

Types of Proportional Voting Systems  
**In America**

*A joint project of*

Southern Center for Studies in Public Policy

&

FairVote

## Cumulative Voting

Cumulative voting achieved some national notoriety in 1993 because it was the full representation voting system recommended by law professor Lani Guinier in her search for a lasting solution to minority vote dilution. Nominated to run the civil rights division of the Department of Justice, Guinier came under harsh attack for her legal writings that laid out the reasons for the Voting Rights Act and explored ideas such as cumulative voting.

The resulting debate about Guinier's writings was misleading and unfortunately led to the withdrawal of her nomination without her having a chance to testify before Congress. Since then, however, the actual experience of cumulative voting in a growing number of communities has demonstrated the new power it gives to minority voters and the acceptance it can gain in the white majority.

**How it works:** In cumulative voting, each voter has as many votes as there are representatives to be elected. Unlike traditional winner-take-all elections, however, voters may distribute their votes in any manner they choose. For example, if there are three seats to be filled, a voter might cast one vote for each of three candidates just as in a traditional at-large election. But they could also choose to give two votes to one candidate and one vote to another, or give all three votes to the same candidate. If voters in a minority were to give all three votes to one candidate, they would triple the chances that their candidate would win. To determine winners, all votes are counted equally; the winners are the candidates with the most votes.

Cumulative voting has worked well for black and Latino voters in many localities. However, to ensure electoral success, like-minded voters in the minority often must "plump" their votes on the same candidate in order to maximize their chances of electing that candidate. A minority-backed candidate might not win if minority voters split their votes among more than one candidate. When the minority population is large enough to elect more than one candidate from the minority group, it thus must weigh the

potential benefits and risks of seeking to elect more than one candidate.

One version of cumulative voting makes it easier for a voting group to elect more than one candidate. In Peoria, Illinois voters use the *Illinois method*, sometimes referred to as *equal and even cumulative voting*. The voters indicate which candidates they support, and their votes are evenly distributed among these candidates. For example, in a three-seat race, a voter who supported just one candidate would provide three votes to that candidate. A voter who supported three candidates would provide one vote to each of those candidates. A voter who supported two candidates would give each of those candidates 1.5 votes. The Illinois method – used from 1870 to 1980 to elect the Illinois State House of Representatives – facilitates candidates running together because the message to voters can be simple: "vote the team."

Even with the Illinois method, however, leaders of the minority group must make strategic decisions in determining how many seats to try to win and how to urge supporters to cast their votes. This strategy should seek to maximize electoral opportunities while avoiding minority-backed candidates splitting the minority vote so that none of them win.

**Where it is used:** More than 50 jurisdictions in Texas have adopted cumulative voting since 1991, and, in 1995, then-governor of Texas George W. Bush signed legislation to allow school districts to adopt cumulative voting (along with limited voting). With a population of more than 150,000 people, the Amarillo Independent School District is the nation's largest political jurisdiction to use cumulative voting. The Latino Union of Latin American Citizens (LULAC), the Mexican American Legal Defense and Education Fund (MALDEF) and the NAACP led the way in settling a voting rights suit in Amarillo with cumulative voting in 1999.

In the first cumulative voting elections, in May 2000, a black candidate and a Latino candidate each won one of four seats up for election. These new board members included the first black ever to

win a school board seat in Amarillo and the first Latino to win in more than two decades. Even though both the black and Latino populations were below the threshold of inclusion, community leaders calculated that each candidate could draw some support from the white community while winning the great bulk of the black and Latino vote. They were proven right when the candidates avoided splitting the minority vote.

Chilton County, Alabama provides another example of the success of cumulative voting. Before 1988, no black candidate had ever been elected to the county commission. In 1988, cumulative voting was used for first time, and a black candidate named Bobby Agee led the field in the election for seven-seat county commission even though blacks were barely 10% of the population, few white voters supported Agee and Agee was outspent by more than 15 to one by some of his white challengers. Black turnout was very high, and most blacks chose to allocate all seven of their votes for Agee rather than spread their votes among other candidates. The first black commissioner in Chilton County's history, Agee has been reelected three times and has served several terms as chair of the commission.

In 1992, however, when a second black candidate tried to join Agee on the commission, Agee had a more narrow victory, and the other candidate was defeated.

Cumulative voting was used in three-seat districts to elect the Illinois State House of Representatives from 1870 to 1980, resulting in many more victories of black candidates than in winner-take-all elections that took place at the same time to elect the state Senate (see chart in appendix). Cumulative voting currently is used in Peoria, Illinois, in various municipalities in Alabama, South Dakota and Texas and for many elections for corporation boards. Cumulative voting is not an ideal system – making political scientists term it "semi-proportional" – but it has proven successful in resolving many voting rights lawsuits and in empowering minority voters in those communities.

