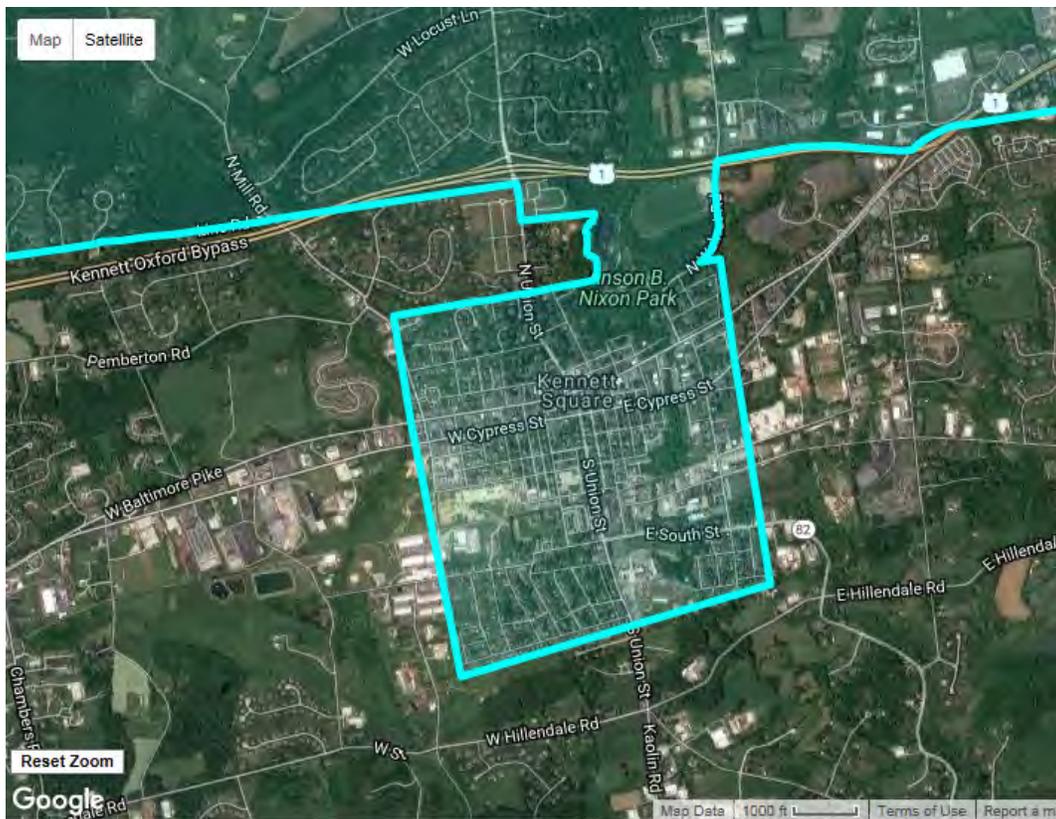
17th Congressional District
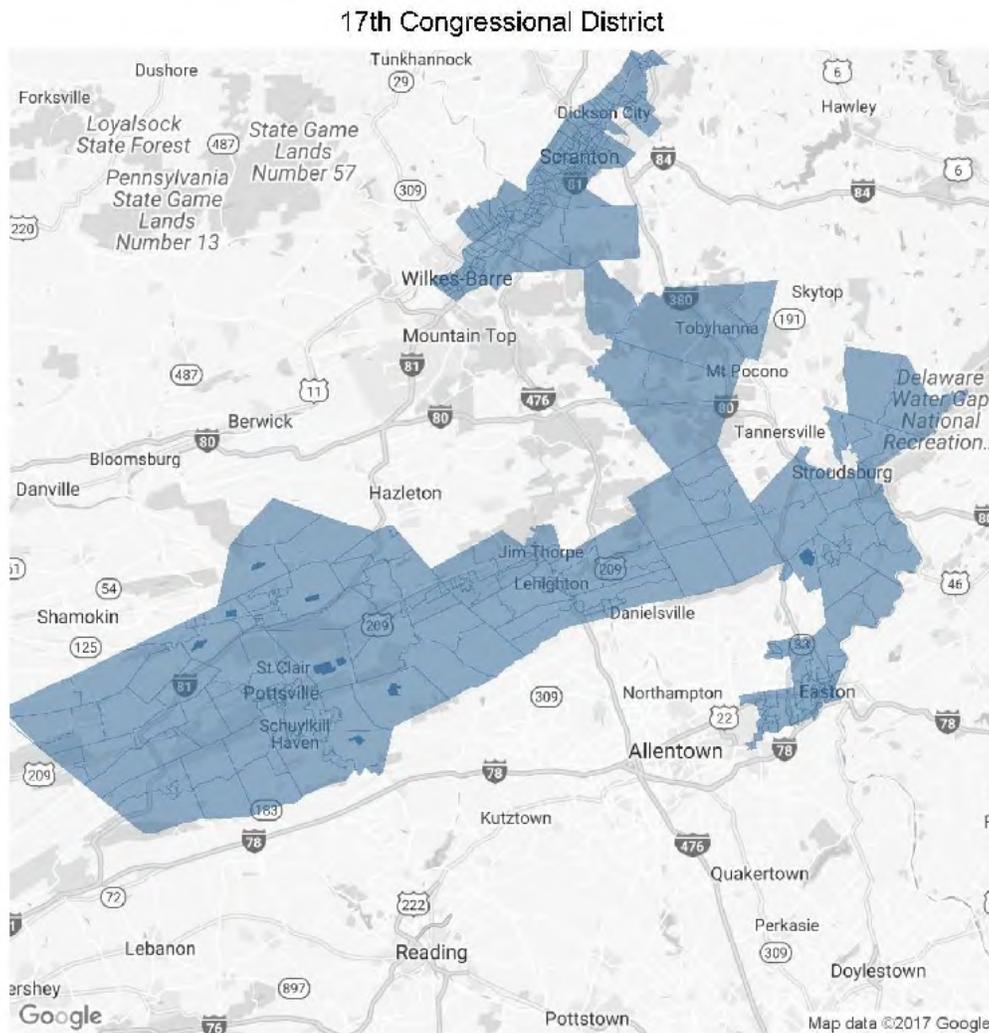
As previously discussed, the 17th Congressional District, located in the northeastern part of the state, appears designed to pack as many Democratic voters in it as possible. To accomplish this, part of the city of Bethlehem, in the southwest, and the entire city of Easton, in the southeast, have been removed from their traditional Lehigh Valley-based district (the 15th District). In order to drive from the Bethlehem-Easton appendage of this district to the other end in Schuylkill County, one would need to travel approximately 50 miles through the 15th District. At the north end of the district, Democratic voters in Wilkes-Barre and Scranton have been cracked from other districts and packed on in an outlying appendage.

