Executive Summary

Gerrymandering allows political parties to draw district lines that determine election results years before they actually happen. Despite rules in place, unfair redistricting practices have steadily grown worse with the rise in the use of database technologies used to sort voters based on any number of factors. By grouping individuals with certain political beliefs into strategically drawn districts, those in charge of drawing the lines are intentionally weakening voters’ voices. Regardless of whether the benefit is for Democratic or Republican purposes, it diminishes the Founding Fathers’ intentions of fair and accurate representation in state and local government. Leading voices on both sides of the aisle agree that the practice must stop.

Statistics also show that gerrymandering has a disproportionate effect on Hispanic and African American voters across the United States.

There is a growing question as to how and whether the process of redistricting can be taken out of the hands of those with vested interests, possibly by use of randomization or citizen volunteers. In addition to increasing the use of independent state commissions, suggestions have come forward to utilize computer programs or algorithms to draw district lines and remove the potential for bias and political conflicts of interest. This analysis evaluates those potential solutions. As a result, I recommend that states begin to employ computer programs to use algorithms or artificial intelligence to draw state and congressional districts lines based on compactness.

Policy Problem

Gerrymandering negatively affects citizens’ ability to elect their choice of representation, disproportionately affects Hispanic and African American voters, and essentially moots the point of a democracy. When gerrymandering occurs, election results and representatives are determined anywhere from seven to nine years in advance. By drawing lines in such a way as to benefit one political party over the other, gerrymandering manipulates elections so that the candidate from the benefitted party has a stronger advantage and better chance of winning. Put another way, gerrymandering determines how much a citizen’s vote and voice matters in state and national elections, and affects individuals’ ability to fairly elect representation.

A Bit of Background: Gerrymandering, How It Works, and Who It Affects

Gerrymandering is the process of drawing political boundaries to give one party a numeric advantage over an opposing party. The map-drawing process is intentionally used to benefit a particular political party in some way, either to help that party win more seats or to more easily protect the seats that the party already has. The goal is to create many districts that will elect members of one party, and only a few that will elect members of the opposite party.

The process all begins with data from the United States Census (Census). In the United States, every state elects a certain number of people to the House of Representatives — a number that is based on the Census’ decennial count of the state’s population. States also use Census data to draw district lines. The U.S. Constitution mandates this process and the Census itself.

Decennial Census data shapes districts in three different ways: apportionment, redistricting, and gerrymandering. Apportionment is the process of dividing the seats in the House of Representatives among the fifty states. Redistricting, which is different from apportionment, occurs when state officials redraw boundaries of the congressional and state legislative districts in their states after each Census. This accounts for population shifts that occur since the last Census.

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redistricting itself is not gerrymandering. Redistricting occurs when district lines are re-drawn to account for shifts in population; Gerrymandering takes place when district lines and maps are re-drawn with the intention of giving a particular political party an advantage of some kind.

Gerrymandering affects anyone that lives in a predominantly minority-party area or that gets pushed into a gerrymandered district. The process of gerrymandering, however, has a disproportionate effect on people of color. In an article published in the American Journal of Political Science, American University Professor Danny Hayes and coauthor Seth McKee found that gerrymandering has a measurable and statistically significant effect on the political participation of African Americans. Looking at data from more than 65,000 precincts over 11 elections in five geographically diverse states—California, Florida, Georgia, North Carolina, and Texas—the research revealed that the consequences of gerrymandering could be positive in some cases and negative in others. The key factor? Whether the member of Congress representing the district was African American.

“Redistricting suppresses black political participation when blacks are redrawn into nonblack incumbent districts, but reverses that effect when African Americans are redrawn into black-represented districts.”

Other research finds similar results for the Hispanic population. In 2017, a panel of federal judges determined that the state of Texas had intentionally discriminated against Hispanic voters, dating back as far as 2011. The judges found that Republican state legislators engaged in racial gerrymandering by diluting Hispanic voting strength in two Republican-held districts and by packing Hispanic voters into a neighboring district, engaging in what is known as “cracking and packing.” Cracking is a technique used to split a community into multiple districts, in order to ensure that is does not have a significant power to elect a candidate. The opposite technique, known as packing, is used when districts hold too many voters that may sway an election; these voters are essentially “drawn” all into one district.