***Does cumulative voting violate the Constitution?***

*No, cumulative voting respects the "one-person, one-vote" principle and guarantees that every voter has equal voting power.*

**Can only racial minorities cast multiple votes for a single candidate?**

*No, any voter can determine how he/she wants to distribute their votes.*

***Disadvantages***

- ✓ Intragroup competition (e.g., candidates from same racial group) may split vote
- ✓ Success depends on running appropriate number of candidates and having voters allocate votes to candidates in right

**Advantages**

- ✓ Lowers share of votes needed to win seats
- ✓ Relatively easy to explain
- ✓ Has extensive history in the United States.

***CALCULATING THE THRESHOLD OF INCLUSION FOR CUMULATIVE VOTING***

Formula:  $\frac{1}{1 + (\text{number of seats})} \times 100\%$

Number of seats

Percentage to win

## Limited Voting

The most common full representation system currently used in the United States is limited voting. Although its name – “limited voting” – conveys that voters receive less than they do under traditional systems, limited voting in fact ensures that more voters have an opportunity to elect candidates of choice.

**How it works:** In limited voting, voters cast fewer votes than the number of representatives being elected in a constituency. The greater the disparity between the number of seats and the number of votes to which voters are limited, the greater is the access for those voters in a minority. When voters are limited to one vote – termed the **one vote system** – the threshold of inclusion is as low as with cumulative voting and choice voting. As the number of available votes available to voters increases, the threshold of inclusion rises.

In a seven-member school board elected with limited voting, voters might be restricted to casting only four votes. All candidates would run against one another, and the seven candidates with the most votes would win. By limiting the number of votes to less than seven, it is more difficult for the voting majority to control the outcome of all seats up for election, even if they vote cohesively. In this example, the threshold of inclusion would be 36% – well below the 50.1%

threshold it takes to be sure of winning with traditional at-large system, but much higher than the 12.5% threshold of inclusion if cumulative voting, choice voting or the one vote system were used.

Note that when voters can cast more than one vote, the threshold of inclusion is a guide to opportunities to elect *one* seat rather than as many seats as there are votes. Thus, in the example above in which voters have four votes to elect seven seats, 36% of voters can be sure of electing only one out of seven seats – it would take 50.1% of votes to be sure of winning a majority of four seats. There is a complex formula in the appendix to determine the share of votes necessary to elect more than one seat under different limited voting arrangements.

**Choosing the number of available votes:** Limited voting is particularly easy for voters in a minority when the number of seats they should win based on their numbers corresponds with the number of votes. If the black share of the vote in a town would warrant about three of seven seats, for example, then it would be best for black voters if all voters were limited to three votes, and three candidates with strong appeal in the black community ran. The only strategic decision necessary in such a situation would come in organizing a team of candidates that the black community would support.

In reality, however, it may not be so easy to know what the realistic chances will be for black voters in a given community over a given period of time. As with cumulative voting, ongoing strategic decisions must be made in determining how many candidates should run and how minority voters should be urged to cast their votes. Decisions must also be weighed about joining forces with some non-minority voters to work together to elect a slate of candidates – a development for which limited voting creates incentives, but one that has some hazards in the minority community's ability to hold their representatives accountable.

By keeping the threshold of inclusion low, the one vote system provides the most flexibility, but only if the black community can be disciplined in recruiting the right number of candidates and organizing voters to spread their votes among them. Typically, candidates are nominated with a strong neighborhood base, so that if the black community were seeking to elect more than one seat with the one vote system, most black voters in one part of town would be urged to vote for a minority-backed candidate from their neighborhood, while black voters in another part of town would be asked to support a candidate from their neighborhood.

Sometimes in partisan elections limited voting is combined with *limited nomination* – meaning that political parties are limited to nominating fewer candidates than representatives to be elected. Limited voting with limited nomination is required of all at-large city council elections in Connecticut, including

Hartford, and is used for city council elections in Philadelphia and many Pennsylvania counties. Limited nomination without limited voting is used to elect four at-large seats to the Washington, D.C. city council. Having limited nomination without limited voting is not a system of full representation; it ensures that candidates from more than one party will be elected, but does not prevent the majority party from controlling which candidate from the minority party is elected.