17th Congressional District

District 18
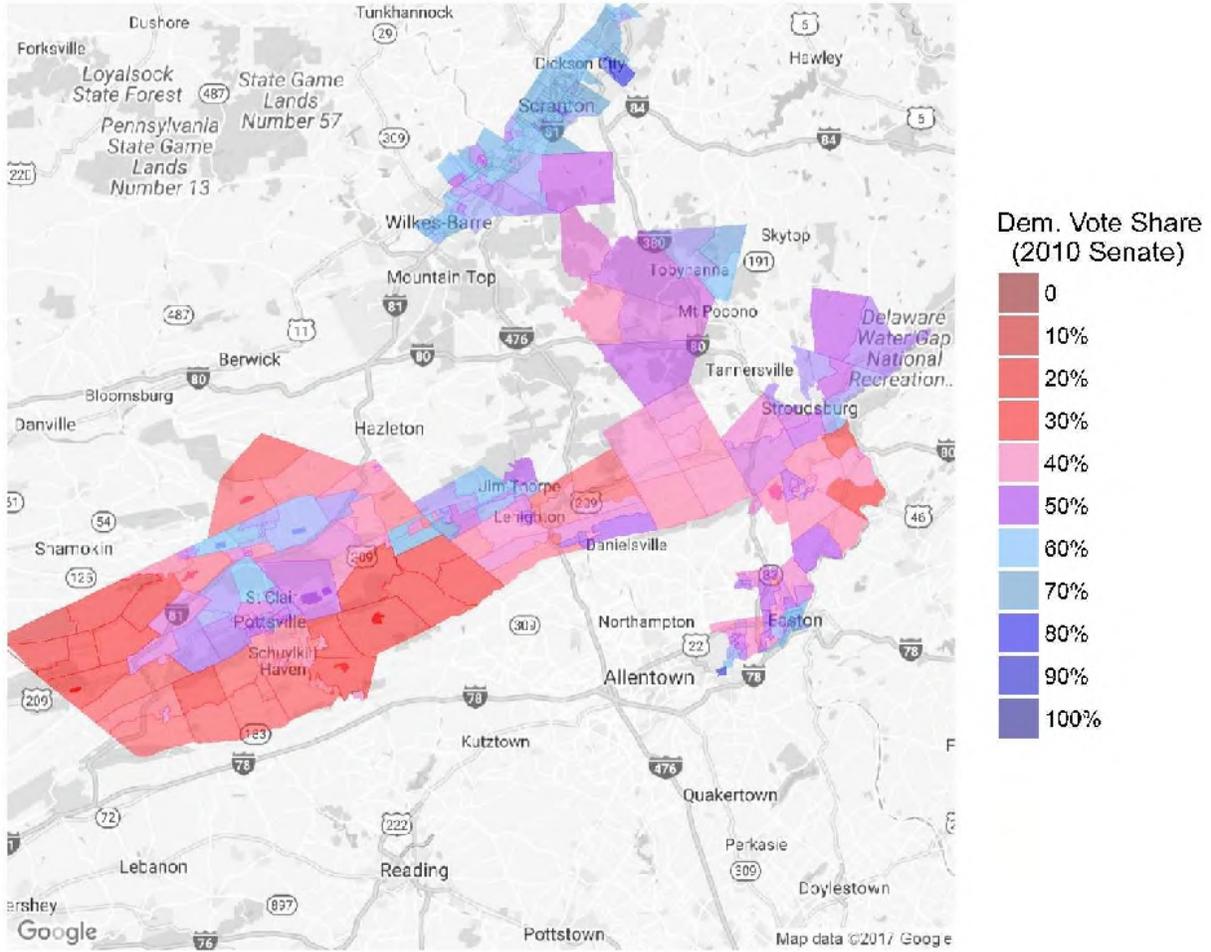
18th Congressional District
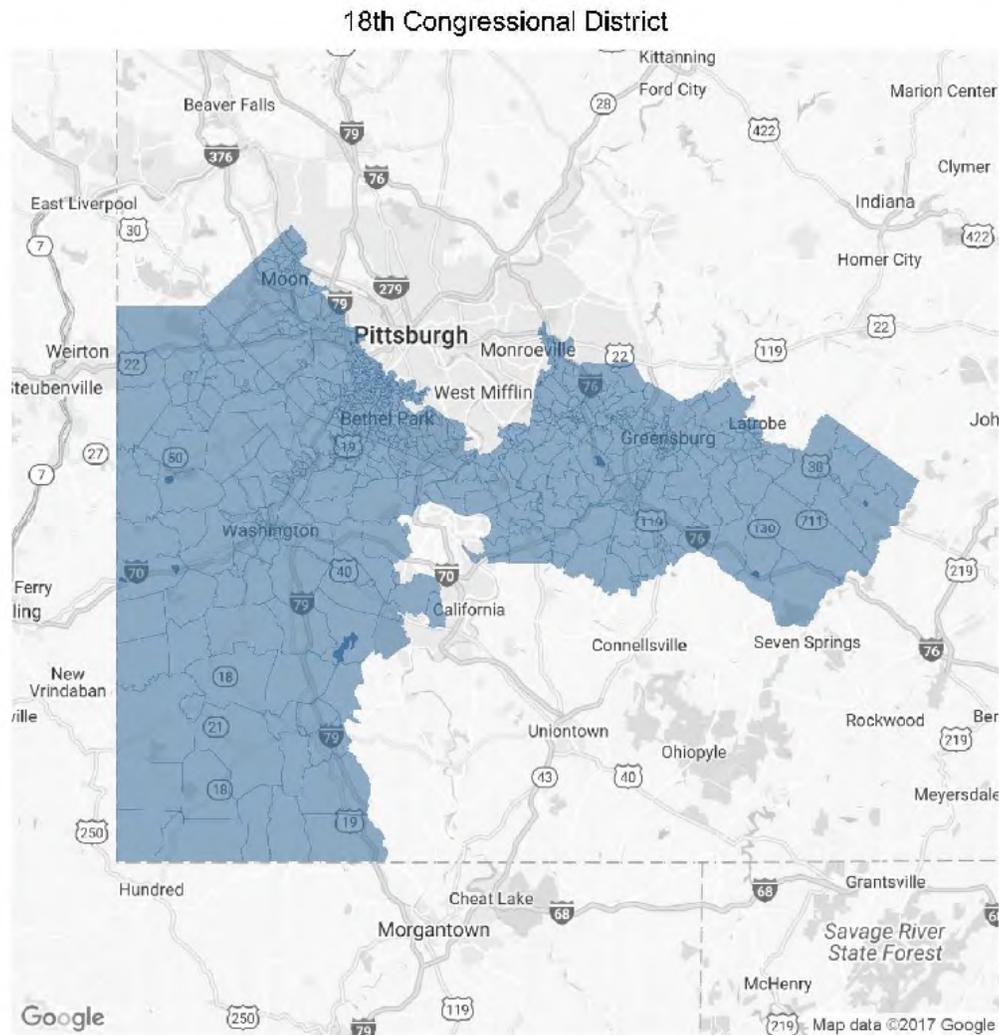
The final district in Pennsylvania is the eighth of the Commonwealth's 18 congressional districts that fails to contain even one complete county (the others being the 1st, 2nd, 6th, 7th, 13th, 14th, and 16th districts). The 18th District also contains five divided municipalities including the aforementioned Monroeville as well Whitehall Township, Allegheny County and Fallowfield, Washington County, both of which are subdivided down to the block level. Notably, the district was expanded southward since the last redistricting and now incorporates the area of Greene County that was part of the pre-2011 12th District. This change to the 18th District makes way for the newly drawn 12th District, which was shifted west in

56

such a way as to pair two Democratic incumbents in 2010, Jason Altmire and Mark Critz.

<center>***</center>

Assessing Pennsylvania's eighteen congressional districts on an individual basis allows one to witness the contortions required to produce this map so obviously designed to meet some particular end. Whether it is visually (with its bizarre shapes), or numerically (the number of splits that it produces for both counties and municipalities even down to the census block level), or practically (with portions of districts held together by steakhouses or mulch stores), this is a textbook example of a political gerrymander. Unfortunately, the best interests for many Pennsylvanians appear neglected, whether it is maintaining the integrity of their communities, or something as simple as the convenience of visiting the district office of their own member of the United States Congress.

APPENDIX[8]

Table A1: Split Counties, 1966-1970s

Count	Split Counties	Number of Districts Falling Within
1	Allegheny	4
2	Dauphin	2
3	Delaware	2
4	Fayette	2
5	Lehigh	2
6	Montgomery	2
7	Philadelphia	5

Table A2: Split Municipalities, 1966-1970

Count	Split Municipalities
1	Philadelphia
2	Pittsburgh

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[8] The Source for all Tables presented in this Appendix is the Pennsylvania Manual.

Table A3: Split Counties, 1970s

Count	Split Counties	Number of Districts Falling Within
1	Allegheny	6
2	Chester	2
3	Clarion	2
4	Cumberland	2
5	Delaware	2
6	Lebanon	2
7	Montgomery	3
8	Northumberland	2
9	Philadelphia	5

Table A4: Split Municipalities, 1970s

Count	Split Municipalities
1	Philadelphia
2	Pittsburgh
3	Telford *
4	Trafford *

* Denotes a municipality that crosses county lines.

Table A5: Split Counties, 1980s

Count	Split Counties	Number of Districts Falling Within
1	Allegheny	4
2	Armstrong	2
3	Beaver	2
4	Cambria	2
5	Carbon	2
6	Chester	2
7	Clearfield	2
8	Cumberland	2
9	Delaware	2
10	Lancaster	2
11	Lawrence	2
12	Monroe	3
13	Montgomery	3
14	Northumberland	2
15	Philadelphia	5
16	Westmoreland	2

Table A6: Split Municipalities, 1980s

Count	Split Municipalities
1	Philadelphia
2	Telford *
3	Tunnelhill *

* Denotes a municipality that crosses county lines.

Table A7: Split Counties, 1990s

Count	Split Counties	Number of Districts Falling Within
1	Allegheny	4
2	Armstrong	2
3	Butler	2
4	Centre	2
5	Chester	2
6	Clarion	2
7	Clearfield	3
8	Crawford	2
9	Cumberland	2
10	Delaware	3
11	Fayette	2
12	Lancaster	2
13	Lycoming	2
14	Monroe	2
15	Montgomery	5
16	Northumberland	3
17	Perry	2
18	Philadelphia	3
19	Westmoreland	3

Table A8: Split Municipalities, 1990s

Count	Split Municipalities
1	Adamstown *
2	Chester
3	East Hempfield
4	East Stroudsburg
5	Hampden
6	Lower Moreland
7	Philadelphia
8	Pottstown
9	Ridley
10	Sandy
11	Shippensburg *
12	Telford *
13	Trafford *
14	Upper Merion

* Denotes a municipality that crosses county lines.