In the history of redistricting, cracking has often been used to ensure that African American voters could not elect African American politicians. While the Voting Rights Act of 1965 banned racially motivated cracking with some success, the technique is still used today to break up communities for partisan gain. The effect of packing is equally disruptive. Voters in the packed districts suffer because no matter how large their influence might be in the one district, they can only have power to elect one representative. Typically, the goal in packing minorities into a district is not to reduce minority representation in the adjacent districts; rather, it is to reduce the other party’s representation in those districts. The result is that even when gerrymandering does not decrease the number of representatives African American or Hispanic voters can elect, it can decrease their influence in White-dominated districts and their ability to fully participate in their constitutional right to vote.

Deciding How the Lines Are Drawn

The question of who decides how the lines are drawn in the first place depends on the state that you live in. According to the Brennan Center for Justice, a research institute at the New York University that promotes social justice reform, each state determines for itself who will draw district lines for state legislators and Congressional members. The decision is usually detailed in the state’s constitution. There are currently seven different solutions that states use to draw their district lines: state legislatures; advisory commissions; independent state commissions; political appointee commissions; politician commissions; backup commissions; and, the resolution of having states with single congressional districts.

Currently, state legislatures are responsible for drawing legislative districts in thirty-one states and thirty-one congressional districts. However, in recent years, there has been a noticeable increase in states that have decided to use alternative approaches to map drawing. One such alternative, independent state commissions, is quickly becoming noticed as a possible solution to gerrymandering across the United States. The use of independent state commissions is a feasible and welcome solution to reducing gerrymandering across the United States and will be discussed below.

Potential Solutions and Their Criteria

A solution to gerrymandering should be cost-effective, politically feasible, administratively feasible, and effective at decreasing gerrymandering practices. There are three potential solutions to solve the problem of gerrymandering and unfair redistricting practices.

Alternative One—Maintain the Status Quo (i.e., Do Nothing)

The first policy alternative is to maintain the status quo and do nothing. Allowing things to continue as they are would mean continuing to publicly admit that, as Maryland Governor Larry
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Hogan (R) has said, “Gerrymandering is a form of political subterfuge that stifles real political debate and deprives citizens of meaningful choices.” It would also mean that the disproportionate effects on African Americans and Hispanics would continue, precluding those populations from expressing their First and Fifteenth Amendment rights. This could open the door for more lawsuits and an exacerbated breakdown of the United States democracy. It would also send a signal that the U.S. may not want to send: we actively discriminate against those who do not think or vote like those already in power. Gerrymandering removes citizens’ voices and their ability to elect representation. It essentially moots out the point of a democracy.

**Alternative Two: Implement Nationwide Independent State Commissions**

The second policy alternative is to implement the use of independent state commissions. Independent state commissions are typically made up of members who are neither public officials nor current lawmakers. They are selected with the help of a screening process that is conducted by an independent entity. Commissioners are responsible for drawing and approving the final maps. As of December 2018, four states use an independent commission for both state and legislative congressional plans: California, Arizona, Colorado, and Michigan.

California’s process of selecting commissioners for an independent state commission is a potential template that other states can follow. California allows state residents to apply to become a member of their Citizens Redistricting Commission. When the applications become available, interested parties can submit their applications online. Those who confirm that they have met all of the qualifications in the California Voters First Act and who do not have a “conflict of interest” are then invited to submit supplemental applications containing additional information about their qualifications.

From there, independent auditors review the applications and select semi-finalists to interview. The semi-finalists are divided into three sub-pools: Democrats, Republicans and those who are neither. Following interviews, the pool is reduced again with finalists’ names going to the State Legislature, where leaders exercise their right under the Act to remove up to 24 applicants from the pool. The first full Commission was comprised of three Democrats, three Republicans, and two “Decline to State” applicants, totaling eight members of the Commission.

Important to note is that Commission members are compensated at a rate of $300 for each day that they are engaged in Commission business, with commissioners serving for 10 years. However, most of the work that the commissions will perform should be completed by the time they approve the maps of the new districts, which is typically around August of the following Census year. Critical to note is that the Voters First Act is very clear that no communication between legislators and Commissioners regarding redistricting issues can occur; any comment from legislators must take place in a public Commission meeting – just like any other citizen.