One of limited voting's clear advantages is that ballot-counting is very easy – all ballot equipment now in use can handle limited voting. One obvious disadvantage is that people initially can perceive that their franchise is being "limited." Even though people are limited to one vote in a single-member district system, there is a different perception when they cannot vote for all candidates who might end up directly representing them. Where limited voting has been used over a long time, this perception does not seem to be a problem – as in Japan, where the one vote system is used for nearly all city elections, and in many Connecticut and Pennsylvania localities– but it requires development of a different understanding of representation and legislative accountability.

Since 1987, limited voting has been adopted in more than 20 localities in North Carolina and Alabama to settle voting rights cases. In 1995, Texas passed a law allowing school districts to convert to limited voting and cumulative voting. Limited voting generally has been successful in electing minority-backed candidates.

### Advantages

- ✓ Easy to administer
- ✓ Creates greater access for minority representation
- ✓ Simple to understand
- ✓ Sometimes can encourage cross-racial coalitions

### Disadvantages

- ✓ Strategic decisions often must be made by candidates and voters
- ✓ Voters may view it as a limitation of their vote
- ✓ Threshold of inclusion may be relatively high

### ***CALCULATING THRESHOLD OF INCLUSION FOR LIMITED VOTING***

Formula: 
$$\frac{\text{Number of votes given to each voter}}{\text{(Number of votes + Number of seats)}}$$

## Choice Voting

Choice voting is the fairest of the three full representation systems described in this manual, but also the most complicated to describe. The voters' job at least is easy – simply ranking candidates in order of choice: "1" for their first choice, "2" for their second choice and so on until they have no preference among the remaining candidates. That simple ranking of candidates enables a ballot-counting process that makes choice voting the only fully "proportional" voting system used in the United States.

Being "proportional" means that like-minded groupings of voters are certain to win seats in close approximation to their share of the vote – at least as long as enough candidates run for office and as long as voters know to rank the candidates they like in order of preference. When used in a partisan setting, choice voting typically will result in parties winning seats in direct proportion to their support among voters – 20% of the vote will win 20% of seats, 40% of the vote will win 40% of seats and so on.

When used in a racially polarized community, choice voting typically results in racial groupings winning seats in direct relation to their support among voters – with that fair result of course depending on equal rates of voter participation and cohesion. By creating incentives for voters to consider and rank candidates outside their race or their party, choice voting also encourages more coalition-building than other full representation systems.

**How it works:** Choice voting is sometimes called the "single transferable vote" or "preference voting," both of which help explain the system. Voting is literally as easy as 1, 2, 3, but tabulating ballots is more complicated. Each voter has a single vote (as with the one vote system) but ranking candidates in order of preference gives voters more chances to cast an "effective vote" (one that elects someone). Your vote "transfers" to your next choice – meaning that it counts for that choice – if your vote for your first choice does not help that candidate win.

Choice voting eliminates wasted votes because ballots are neither "wasted" on

"sure winners" nor on "sure losers." To determine winners, the minimum number of votes necessary for a candidate to earn office is established – this "victory threshold" is the same as the threshold of inclusion as provided by cumulative voting and the one vote system. After tallying voters' first choices, candidates who have reached the victory threshold are elected. Any votes beyond that threshold do not remain with that candidate, however, as doing so would lead to votes being "wasted." (For example, imagine a very popular candidate winning 51% of first-choices votes in an election for five seats. If all those votes remained with that one candidate, then a majority of voters would have only elected one seat, and the remaining 49% of voters would have elected the other four seats in violation of the principle of majority rule.) Thus, "surplus" votes beyond the winning threshold are allocated to second choice candidates as indicated on each voter's ballot (there are different methods of allocating these votes).

If there are more seats to elect and all remaining candidates are below the winning threshold, then the candidate with the fewest votes is eliminated. All of his/her ballots are distributed among the remaining candidates according to the voters' preferences listed on those ballots. This process of redistributing ballots and tallying votes continues until all seats are filled. (See chart in appendix.)

**History of providing strong representation:** The history of choice voting in the United States and other nations provides clear evidence that it boosts minority representation. When used to elect the New York city council in five elections from 1937 to 1945, it elected the council's first black member, Adam Clayton Powell. When used to elect Cincinnati's city council from 1925 to 1955, the black community was very successful in achieving a fair share of representation and ultimately being wooed by both major parties despite being less than 20% of the adult population at the time.

Choice voting's success in providing representation to racial and ethnic minorities in local school board elections in New York City led to the Department of Justice in 1999 refusing to preclear a statute that would have replaced it with a limited voting system because of choice voting's strong record of providing strong representation to African Americans, Asian Pacific Americans and Latinos. Choice voting is particularly good in complex electorates like New York City because it creates incentives for all significant racial groups to run candidates and for candidates to reach out to voters from other racial groups.