Table A9: Split Counties, 2000s

Count	Split Counties	Number of Districts Falling Within
1	Allegheny	4
2	Armstrong	2
3	Berks	3
4	Butler	2
5	Cambria	2
6	Chester	3
7	Clearfield	2
8	Crawford	2
9	Cumberland	2
10	Delaware	2
11	Fayette	2
12	Indiana	2
13	Lackawanna	2
14	Luzerne	2
15	Lycoming	2
16	Mercer	2
17	Mifflin	2
18	Montgomery	6
19	Perry	2
20	Philadelphia	4
21	Somerset	2
22	Venango	2
23	Warren	2
24	Washington	2
25	Westmoreland	3

Table A10: Split Municipalities, 2000s

Count	Split Municipalities
1	Abington
2	Adamstown
3	Avalon
4	Baldwin
5	Bern
6	Brackinridge
7	Canonsburg
8	Carroll
9	Charleroi
10	Chartiers
11	Connelsville
12	Crafton
13	Darby
14	Dickson
15	Dunbar
16	Earl
17	East Bradford
18	East Deer
19	East Huntingdon
20	East Washington
21	Elizabeth
22	Emlenton
23	Etna
24	Fallowfield
25	Georges
26	Hempfield
27	Hermitage
28	Indiana
29	Jessup
30	Marlborough
31	Monroeville
32	Mt. Pleasant
33	Muhlenberg
34	North Strabane
35	North Union
36	North Versailles

37	O'Hara
38	Olyphant
39	Penn Hills
40	Philadelphia
41	Pitcairn
42	Plymouth
43	Reading
44	Ridley
45	Robinson
46	Salem
47	Sewickly
48	Shippensburg
49	South Buffalo
50	South Heidelberg
51	South Huntington
52	South Strabane
53	South Union
54	Southampton
55	Spring
56	Springhill
57	Swoyersville
58	Telford
59	Tinicum
60	Trafford *
61	Upper Dublin
62	Upper Moreland
63	Unity
64	Washington
65	White
66	Whitemarsh
67	Wilkins

* Denotes a municipality that crosses county lines.

Table A11: Split Counties, Current Map

Count	Split Counties	Number of Districts Falling Within
1	Allegheny	3
2	Berks	4
3	Cambria	2
4	Carbon	2
5	Chester	3
6	Clarion	2
7	Crawford	2
8	Cumberland	2
9	Dauphin	3
10	Delaware	2
11	Erie	2
12	Greene	2
13	Huntingdon	2
14	Lackawanna	2
15	Lancaster	2
16	Lawrence	2
17	Lebanon	2
18	Luzerne	2
19	Monroe	2
20	Montgomery	5
21	Northampton	2
22	Northumberland	2
23	Perry	2
24	Philadelphia	3
25	Somerset	2
26	Tioga	2
27	Washington	2
28	Westmoreland	4

Table A12: Split Municipalities, Current Map

Count	Split Municipalities
1	Archbald
2	Barr
3	Bethlehem
4	Caln
5	Carbondale
6	Chester
7	Cumru
8	Darby
9	East Bradford
10	East Carroll
11	East Norriton
12	Fallowfield
13	Glenolden
14	Harrisburg
15	Harrison
16	Hatfield
17	Hereford
18	Horsham
19	Kennett
20	Laureldale
21	Lebanon
22	Lower Alsace
23	Lower Gwynedd
24	Lower Merion
25	Mechanicsburg
26	Millcreek
27	Monroeville
28	Morgan
29	Muhlenberg
30	North Lebanon
31	Northern Cambria
32	Olyphant
33	Penn
34	Pennsbury
35	Perkiomen
36	Philadelphia

37	Piney
38	Plainfield
39	Plymouth Township
40	Ridley
41	Riverrsde
42	Robinson
43	Sadsbury
44	Seven Springs *
45	Shippen
46	Shippensburg *
47	Shirley
48	Spring
49	Springfield
50	Stroud
51	Susquehanna
52	Throop
53	Tinicum
54	Trafford *
55	Upper Allen
56	Upper Darby
57	Upper Dublin
58	Upper Gwynedd
59	Upper Hanover
60	Upper Merion
61	Upper Nazareth
62	West Bradford
63	West Hanover
64	West Norriton
65	Whitehall
66	Whitemarsh
67	Whitpain
68	Wyommising

* Denotes a municipality that crosses county lines.

**Table A13: Districts and Counties
That Contain Census Block Splits, Current Map**

District	Counties
2	Montgomery
3	Clarion
4	Dauphin
5	Clarion
	Huntingdon
	Tioga
6	Berks
	Lebanon
	Montgomery
7	Chester
	Montgomery
8	Montgomery
9	Cambria
	Huntingdon
	Washington
10	Lackawanna
	Northumberland
	Tioga
11	Dauphin
	Northumberland
12	Cambria
13	Montgomery
14	Allegheny
15	Lebanon
	Northampton
16	Berks
	Chester
17	Lackawanna
	Northampton
18	Allegheny
	Washington

November 27, 2017

I hereby certify that the foregoing statements are true and correct to the best of my knowledge, information, and belief. This verification is made subject to the penalties of 18 Pa.C.S. § 4904 relating to unsworn falsification to authorities.
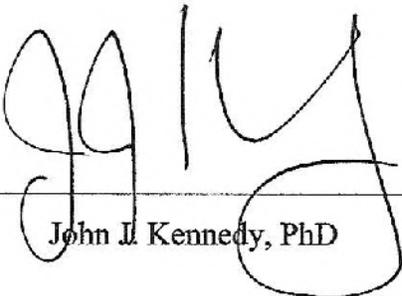
John J. Kennedy, PhD

Exhibit 1

JOHN J. KENNEDY

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WEST CHESTER UNIVERSITY FACULTY APPOINTMENT

- Full Professor and Tenured, 2017–current
- Associate Professor and Tenured, 2006–2017
- Assistant Professor, 2001–2006
- Adjunct Professor, 1997–2001

EDUCATION

- Doctor of Philosophy, Temple University, Political Science, May 1996
  Dissertation Title: "The State of the Pennsylvania Legislature in the 1990s"
  Fields of Study: American Politics, State and Local Government, Elections, Congress, Presidency, Public Opinion and the Media

- University of Houston
  Doctoral Student in Political Science
  Teaching Assistantship Grant

- Master in Public Administration, Kutztown University, May 1988

- Bachelor of Science Degree in Public Administration, Kutztown University, May 1984

RESEARCH EXPERIENCE

Books

- Kennedy, John J. "Pennsylvania Government and Politics." Cognella Academic Press. August 2017.

- Kennedy, John J. "Pennsylvania Elections, Statewide Contests from 1950–2014. Revised Edition." University Press of America, Inc., 2014.

- Kennedy, John J. "Pennsylvania Elections, Statewide Contests from 1950–2004." University Press of America, Inc., 2005.

- Kennedy, John J. "The Contemporary Pennsylvania Legislature." University Press of America, 1999.

- Kennedy, John J. "The Adolescent Family Life Act;" "The Danforth Act;" "The Hatch Act;" "The Smith-Hughes Act of 1917" and "The Smith–Lever Act of 1914." in *The Encyclopedia of Women in American Politics*. Oryx Press. Publication Date: November 1998.

Peer Reviewed Article
- Kennedy, John J. "Sometimes it Does Matter: The 2016 Presidential Primary in Pennsylvania" in *Commonwealth*. November 2016.

Book Review
- Kennedy, John J. in the *Pennsylvania Magazine of History and Biography*. "The Realignment of Pennsylvania Politics Since 1960: Two–Party Competition in a Battleground State." By Renee Lamis. April 2010.

INVITED PRESENTATIONS

- Keynote Speaker. 2015 Undergraduate Research at the Capitol–Pennsylvania (URC-PA) Poster Conference. Harrisburg, PA. March 3, 2015.

- Chair and Panelist at Plenary Panel on Redistricting in Pennsylvania. The Pennsylvania Political Science Association. Allentown, PA, March 30, 2012

- Panelist at Plenary Panel on Race and Religion in the 2008 Election. Pennsylvania Political Science Association. Elizabethtown, PA, March 27, 2009.

- The Capitol Centennial Commission presents 100 Years of Pennsylvania Political History. Responsible for discussing the political system of Pennsylvania for the years 1986-2006. October 2, 2006.

- Arbiter of Debate Criteria for Congressional Election in Delaware 2006.

NEWSPAPER EDITORIALS

- Subject: Pennsylvania's Status as a Swing State in Presidential Politics. Philadelphia Inquirer. October 30, 2012.

- Subject: Pennsylvania Senate Election, Sestak v. Toomey. Philadelphia Inquirer. October 30, 2010.

- Subject: Revisiting the Year of the Woman. The Morning Call. October 28, 1998.

- Columns and Viewpoints Editorial. Subject: United States Presidential Election. The Morning Call August 4, 1995.

- Columns and Viewpoints Editorial. Subject: Candidate Recruitment for Elections to the United States Senate. The Morning Call. April 21, 1994.

CONFERENCE PRESENTATIONS

- Paper Title: "Democratic Party Futility in U.S. Senate Elections in Pennsylvania: An Analysis of Voting Behavior in the Southwest." Pennsylvania Political Science Association Meeting. April 1–2, 2005.

- Paper Title: "Technology Enhancing Political Science: Overcoming Institutional Obstacles and Building Bridges for Change." With Dr. R. Lorraine Bernotsky. The American Political Science Association. Boston, MA. August 29–September 1, 2002.

- Paper Title: "Election 2000: Using Tracking Polls to Teach Undergraduate Research Methods." With Dr. R. Lorraine Bernotsky. The American Political Science Association. San Francisco, CA. August 30–September 2, 2001.