Independent state commissions would be a cost-effective solution if individually implemented across the nation. Despite commissioners being paid a stipend, the total amount would not reach an exorbitant amount, as most of their work would be completed relatively quickly and the cost would only occur once every 10 or so years unless there was a major shift in population numbers. Independent state commissions would also be politically and administratively feasible, as the use of the commissions are already being used in four different states, showing plausibility and a consensus that the solution is welcome. Finally, independent state commissions would, theoretically, decrease gerrymandering by removing the power to draw districts from those who intend to win them later.

**Alternative Three: Employ a Computer Program to Use an Algorithm or Artificial Intelligence to Draw State and Congressional Districts Lines Based on Compactness**

The third policy alternative is to employ a computer program to use an algorithm or artificial intelligence program. The algorithm would then be input into a program database or artificial intelligence program to draw district lines across the state. One possible tool that may be used for this is a geographic information system (GIS) program, a framework for gathering, managing, and analyzing data that has specific redistricting tools. Another program would be Mander, a set of code written in the Python programming language that calculates how compact a district is. Finally, a panel of three judges, who are rotated every re-districting cycle to avoid bribery or coercion, would approve the resulting map.

Implementing the use of a computer program and algorithm or artificial intelligence program is a cost-effective and administratively feasible solution, costing little to nothing and requiring no new real technology. The computer
software already exists, as shown by the GIS programs and Mander code program. There have also been individuals who have taken it upon themselves to provide computer-generated layouts of neutrally drawn states with districts drawn to optimize compactness. Additionally, the use of a computer program, algorithm, or artificial intelligence tool would theoretically remove the practice of gerrymandering all together due to any human-imposed conflicts of interest being removed.

The remaining factor, political feasibility, provides a question and connotation that has been noted in Alternative #1, “Maintaining the Status Quo.” State legislatures have the opportunity to utilize an almost zero-cost, administratively feasible solution that would remove the possibility of tainted elections for the future. As this is a bi-partisan issue that both parties have stated they want to solve, this solution should be considered strongly politically feasible.

**Recommendation**

Based on the criteria and analysis of each solution, the third alternative, “Employ a Computer Program to Use an Algorithm or Artificial Intelligence to Draw State and Congressional Districts Lines Based on Compactness,” appears to be the best choice. It would be an effective policy with low to medium costs that can be implemented almost immediately and with relatively low administrative complexity. It would also remove most, if not all, concerns of bias and conflicts of interest with respect to drawing district lines.

While not all individuals agree on the removal of individuals’ participation in the physical drawing of district lines, employing technology to solve the critical problem of gerrymandering is a strong policy solution. Furthermore, while both potential solutions require a change in policy, they are both infinitely better than maintaining the status quo.

As a result, I recommend that state legislatures across the United States begin to propose amendments to their state constitutions and propose legislation that would provide for the use of computer programs such as GIS or Mander to draw district lines. In the alternative, states should propose legislation that would implement independent state commissions based on the aforementioned California Commission model.

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**Endnotes**

1. Congressman Earl Blumenauer (D-OR), C-Span Floor Speech (“Americans deserve better. Congressional representation should not be a political blood sport that protects incumbents, disenfranchises legitimate interests, and allows people to achieve with surgical reappointment what they couldn’t do honestly at the ballot box.”) See also Former Congressman Reid Ribble (R-WI), NPR Interview (“We’re at a place now in this country where voters are not picking their representatives anymore. Representatives, through the gerrymandering process and redistricting, are picking their voters.”)


7. Ibid


12. Ibid


15. Ibid


18. Ibid


20. Ibid


22. Ibid

23. Ibid


25. Ibid

27 Ibid
28 Ibid
36 California Citizens Redistricting Commission, “FAQs.” Last accessed: January 31, 2019. https://wedrawthelines.ca.gov/faq/ (“The California Commission addresses the process being completed by a computer program, stating, “The Commission is relying on the active participation of citizens across California to weigh in on how the districts should be drawn, since information about “communities of interest” is not collected in the Census. This is an open conversation that will assist the Commission in evaluating citizen input and exercising responsible judgment about what districts should look like – a computer could never do that.”)