The major drawback for choice voting is that jurisdictions can have difficulty in tallying the ballots. After World War II, that difficulty, combined with the hostility of some majority communities who were concerned about representation of racial and political minorities, reversed what had been a clear trend toward choice voting.

Cambridge, Massachusetts is the only holdover from nearly two-dozen cities that used choice voting early in the 20<sup>th</sup> century, including Cleveland, Sacramento (Calif.) and Worcester (Mass). Choice voting has provided steady representation of racial minorities on the Cambridge city council and school committee since the 1950's.

With the rise of new ballot-counting technologies that can eliminate the need for a hand-count, choice voting has gained renewed attention. In 1997, Cambridge converted to an electronic ballot count that makes the ballot-count quick and easy. Charter commissions in the late 1990s recommended choice voting in Kalamazoo (Mich.) and Pasadena (Calif.) Ballot initiatives to adopt choice voting won overwhelming support from black voters in Cincinnati and San Francisco in the 1990s, but both efforts fell short, gaining 45% of the vote.

### **Advantages**

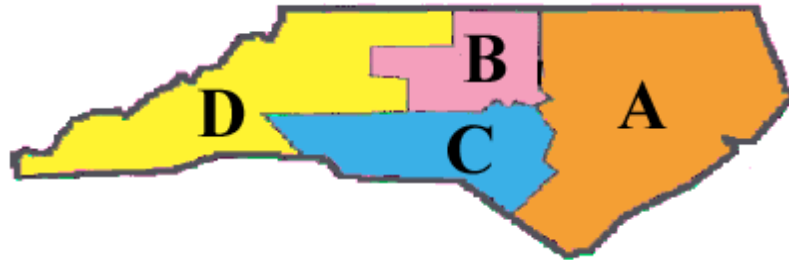
- ✓ Low threshold to win
- ✓ Maximizes number of voters electing someone
- ✓ Minimizes need for strategic decisions / campaigns
- ✓ Promotes coalitions
- ✓ Maximizes voter choice

### **Disadvantages**

- ✓ Complex to explain
- ✓ Cannot be used on older voting machines

*Note: The threshold of inclusion for choice voting is the same as with cumulative voting. Please see "Calculating the Threshold of Inclusion For Cumulative Voting and Choice Voting" diagram.*

**North Carolina**  
**What A Super District Might Look Like**



Eastern District A (3 seats)  
Winning Percentage: 25%  
Non-white % of VAP: 31%

Northern District B (3 seats)  
Winning Percentage: 25%  
Non-white % of VAP: 25%

Southern District C (3 seats)  
Winning Percentage: 25%  
Non-white % of VAP: 27%

Western District D (3 seats)  
Winning Percentage: 25%  
Non-white % of VAP: 9%

**Voting Rights Analysis:** Black voters likely would elect candidates of choice in Districts A, B, and C and could elect a candidate with support of white voters in District D. Under this system, most of North Carolina's voters would elect a representative of their choice.

*\*Note: Super Districts were created by combining existing U.S. House districts and thus look more "gerrymandered" than we would like.*

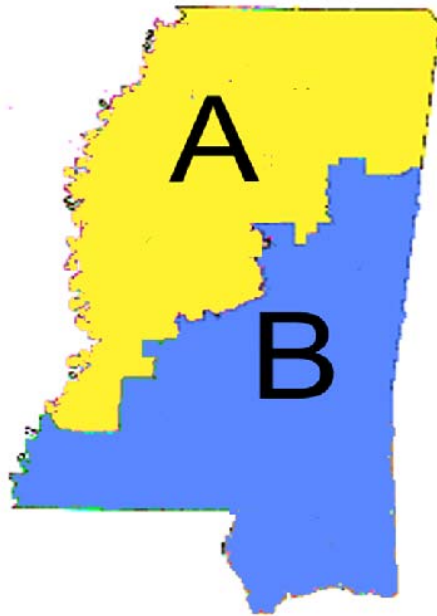
This map is an example of how full representation voting systems — such as choice voting, the one-vote system and cumulative voting — can be vehicles for providing fair representation for black voters in voting rights cases. U.S. House districts with one representative have been replaced by four larger "super districts," Districts A, B, C and D. The percentage of votes necessary to win a seat is based on use of a full representation voting system (see below).