- Paper Title: "Suburban Migration and the Vote in Southeastern Pennsylvania: 1950-2000." With Dr. R. Lorraine Bernotsky. The Pennsylvania Political Science Association. Harrisburg, PA, April 6–7, 2001.

- Paper Title: "The Forgotten Ones: Electoral Experiences of the Defeated Candidates to the Pennsylvania Legislature." The Pennsylvania Political Science Association. Huntingdon, PA. April 3–4, 1998.

- Paper Title: "Candidate Recruitment in a Changing Environment: The Pennsylvania Legislature in the 1990s." The Northeastern Political Science Association. Philadelphia, PA. November 13–15, 1997.

- Panel Chair: "State Innovations: Models and Methods." The Northeastern Political Science Association. Philadelphia, PA. November 13–15, 1997

- Paper Title: "Role Orientations and Political Ideologies of Pennsylvania's Legislators." The Pennsylvania Political Science Association. Elizabethtown, PA. April 4–5, 1997.

- Paper Title: "Candidate Recruitment in a Changing Environment: The Pennsylvania Legislature 1994." The Pennsylvania Political Science Association. Easton, PA. April 11–12, 1996.

CONFERENCE CHAIR ACTIVITIES

- Panel Chair: Pennsylvania Politics. The Pennsylvania Political Science Association. Allentown, PA, March 30–31, 2012.

- Panel Chair: Pennsylvania Politics. The Pennsylvania Political Science Association. Harrisburg, PA, April 8–9, 2011.

- Panel Chair: Pennsylvania Politics. The Pennsylvania Political Science Association. Harrisburg, PA, March 26–27, 2010.

- Panel Chair: Pennsylvania Politics. The Pennsylvania Political Science Association. Elizabethtown, PA, March 27–28, 2009.

- Panel Chair: Pennsylvania Politics. The Pennsylvania Political Science Association. Harrisburg, PA, April 2–4, 2008.

- Panel Chair: Pennsylvania Politics. The Pennsylvania Political Science Association. Kutztown, PA, April 1–3, 2007.

MEDIA ANALYST

Newspapers

- Various Times in National (Washington Post, Los Angeles Times, Associated Press), Regional (Philadelphia Inquirer, Pittsburgh Tribune, Harrisburg Patriot, Allentown Morning Call), and local (Daily Local News, Pottstown Mercury)

Television and Radio

- KYW-Eyewitness News, Channel 3. Discussion of Polling and Presidential Campaign, October 27, 2016.

- WHYY–Philadelphia National Public Radio. Discussion of Congressional Elections. Philadelphia, PA. Taped. October 11, 2010.

- PBS12 Newscast. Discussion of Presidential Election. Taped on WCU Campus. October 10, 2008.

- WHYY–Philadelphia National Public Radio. Discussion of Presidential Election. Philadelphia, PA. Live. October 8, 2008.

- PBS12 Newscast. Pennsylvania Primary Coverage. Co-host and Analyst. Philadelphia, PA. Live. April 22, 2008.

- Al Jazeera English. Interview on Upcoming Pennsylvania Primary. Taped on WCU Campus. April 17, 2008.

- WHYY–Philadelphia National Public Radio. "Day to Day" Program. Discussion of Pennsylvania Primary. Philadelphia, PA. Taped Interview. April 14, 2008.

- PBS12 Newscast. Delaware Tonight. Analysis of Pennsylvania Elections. Wilmington, DE. Live. October 16, 2006.

- PBS12 Newscast. Delaware Tonight. Analysis of Polling and Election Results. Wilmington, DE. Live. November 5, 2004.

- WHYY–Philadelphia National Public Radio. Interview on Pennsylvania Congressional Elections. "BBC World Update" Program. Philadelphia, PA. Taped Interview. October 8, 2006.

- UMGA–TV. Book Chat. Interview and Discussion of Pennsylvania Elections Book. March 29, 2006

- WHYY–Philadelphia National Public Radio. Analysis of Pennsylvania Elections. Philadelphia, PA. Taped Interview. October 29, 2004.

- WHP Talk Radio 580. Analysis of Pennsylvania Elections. Harrisburg, PA. Taped Interview. October 29, 2004.

- WHYY Philadelphia National Public Radio. Analysis of Pennsylvania Elections. Philadelphia, PA. Taped Interview. October 5, 2004.

- PBS12 Newscast. Delaware Tonight. Analysis of Delaware Elections. Wilmington, DE. Live. September 28, 2004.

- WILM Radio Interview. Analysis of Delaware Elections. Wilmington, DE. Live Interview. September 28, 2004.

- PBS12 Newscast. Delaware Tonight. Analysis of Delaware Elections. Wilmington, DE. Live Interview. September 27, 2004.

- NBC–10 Live at Issue-Sunday Morning News Program. Philadelphia, PA. Live. November 24, 2002.

- NBC–10 Election Night Coverage. Philadelphia, PA. Live Broadcast. November 5, 2002.

- NBC–10 Newscast. Philadelphia, PA. Analysis of Pennsylvania, New Jersey and Delaware Elections. Live and Tape Broadcast. October 27, 2002.

- NBC–10 Newscast. Philadelphia, PA. Analysis of New Jersey Elections. Live and Tape Broadcast. October 20, 2002.

- NBC–10 Newscast. Philadelphia, PA. Analysis of Pennsylvania Elections. Tape Broadcast. October 15, 2000.

- NBC–10 Newscast. Philadelphia, PA. Analysis of Pennsylvania Elections. Tape Broadcast. October 13, 2002.

- Pennsylvania Cable Network. Harrisburg, PA. Booknotes. Tape Broadcast. March 10, 2000.

- WFMZ–69 Newscast. Allentown, PA. Report on New Hampshire Primary. February 2, 2000.

PUBLIC OPINION POLLING

- Political Analyst, 2008. West Chester Center for Social and Economic Research. Conducted 3 statewide surveys (2 Pennsylvania and 1 Delaware). With R. Lorraine Bernotsky.

- Political Analyst, 2006. West Chester Center for Social and Economic Research. Conducted 4 statewide surveys (3 Pennsylvania and 1 New Jersey). With R. Lorraine Bernotsky.

- Political Analyst, 2004. West Chester Center for Social and Economic Research. Conducted 4 statewide surveys (3 Pennsylvania and 1 Delaware). With R. Lorraine Bernotsky.

- Political Analyst, 2002. West Chester Center for Social and Economic Research. Conducted 5 statewide surveys (2 Pennsylvania, 1 New Jersey and 1 Delaware). With R. Lorraine Bernotsky.

- Political Analyst, 2000. West Chester Center for Social and Economic Research. Conducted 3 statewide surveys (Pennsylvania). With R. Lorraine Bernotsky.

GRANTS

- Faculty Research Grant, College of Business and Public Affairs. 2015.

TEXTBOOK CONSULTING

- CQ Press. *Governing States and Localities*. Kevin Smith and Alan Greenblatt. 2016.

UNIVERSITY-LEVEL SERVICE

- Political Analyst. Center for Social and Economic Research. 2001–2008

- Curriculum and Planning Committee 2006-2008, 2016–Present

- Committee for Action through Politics (CAP) Statewide Chair. APSCUF. 2004–2006.

- Statewide CAP Committee Vice-Chairperson. APSCUF. 2003–2004.

- WCU Representative on the CAP Committee. APSCUF. 2004–Present.

- WCU Legislative Chair. APSCUF. 2001–2004.

- Faculty Advisor. College Democrats. 2006–Present.

- Faculty Advisor. College Republicans. 2016–2017.

- Faculty Senate. Member. 2003–2006.

- Program Liaison. The Washington Center. 2003–Present.

- Faculty Advisor. Political Science Club. 2001–2006.

COLLEGE-LEVEL SERVICE

- Evaluation Committee Member, Dr. Jeffery Osgood for Promotion to Full Professor. 2015.

- Evaluation Committee Chair, Dr. Allison Turner for Tenure and Promotion to Associate Professor. 2014.

- Evaluation Committee Chair, Dr. Jeffery Osgood for Tenure and Promotion to Associate Professor. 2013.

- Evaluation Committee Chair, Dr. Jeremy Phillips for Tenure and Promotion to Associate Professor. 2011–2013 and 2016–current.

- Search Committee Member, Dr. Mark Davis for Tenure and Promotion to Associate Professor. 2013–2015.

- Search Committee Member, College of Business and Public Affairs, Assistant Dean, 2010.

- Search Committee Member, Master of Public Administration. Assistant Professor. 2012

- Commencement Marshall, 2001–2010.

DEPARTMENTAL-LEVEL SERVICE

- Internship Director and Co-Director. 2002–Present

- Director of the Legislative Fellowship Program. 2002–Present.

- Assessment Coordinator, Political Science Department. 2004–2007.

- Member of WCU Academic Advising Committee. 2002–2010.

- Advisor Liaison, Political Science Department. 2016–Present.

- Mayo Scholarship Selection Chair. 2007–Present.

- Jack Shea Scholarship Selection Chair. 2013–Present.

- Roy Reinard Scholarship Selection Chair. 2007–Present.

- Chair, Department Evaluation Committee. 2010–Present

- Search Committee. Political Science Department, Assistant Professor. 2014.

- Search Committee Political Science Department, Chair, Assistant Professor, 2010.

- Search Committee Political Science Department, Assistant Professor, 2005.

- Evaluation Committee Chair, Dr. Chris Stangl for Promotion to Associate Professor. 2014–2015.

- Evaluation Committee Member, Dr. Ashlie Delshad for Tenure and Promotion to Associate Professor. 2011–2015.

- Evaluation Committee Member, Dr. Chris Stangl for Tenure. 2006–2013.

COURSES TAUGHT AT WEST CHESTER UNIVERSITY

- PSC 100 Introduction to American Government

- PSC 325 Campaigns and Elections

- PSC 324 American Political Parties

- PSC 355 Congressional Politics

- PSC 370 Pennsylvania Politics

- PSC 371 State and Local Government

PROFESSIONAL AFFILIATIONS

- Commonwealth: A Journal of Pennsylvania Policy and Politics. Editorial Advisory Board Member.

- Pennsylvania Political Science Association. Member, 1995–current.

- Pennsylvania Political Science Association, Executive Board Member. 2009–2014.

- Pennsylvania Policy Forum. Charter Member.

AWARDS

- WCU Honors College and Honors Student Association. Outstanding Faculty READ Poster. 2016.

- WCU Honors College. Outstanding Faculty Recipient. 2011.

- "Recognition" presented by Lieutenant Governor Catherine Baker Knoll. 2006.

- Featured in West Chester Magazine article, Fall 2014.

EXHIBIT C

UNITED STATES DISTRICT COURT
EASTERN DISTRICT OF PENNSYLVANIA

LOUIS AGRE, et al.,   )
)   2:17-cv-04392 (MMB)
          Plaintiffs,   )
)
v.   )
)   December 6, 2017
THOMAS W. WOLF, et al.,   )
)   Philadelphia, PA
)
          Defendants.   )   P.M. Session

               TRANSCRIPT OF TRIAL DAY 3
        BEFORE THE HONORABLE MICHAEL M. BAYLSON,
           D. BROOKS SMITH AND PATTY SHWARTZ
              UNITED STATES DISTRICT JUDGE
APPEARANCES:

For the Plaintiffs: ALICE W. BALLARD, ESQUIRE
                            Law Office of Alice W. Ballard, PC
                            123 S. Broad Street
                            Suite 2135
                            Philadelphia, PA 19109

                            THOMAS H. GEOGHEGAN, ESQUIRE
                            SEAN MORALES-DOYLE, ESQUIRE
                            Despres, Schwartz & Geoghegan, LTD
                            77 W. Washington Street
                            Suite 711
                            Chicago, IL 60602

                            BRIAN A. GORDON, ESQUIRE
                            Gordon & Ashworth, PC
                            One Belmont Avenue
                            Suite 519
                            Bala Cynwyd, PA 19004

For the Defendants: BRIAN S. PASZAMANT, ESQUIRE
                            Blank Rome
                            One Logan Square
                            Philadelphia, PA 19103

                            KATHLEEN A. GALLAGHER, ESQUIRE
                            Cipriani & Werner, PC
                            650 Washington Road
                            Suite 700
                            Pittsburgh, PA 15228

I N D E X

1   Q   So you were working for the Attorney of the General

2   Assembly in your opinion, correct?

3   A   Yes.

4   Q   Were you given access to the General Assembly to prepare

5   your report?

6   A   Well, I gather that some, it came together quickly. But I

7   gather that some of the data came from the General Assembly so

8   I didn't go to Harrisburg and actually track down the people.

9   It was passed through counsel to me.

10   Q   So you talked to an attorney, right?

11   A   Yes.

12   Q   And you didn't talk to a single Legislator, did you?

13   A   No, I didn't.

14   Q   You didn't talk to Senator Scarnati?

15   A   No.

16   Q   And you understand that Mr. Torchinsky represents Senator

17   Scarnati, right?

18   A   Oh, yes.

19   Q   You didn't talk to Representative Turzai either, did you?

20   A   No.

21   Q   Did you talk --

22   A   I did read the deposition.

23   Q   Did you talk to Erik Arneson?

24   A   No.

25   Q   Did you talk to a Mr. Schaller?

1   A   No.

2   Q   Did you talk to a Mr. Memmi?

3   A   I did not talk to Mr. Memmi, no.

4   Q   Do you know who Mr. Memmi is?

5   A   I do know who he is.

6   Q   Can you tell the Court who Mr. Memmi is?

7   A   He advises counsel and advises Mr. Torchinsky in this

8   case.

9   Q   If you knew that Mr. Memmi was the only person charged

10   with drawing the contours of the maps in the redistricting bill

11   of the Senate of 2011 redistricting map that was introduced in

12   Senate Bill 1249, do you think it would be important to get his

13   opinion as to what the intent was?

14   A   Mr. Memmi's opinion? Yes.

15   THE COURT: How do you spell that?

16   MR. PERSOON: M E M M I.

17   Q   Now you testified that on the basis of Table 6 that if

18   this was meant to be a gerrymander it's pretty incompetent,

19   correct?

20   A   Yes.

21   Q   What if this, you've also in your report and in your

22   testimony talked a little bit about incumbency protection,

23   right?

24   A   Yes.

25   Q   What's the general boost that an incumbent has over a

EXHIBIT D

Fall 2017
Curriculum Vitae of James G. Gimpel
Department of Government and Politics
University of Maryland
College Park, MD 20742
(301)-405-7929 (office)
jgimpel AT umd.edu

Personal:

U.S. Citizen; Married, two children.
Current residence: Columbia, Maryland

Current Position:

University of Maryland - College Park.

Full Professor, August 2001-present.
Editor, *American Politics Research*, 2003-2011 (eight years)

Associate Professor with tenure, August 1997-August 2001.
Assistant Professor, January 1992-August 1997.

Education:

University of Chicago. Ph.D. Political Science, 1990.
University of Toronto. M.A. Political Science, 1985.
Drake University. B.A. with honors. Political Science, 1984.

Books:

► *Our Patchwork Nation: The Twelve Community Types that Make Up Our Nation* (Penguin, 2010) with Dante Chinni.

► *Cultivating Democracy: Civic Environments and Political Socialization in America* (Brookings Institution Press, 2003) with J. Celeste Lay and Jason E. Schuknecht.

► *Patchwork Nation: Sectionalism and Political Change in American Politics* (University of Michigan Press, 2003) with Jason E. Schuknecht.

► *Separate Destinations: Migration, Immigration and the Politics of Places* (University of Michigan Press, 1999).

► *The Congressional Politics of Immigration Reform* (Allyn and Bacon, 1999) with James R. Edwards, Jr.

► *National Elections and the Autonomy of American State Party Systems* (University of Pittsburgh Press, 1996).

► *Fulfilling the Contract: The First 100 Days* (Allyn and Bacon, 1996). Published in hardcover under the title: *Legislating the Revolution: The Contract with America in its First 100 Days.*

Articles in Peer Reviewed Journals:

► "Political Fit as a Component of Neighborhood Preference and Satisfaction." with Iris Hui. *City and Community* Accepted and forthcoming (2018).

► "Inadvertent and Intentional Partisan Residential Sorting." with Iris Hui. *Annals of Regional Science* 58: 3: (2017) 441-468.

► "Seeking Compatible Neighbors: Partisan Composition, Neighborhood Selection and Residential Sorting." with Iris Hui. *Political Geography* 48: 4: (2015) 130-142.

► "Business Interests and the Party Coalitions: Industry Sector Contributions to U.S. Congressional Campaigns." with Frances E. Lee and Michael Parrott. *American Politics Research* 42: 6: (2014) 1034-1076.

► "Voter Migration and the Geographic Sorting of the American Electorate." with Wendy K. Cho and Iris Hui. *Annals of the Association of American Geographers* 103: 4: (2013) 856-870.

► "The Distributive Politics of the Federal Stimulus: The Geography of the ARRA of 2009." with Frances E. Lee and Rebecca U. Thorpe. *Political Science Quarterly* 127: 4: (2012) 567-596.

► "Do Robotic Calls from Credible Sources Influence Voter Turnout or Vote Choice? Evidence from a Randomized Field Experiment." with Daron R. Shaw, Alan Gerber and Donald P. Green. *Journal of Political Marketing* 11: 4: (2012) 241-249.

► "The Tea Party Movement and the Geography of Collective Action." with Wendy K. Cho and Daron R. Shaw. *Quarterly Journal of Political Science* 7: 2: (2012) 105-133.

► "GIS and the Spatial Dimensions of American Politics." with Wendy K. Cho. *Annual Review of Political Science* 15: (2012) 443-460*.*

► "What if We Randomized the Governor's Schedule? Evidence on Campaign Appearance Effects from a Texas Experiment." with Daron R. Shaw. *Political Communication* 29: 2: (2012) 137-159.

► "When War Hits Home: The Geography of Military Losses and Support for War in Time and Space." with Scott L. Althaus and Brittany H. Bramlett. *Journal of Conflict Resolution* 56: 3: (2012) 382-412.