Currently North Carolina has two black-majority districts and two black House members. Since only a portion of the state's African Americans live in the two current black districts, the rest do not elect a black House member. Under this plan, the state might easily have three black representatives. Using a similar technique, we were able to draw super-district plans that likely would increase the number of black U.S. House representatives elected from Alabama, Arkansas, Louisiana, Mississippi, South Carolina and Virginia. Black voters likely would benefit in other states as well.

In 1967, Congress passed a law requiring states to use one-seat U.S. House districts. In 1999, Congressman Mel Watt introduced a bill called the States' Choice of Voting Systems Act (HR 1173) which would lift this requirement. Similar super-district plans could be used for local and state redistricting plans in 2001-2. Several states have no statutory barriers to using super district plans.



**Mississippi**  
**What A Super District Might Look Like**



**Northern District A (2 seats)**

Winning Percentage: 33%

Black % of VAP: 38.1%

**Southern District B (3 seats)**

Winning Percentage: 25%

Black % of VAP: 27.2%

**Voting Rights Analysis:** Black voters likely would elect candidates of choice in both District A and District B. Under this system, the great majority of Mississippi voters would elect a representative of their choice.

*\*Note: Super Districts were created by combining existing U.S. House districts. As a result, the district line looks more "gerrymandered" than we would otherwise draw.*

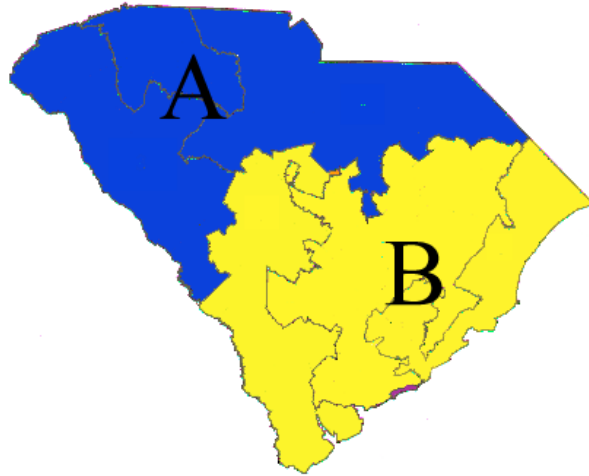
This districting plan is an example of how full representation voting systems — such as choice voting, the one-vote system and cumulative voting — can be vehicles for providing fair representation for black voters in voting rights cases. U.S. House districts with one representative have been replaced by two "super districts," District A and District B. The lower percentage of votes necessary to win a seat is based on use of a full representation voting system (see below).

Currently, Mississippi has one black-majority district and one black House Member. Since only a third of the state's black voters live in that district, the rest have little chance to elect a black Representative. Under our plan, Mississippi might easily have two black Members. Using similar methods, we have drawn super-district plans that likely would increase the number of black U.S. House representatives elected from Alabama, Louisiana, North Carolina, South Carolina and Virginia. Black voters likely would benefit in other states as well.

In 1967, Congress passed a law requiring states to use one-seat U.S. House districts. In 1999, hearings were held on Congressman Mel Watt's bill (HR 1173, the States' Choice of Voting Systems Act) that would lift this requirement. Similar super-district plans could be drawn in many local and state redistricting plans in 2001-2. Several states and localities have no statutory barriers to use of super district plans.



**South Carolina**  
**What A Super District Might Look Like**



<b><u>Northern District A (3 seats)</u></b>	<b><u>Southern District B (3 seats)</u></b>
Winner Percentage: 25%	Winner Percentage: 25%
Black % of VAP: 21.3%	Black % of VAP: 32.4%

Voting Rights Analysis: Black voters in District A could elect a candidate with support of white voters, and black voters in District B could elect a candidate of choice. Under this system, most of South Carolina’s voters would elect a representative of their choice.

*\*Note: Super Districts were created by combining existing U.S. House districts. As a result, the district line looks more “gerrymandered” than we would otherwise draw.*

This map is an example of how full representation voting systems — such as choice voting, the one-vote system and cumulative voting — can be vehicles for providing fair representation for black voters in voting rights cases. U.S. House districts with one representative have been replaced by two larger “super districts,” District A and District B. The percentage of votes necessary to win a seat is based on use of a full representation voting system (see below).

Currently, South Carolina has one black-majority district and one black House member. Since only a portion of the state’s African Americans live in that district, the rest do not elect a black House member. Under this plan, the state might easily have two black members. Using a similar technique, we were able to draw super-district plans that likely would increase the number of black U.S. House representatives elected from Alabama, Louisiana, Mississippi, North Carolina and Virginia. Black voters likely would benefit in other states as well.

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