► "Ecologies of Unease: Geographic Context and National Economic Evaluations." with Andrew Reeves. *Political Behavior* 34: 3: (2012): 392-420.

► "How Large and Long-lasting Are the Persuasive Effects of Televised Campaign Ads? Results from a Randomized Field Experiment." with Alan S. Gerber, Donald P. Green and Daron R. Shaw. *American Political Science Review* 105: 1: (2012) 135-150.

► "The Political Ecology of Opinion in Big-Donor Neighborhoods." with Brittany H. Bramlett and Frances E. Lee. *Political Behavior* 33: 4: (2011) 565-600.

► "Rough Terrain: Spatial Variation in Contributions of Time and Money to an Election Campaign." with Wendy K. Cho. *American Journal of Political Science* 54: 1: (2010) 74-89.

► "Media Supply, Audience Demand and the Geography of News Consumption in the United States." with Scott L. Althaus and Anne M. Cizmar. *Political Communication* 26: 3: (2009) 249-277.

► "Political Socialization and Reactions to Immigration-Related Diversity in Rural America." with J. Celeste Lay. *Rural Sociology* 73: 2: (2008) 180-204.

► "The Check is in the Mail: Interdistrict Funding Flows in Congressional Elections." with Frances E. Lee and Shanna Pearson-Merkowitz. *American Journal of Political Science* 52: 2: (2008) 373-394

► "Distance-Decay in the Political Geography of Friends-and-Neighbors Voting." with Kimberly Karnes, John McTague and Shanna Pearson-Merkowitz. *Political Geography* 27: 2 (2008) 231-252.

Articles in Peer Reviewed Journals (cont'd.):

► "The Battleground vs. the Blackout States: Behavioral Implications of Modern Presidential Campaigns." with Karen M. Kaufmann and Shanna Pearson-Merkowitz. *Journal of Politics* 69: 3 (2007) 786-797.

► "Prospecting for (Campaign) Gold." with Wendy K. Cho. *American Journal of Political Science* 51: 2 (2007) 255-268.

► "Spatial Surges in Arab American Voter Registration." with Wendy K. Cho and Tony Wu. *Political Geography* 26: 3 (2007) 330-351.

► "Election Year Stimuli and the Timing of Voter Registration." with Joshua J. Dyck and Daron R. Shaw. *Party Politics* 13: 3 (2007) 347-370.

► "Clarifying the Role of Socioeconomic Status in Political Participation: Policy Threat and Arab American Mobilization." with Wendy K. Cho and Tony Wu. *Journal of Politics* 68: 4 (2006) 977-991.

► "The Political Geography of Campaign Contributions in American Politics." with Frances E. Lee and Joshua Kaminski. *Journal of Politics* 68: 3 (2006) 626-639.

► "Residential Concentration, Political Socialization and Voter Turnout." with Wendy K. Cho and Joshua J. Dyck. *Journal of Politics* 68: 1 (2006) 156-167.

► "Location, Knowledge and Time Pressures in the Spatial Structure of Convenience Voting." with Joshua J. Dyck and Daron R. Shaw. *Electoral Studies* 25: 1 (2006) 35-58.

► "Distance, Turnout and the Convenience of Voting." with Joshua J. Dyck. *Social Science Quarterly* 86: 3 (2005) 531-548.

► "Registrants, Voters and Turnout Variability Across Neighborhoods." with Joshua J. Dyck and Daron R. Shaw. *Political Behavior* 26:4 (2004) 343-375.

► "The Persistence of White Ethnicity in New England Politics," with Wendy K. Cho. *Political Geography* 23: 8 (2004) 821-832.

► "Turnout and the Local Age Distribution: Examining Political Participation Across Space and Time." with Irwin L. Morris and David R. Armstrong. *Political Geography* 23:1 (2004) 71-95

► "Political Participation and the Accessibility of the Ballot Box." with Jason E. Schuknecht. *Political Geography* 22: 4 (2003) 471-488.

► "A Promise Fulfilled? Open Primaries and Representation." with Karen M. Kaufmann and Adam Hoffman. *Journal of Politics* 65: 2 (2003) 457-476.

► "Reconsidering Regionalism in American State Politics." with Jason E. Schuknecht. *State Politics and Policy Quarterly* 2: 4 (2002) 325-352.

► "Political and Demographic Foundations for Sectionalism in State Politics: the Connecticut Case." with Jason E. Schuknecht. *American Politics Research* 30: 2 (2002) 193-213.

► "Interstate Migration and Electoral Politics," with Jason E. Schuknecht. *Journal of Politics* 62:1 (2001) 207-231.

► "Prejudice, Economic Insecurity, and Immigration Policy," with Peter F. Burns. *Political Science Quarterly* 115: 2 (2000) 201-225.

Articles in Peer Reviewed Journals (cont'd.):

► "Contemplating Congruence in State Party Systems," an author-meets-critic exchange focusing on my 1996 book on state elections. *American Politics Quarterly* 27: 1 (1999) 133-140.

► "Self-Interest, Symbolic Politics and Attitudes Toward Gun Control," with Robin M. Wolpert. *Political Behavior* 20:3 (1998) 241-262.

► "Packing Heat at the Polls: Gun Ownership as a Politically Salient Trait in State and National Elections," *Social Science Quarterly* 79:3 (1998) 634-648.

► "Information, Recall and Accountability: The Electorate's Response to the Clarence Thomas Nomination," with Robin M. Wolpert. *Legislative Studies Quarterly* 22:4 (1997) 515-525.

► "Candidate Character vs. the Economy in the 1992 Election," with Kathryn M. Doherty. *Political Behavior* 19:3 (1997) 213-222.

► "Forecasts and Preferences in the 1992 Presidential Election," with Diane Hollern Harvey. *Political Behavior* 19:2 (1997) 157-175.

► "Opinion-Holding and Public Attitudes Toward Controversial Supreme Court Nominees." with Robin M. Wolpert. *Political Research Quarterly* 49: 1 (1996) 163-176.

► "Rationalizing Support and Opposition to Supreme Court Nominations: The Role of Credentials." with Robin M. Wolpert. *Polity* 28: 1 (1995) 67-82.

► "Understanding Court Nominee Evaluation and Approval: Mass Opinion in the Bork and Thomas Cases." With Lewis S. Ringel. *Political Behavior* 17: 1 (1995) 135-153.

► "District Conditions and Primary Divisiveness in Congressional Elections." with Paul S. Herrnson. *Political Research Quarterly* 48: 1 (1995) 117-134.

► "Reform-Resistant and Reform-Adopting Machines: The Electoral Foundations of Urban Politics 1910-1930," *Political Research Quarterly* 46: 2 (1993) 371-382.

Chapters in Edited Books:

► "Sampling for Studying Context: Traditional Surveys and New Directions." in R. Michael Alvarez and Lonna Atkeson, eds. *Oxford Handbook of Polling and Polling Methods*. (New York, NY: Oxford University Press, 2016).

► "State Politics and Political Culture." in Joshua J. Dyck and Richard G. Niemi, eds. *Guide to State Politics and Policy*. (Washington, DC: CQ Press, 2013)

► "Political Socialization and Religion." with Shanna Pearson-Merkowitz. in Corwin Smidt, ed. *The Oxford Handbook of Religion and Politics* (New York: Oxford University Press, 2009).

► "Policies for Civic Engagement Beyond the Schoolyard." With Shanna Pearson-Merkowitz. in Peter Levine and James Youniss, eds. *Engaging Young People in Civic Life.* (Nashville, TN: Vanderbilt University Press, 2009).

► "Accounting for the Urban-Rural Gap in American Electoral Politics." With Kimberly A. Karnes. in Laura Olson and John C. Green, eds. *Beyond Red State, Blue State: Voting Gaps in American Politics* (Upper Saddle River, NJ: Prentice Hall, 2007).

Chapters in Edited Books (cont'd.):

► "The Geography of Electioneering: Campaigning for Votes and Campaigning for Money." with Frances E. Lee. in John Samples and Michael McDonald, eds. *The Marketplace of Democracy: Electoral Competition and American Politics* (Washington, DC: Brookings Institution Press, 2006).

► "Political Environments and the Acquisition of Partisanship." with J. Celeste Lay. in Alan Zuckerman, ed. *The Social Logic of Politics* (Philadelphia, PA: Temple University Press, 2005).

► "The Politics of Election Reform in Maryland." with Joshua J. Dyck, in Daniel Palazzolo and James W. Ceasar, eds. *Election Reform: Politics and Policy* (Lanham, MD: Lexington Books, 2004).

► "The Structure of Public Support for Gun Control: The 1988 Battle Over Question 3 in Maryland," with Robin M. Wolpert. in John Bruce and Clyde Wilcox (eds.) *The Changing Politics of Gun Control* (Lanham, MD: Rowman & Littlefield, 1998).

► "Equilibrium Cycles in Grassroots Mobilization and Access," in Paul S. Herrnson, Ronald Shaiko and Clyde Wilcox (eds.) *The Interest Group Connection* (Chatham, NJ: Chatham House, 1998).

► "The Rise and Demise of a Lead PAC," in Robert Biersack, Paul S. Herrnson and Clyde Wilcox (eds.) *Risky Business: PAC Decisionmaking and Strategy in 1992.* (Armonk, NY: M.E. Sharpe, 1994). 56-62.

► "Congress and the Coordination of Public Assistance," in Edward T. Jennings and Neal Zank (eds.) *Welfare System Reform*. (Westport, CT: Greenwood Press, 1993). 33-42.

Grants and Awards:

► Hoover Institution, National Fellowship 2012-2013.

► Knight Foundation Grant, 2007-2011, $60,000 (by contract via D. Chinni).

► CIRCLE via The Pew Charitable Trusts, 2004-2005, $35,000.

► CIRCLE via The Pew Charitable Trusts, 2002-2003, $33,000.

► Ahmanson Community Trust Foundation, 2001-2003, $100,000.

► William T. Grant Foundation Research Grant, 2001-2003, $102,000.

► John M. Olin Foundation Policy Studies Grant, 1998, $30,000.

► Visiting Fellow, Congress Assessment Project, Washington, DC, 1995, $7,000.

► Summer Research Award, Graduate Research Board, University of Maryland, 1995, $4,500.

► University of Chicago Graduate Fellowship 1986-1990.

Magazine Articles, Opinion Editorials, Book Reviews:

◦ "Where are the Working Class Republicans and Is There Something the Matter with Them?" *Extensions*: A Journal of the Carl Albert Congressional Research and Studies Center. 2015 (Winter): 6-11.

◦ "The 12 States of America." with Dante Chinni. *The Atlantic Monthly*. 307: 3 (April 2011): 70-81.

◦ "Presidential Voting and the Local Variability of Economic Hardship." with Wendy K. Cho. *The Forum*. 7: 1: 1-24.

Magazine Articles, Opinion Editorials, Book Reviews (cont'd):

○ "A Political Powerhouse in Search of a Home." with Wendy K. Cho. *Asian American Policy Review*. 17: (2008) 155-161.

○ "Etats-Unis Election Présidentielle: Le Dessous des Cartes," *Alternatives Internationionales*. December 2007. 10-14.

○ "Pay Attention to Asian American Voters." with Wendy K. Cho. *Politico*. May 28, 2007 Opinion-Editorial posted on-line at http://www.politico.com/news/stories/0507/4213.html

○ "The Rural Side of the Urban-Rural Gap." with Kimberly A. Karnes. *P.S.: Political Science & Politics* 39: 3 (2006) 467-472.

○ "The Federalism Flip-Flop: Democrats Now Argue for States' Rights." Opinion Editorial in the *Boston Globe*. Sunday, December 19, 2004, Political Play.

○ "Getting out the Asian-Pacific American Vote." with Wendy K. Cho. *Campaigns & Elections*. (July 2004) 44-45.

○ "Computer Technology and Getting Out the Vote: New Targeting Tools." *Campaigns & Elections*. (August 2003) 39-40.

○ Review of Donald Green, Bradley Palmquist and Eric Schickler. Partisan Hearts and Minds: Political Parties and the Social Identities of Voters. In APSR's *Perspectives on Politics.* (September 2003) 606-607.

○ "Setting Different Courses: Along the Potomac, A Political and Philosophical Divide," with Jason E. Schuknecht. Opinion Editorial in *The Washington Post*. Sunday, January 21, 2001, Outlook Section.

○ "We Shall Finally Overcome, By Exposure," with Jason E. Schuknecht. Opinion Editorial in *The Baltimore Sun* Wednesday, September 6, 2000, p. 17A.

○ Review of George Borjas' Heaven's Door: Immigration Policy and the American Economy. *Political Science Quarterly* 115: 1: (Spring 2000) 145-146.

○ "Maryland's Topsy-Turvy Politics: A Step Up for a Party Coming Back to Life," Opinion Editorial in *The Washington Post*. Sunday, October 17, 1998, Outlook Section.

○ Review of John Bader's Taking the Initiative. *Political Science Quarterly* 112:4: (Winter 1997-98) 692-693.

○ Review of Philip Klinkner's The Losing Parties. *Journal of Politics* 58: (1996) 245-246.

○ Review of Ralph Goldman's The National Party Chairmen and Committees. *American Political Science Review* 86: (1992) 237-238.

○ Review of Mark Bisnow's In the Shadow of the Dome. *American Political Science Review* 85: (1991) 630-631.

○ "Congressional Oversight of Welfare and Work." *Public Welfare* 49: (1991) 8-11.

Research in Progress or Under Review:

○ Gimpel, James G. 2017. "Voicing Grievances to the Consumer Financial Protection Bureau." Submitted for review.

Conference Participation (recent):

○ "The Variable Development of Partisanship within the South, 1940-1966." with Nathan Lovin. Paper presented at the annual meeting of the American Political Science Association, September 1-4, 2016, Philadelphia, PA.

○ "Recruiting the Best Candidate for the Job: Candidate Dyads and Congressional Election Outcomes." with Kristina Miler and Charles Hunt. Paper presented at the annual meeting of the Midwest Political Science Association, April 8-10, 2016, Chicago, IL.

○ "Racial Context as a Stimulus to Campaign Contributing." with James Glenn. Paper presented at the annual meeting of the Midwest Political Science Association, April 8-10, 2016, Chicago, IL.

○ "Political Implications of Residential Mobility and Stasis on the Partisan Balance of Locales." with Wendy Cho and Caroline Carlson. Paper presented at the annual meeting of the American Political Science Association, August 28-September 1, 2014, Washington, DC.

○ "Political Evaluations of Neighborhoods and their Desirability: Experimental Evidence." with Iris Hui. Paper presented at the annual meeting of the American Political Science Association, August 30-September 1, 2013. Chicago, Illinois.

○ "Business Interests and the Party Coalitions: Industry Sector Contributions to U.S. Congressional Campaigns," with Frances Lee and Mike Parrott. Paper presented at the annual meeting of the Midwest Political Science Association, April 12-15, 2012. Chicago, Illinois.

○ "Local Age Distributions and Ideological Extremism in American Politics," with Brittany Bramlett. Paper presented at the annual meeting of the American Political Science Association, September 1-4, 2011. Seattle, Washington.

○ "The Geography of Tea: Strategic Activism or Expressive Protest?" with Wendy K. Cho and Daron R. Shaw. Paper presented at the annual meeting of the Midwest Political Science Association, March 30-April 3, 2011. Chicago, Illinois.

○ "The Distributive Politics of the Federal Stimulus: The Geography of the ARRA of 2009," with Frances E. Lee and Rebecca Thorpe. Paper presented at the annual meeting of the American Political Science Association, September 1-4, 2010. Washington, DC.

○ "Migration Decisions and Destinations: Evidence for Political Sorting and Mixing," with Iris Hui. Paper presented at the annual meeting of the Midwest Political Science Association, April 22-22, 2010. Chicago, Illinois.

○ "Ecologies of Unease: Geographic Context and National Economic Evaluations." with Andrew Reeves and Wendy Cho. Paper presented at the annual meeting of the American Political Science Association, September 3-6, 2009. Toronto, Ontario.

○ "When War Hits Home: The Geography of Military Losses and Support for War in Time and Space." with Scott L. Althaus and Brittany H. Bramlett. Paper presented at the annual meeting of the American Political Science Association, September 3-6, 2009. Toronto, Ontario.

○ "The Political Ecology of Opinion in Big-Donor Neighborhoods." with Brittany H. Bramlett and Frances E. Lee. Paper presented at the annual meeting of the Midwest Political Science Association, April 2-4, 2009. Chicago, IL.

○ "Regional Migration Flows and the Partisan Sorting of the American Electorate." with Wendy K. Cho and Iris Hui. Paper presented at the annual meeting of the Midwest Political Science Association, April 2-4, 2009. Chicago, IL.

Ph.D. Dissertation:

◦   Field: American Government. Subfield: Political Behavior

◦   Title: "Competition Without Cohesion: Studies in the Electoral Differentiation of State
    and National Party Systems."

   Committee: Mark Hansen, Henry E. Brady, Gary Orfield, and J. David Greenstone (deceased)

Teaching:

◦   Courses: Campaigns and Elections; American Voting Behavior; Immigrants and Immigration Policy;
    State Politics; U.S. Congress; Public Opinion; Statistics; Linear Models; GIS for Social Science
    Research; Intermediate GIS for Social Science Research; Spatial Statistics.

◦   Awards: University Excellence in Mentorship and Teaching Award, 1999.
    Panhellenic Association Outstanding Teacher Award, 1994.

Ph.D. Students and Placements

   Michael Parrott, member (APSA Congressional Fellow, 2016)
   Stephen Yoder, chair (Government Accountability Office, 2014)
   Heather Creek, chair (Pew Research Center, 2013)
   Daniel Biggers, member (Yale Post-Doc 2012; moved to tt UC-Riverside, 2014)
   Brittany Bramlett, chair (tt Albright College, 2012, moved to non tt Georgia 2014)
   Rebecca Thorpe, member (tt University of Washington, 2010)
   Kimberly Karnes, chair (tt Old Dominion, 2010)
   Shanna Pearson-Merkowitz, member (tt University of Rhode Island, 2009, tenured)
   Laurence O'Rourke, chair (ICF Research 2008)
   Joshua Dyck, chair (tt University of Buffalo, 2006 tenured, moved to UM, Lowell)
   Laura Hussey, chair (tt University of Maryland, Baltimore County, 2006 tenured)
   Richard Longoria, chair (tt Cameron University, 2006, moved to Texas A&M Brownsville 2014)
   Adam Hoffman, member (tt Salisbury University, 2005, tenured)
   Regina Gray, member (Department of Housing and Urban Development, 2005)
   J. Celeste Lay, chair (tt Tulane University, 2004, tenured)
   Atiya Stokes, member (tt Florida State University, 2004, moved to Bucknell, tenured)
   Thomas Ellington, member (tt Wesleyan College, 2004, tenured)
   Timothy Meinke, member (tt Lynchburg College, 2002, tenured)
   Jason Schuknecht, chair (Westat research consulting, 2001)
   Constance Hill, member (Birmingham Southern College, 2000)
   Peter Francia, member (tt East Carolina University, 2000, tenured)
   Peter Burns, member (tt Loyola University, New Orleans 1999, tenured)
   David Cantor, member (Lake, Snell, Perry research consulting, 1999)
   Richard Conley, member (tt University of Florida, 1998, tenured)
   Susan Baer, member (tt San Diego State, 1998)
   and six others prior to 1998.

Advanced Training:

- Statistical Horizons Workshop on Big Data and Data Mining. University of Pennsylvania Wharton Business School, Philadelphia, PA, April 2013.

- Summer Workshop on Frontiers of Spatial Regression Analysis. Spatial Analysis Laboratory, University of Illinois, Urbana-Champaign, June 2007.

- Summer Workshop on Point Pattern Analysis, Department of Geography, University of California, Santa Barbara, June 2004.

- Summer Workshop on Distance and Accessibility, Department of Geography, Ohio State University, July 2002.

- Summer Statistics Program, ICPSR, University of Michigan, Ann Arbor, Michigan, June 1994.

Service to the Discipline:

- Journal Editor, *American Politics Research*, 2003-2011. During this time, submissions doubled from ~110 per year to over 220 per year; journal submission and operations moved on-line; journal content expanded by 30%; and review times dropped to a mean of 45 total days (sd=17 days).

- Elections and Voting Section Committee to Name Emerging Scholar in American Politics, 2003 and 2007.

- Chair, APSA William Anderson Award Committee to Name the Best Ph.D. Dissertation in State and Local Politics, Federalism and Intergovernmental Relations, 2010.

- Manuscript Reviewer**:** *American Political Science Review; American Journal of Political Science; Journal of Politics; Political Geography; Political Research Quarterly*; *Public Opinion Quarterly*; *Political Psychology*; *American Politics Research; Political Behavior; Urban Affairs Quarterly*; *Social Forces*; Cambridge University Press, Brookings Institution Press, Johns Hopkins University Press; St. Martin's Press; HarperCollins Publishing; Pearson-Longman Publishing; Greenwood Press; University of Pittsburgh Press; SUNY Press; University of Michigan Press

- *PRQ* Outstanding Reviewer Award, 2009-2010

Departmental Committee Service:

- 2003-2010 Promotion and Tenure Committees (Karen Kaufmann, Frances E. Lee (twice), Geoffrey Layman, Linda Faye Williams and Irwin Morris)

- 2001-2009 Faculty Supervisor, Maryland State Government Internship Program.

- 2003-2004, 2001-2002; 1998-1999 Faculty Search Committees

- Service includes: Executive Committee; Undergraduate Studies Committee; Graduate Studies Committee; Salary Committee; Conley-Dillon Award Committee; Promotion & Tenure Working Group.

University and College Service:

2015-ongoing Advisor to UMD BSOS Dean on College Fundraising and Development
2015-ongoing Advisor to UMD Office of Government Relations
2015-ongoing Advisor to UMD Office of Institutional Research, Planning and Assessment
2014-ongoing Advisor to University Relations Office of Prospect Management and Research
2011-2012 Dean's Committee on GIS and Spatial Analysis in the Social Sciences
2007-2008 Joint Asian American Studies/Public Policy Faculty Search Committee.
2005-2007 Department Representative on UM Faculty Senate
2004-2006 Department Representative on College Promotion and Tenure Committee.
2000-2005 Chair, Behavioral and Social Sciences Curriculum Committee
1999-2001 Behavioral and Social Sciences Academic Council
1997-2000 Faculty Senate Campus Parking Advisory Committee

Research Consulting and Government Work Experience (selected):

° *Head Start XXI Resource Center, Hammond, Indiana.*   GIS and Statistical Consultant to this Head Start Program Serving 1,200 clients in Lake and Porter Counties. October 2003-March 2004.

° *Naugatuck Valley Economic Development Commission*. Adviser to this Connecticut economic development agency drafting an EDA report on the local economic impact of defense downsizing and industrial restructuring in the Northeast. January 1998-May 1998.

° *U.S. Department of Housing and Urban Development*. Office of Policy Development and Research. Policy analyst working in the economics division under Assistant Secretary for Policy Development and Research, John Weicher. June 1991-January 1992.

Official Expert Testimony (selected):

° *Common Cause v. Rucho*; and *League of Women Voters v. Rucho*, consolidated cases;   Deposed April 2017; no trial date set.

° *Juan Juaregui vs. City of Palmdale, California*; Deposed May 2013; Testified at Trial June 2013.

° U.S. House of Representatives, Government Reform Subcommittee on Federalism and the Census, Testimony on Immigration-Induced Reapportionment, December 6, 2005.

° U.S. House of Representatives, Small Business Committee, Testimony on Population Mobility and the Rural Economy, May 20, 1997.

° Maryland Commission to Revise the Election Code, Testimony on Third-Party Voting and Registration, November 1996.

Invited Talks and Speaking Engagements (selected):

° Invited Panelist, American Enterprise Institute, Washington, DC. "Opinion Diversity in the Academy." May 11, 2017.

° Presentation at Washington University, St. Louis. Department of Political Science. "Incidental and Intentional Partisan Residential Sorting."   December 1, 2016.

° Presentation at The Maret School, Washington, DC. "Our Patchwork Nation and the 2016 Election." November 9, 2016.

° Presentation at Bowdoin College, Brunswick, ME. "Big Data and the Political Campaign." February 16, 2016.

Invited Talks and Speaking Engagements (selected):

- Presentation at American University, National Capital Area Political Science Association Workshop. "Business Interests and the Party Coalitions: Industry Sector Contributions to U.S. Congressional Campaigns." January 7, 2013.

- Conference Participant at Hoover Institution, Legal Immigration Policy Roundtable. Stanford University. Palo Alto, California. October 4-5, 2012.

- Presentation at the University of Maryland Libraries, Speaking of Books Series. "Our Patchwork Nation." College Park, Maryland. October 19, 2011.

- Presentation at University of Iowa, Department of Political Science. "Voter Migration and the Geographic Sorting of the American Electorate." Iowa City, IA. September 30, 2011.

- Keynote Address delivered to the Annual Great Plains Political Science Association Convention. "Economic and Political Socialization: Lessons from Rural America for the Rest of the Nation." Brookings, SD. September 24, 2011.

- Presentation at Stanford University, Hoover Institution. "The Geography of Tea: Strategic Activism or Expressive Protest?" May 19, 2011.

- Presentation at the University of California, Los Angeles, Department of Geography. "New Directions in the Geographic Analysis of Contemporary U.S. Politics." April 22, 2011.

- Presentation at the University of Maryland, School of Public Policy. Tuesday Forum. "Economic and Political Socialization across *Our Patchwork Nation*." November 30, 2010.

- Presentation at University of Kentucky, Department of Political Science. "Voter Migration and the Geographic Sorting of the American Electorate." Lexington, KY. December 3, 2010.

- Presentation at Georgetown University, American Politics Workshop. "The Distributive Politics of the Federal Stimulus." Washington, DC. September 24, 2010.

- Presentation at Christopher Newport University, Conference on Civic Education and the Future of American Citizenship. "Political Socialization Inside and Outside the Classroom." Newport News, VA. February 4, 2010.

- Presentation at the Brookings Institution. "Remarks on Joint Brookings/Kenan Center Immigration Roundtable Proposals and Recommendations." Washington, DC. October 6, 2009.

- Presentation at the University at Buffalo, Department of Political Science Seminar Series. "Regional Migration Flows and Partisan Sorting of the American Electorate." Buffalo, NY. April 17, 2009.

- Presentation at the University of Wisconsin, Madison, American Politics Workshop. "Rough Terrain: Spatial Variation in Political Participation." Madison, WI. March 23, 2009.

- Presentation at the University of Texas, Austin, Department of Government. "Immigration and Diversity Attitudes in Rural America." Austin, TX. February 26-27, 2009.

- Presentation at the University of Paris 8, St. Denis. "Political Socialization and Diversity Attitudes." Conference on Immigration and Spatial Concentration in Three Countries. Paris, France. January 15-16, 2009.