

filled rooms in a given election year would still have the chance to make their preferences known in an official capacity, and should the eventual candidates prove to be other than the ones they chose, they would know whose favor they needed to court.

**SEE ALSO:** Favorite Son/Favorite Daughter; Popular Sovereignty, Doctrine of; Presidential Election of 1824; Presidential Election of 1860; Presidential Election of 1948; States' Rights Party (Dixiecrats).

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## Voting Methods

THE 2000 FLORIDA debacle has illustrated the central role played by methods of voting in the electoral process. The United States has traditionally seen a patchwork of such methods, with the administration of elections, including the choice of voting methods, left to local authorities. The methods used are largely determined by technological developments, with older methods gradually giving way to new ones, starting with the introduction of hand-counted paper ballots at the end of 19th century and shifting to electronic voting at the end of the 20th century. This process was accelerated by legislation aimed at fixing the problems of the 2000 election, with optically scanned ballots and electronic voting replacing older methods.

Until the late 19th century, voting in the United States was conducted either in public, with voters each calling out loud their choice to election officials, or by

using party tickets, a list with the party's candidates for all offices contested in the election. Parties provided these ballots to voters prior to the election, and voters were encouraged to vote a straight party ticket by simply bringing the ticket to the polling place. Concerns about fraud and privacy led to the replacement of these methods with the Australian ballot. This type of paper ballot, listing all candidates and printed at the government's expense, was first used in the Australian state of Victoria in 1856. Voters marked their choice in private and then dropped their ballot in a sealed ballot box. New York was the first American state to use the Australian ballot in 1888. Currently, these hand-counted paper ballots are used by less than one percent of registered voters, primarily in small, rural areas.

Mechanical lever machines were developed and introduced in the United States at about the same time as the Australian ballot. The first use of such a machine was in Lockport, New York in 1892. By the 1930s, machines were used in all major cities, and by the 1960s they were used by well over half of American voters. These machines use a tabular ballot layout, with each row assigned to a particular office and each column assigned to a particular candidate, or vice versa. The voters pull down selected levers to indicate their choices. When the voter opens the curtain surrounding the booth and exits, levers are automatically returned to their original position.

Only the machine has a mechanism to keep the total vote count, and so an independent verification is impossible, making the machine vulnerable to tampering. Furthermore, such machines have a large number of moving parts, which makes their maintenance very difficult. The last such machine was produced in 1982, and they are gradually being replaced. In the 2006 election, only about seven percent of American voters were still using mechanical lever machines, primarily in New York State.

The 1960s brought the next generation of voting methods, represented by punch cards. Punched cards have been in use for keeping statistics since the late 19th century, and International Business Machines Corporation (IBM) developed pre-scored punched cards. Two professors at University of California-Berkeley adapted these punch cards for use in elections, and launched the company Harris Votomatic to sell their product. The system was first used in primary elections in Fulton and DeKalb counties, Georgia, in 1964. By 1986, more than

one-third of registered voters in the United States were using them. The system is straightforward: voters punch holes in the card with a device. If the voter is using a Votomatic card, the only information that appears on the card itself is the number of each hole. The name of the candidate corresponding to each hole appears in a separate booklet. If the voter is using a Datavote card instead, the name of the candidate will appear next to the hole the voter must punch in order to vote for that candidate. After the vote, the ballot is either placed in a ballot box, or fed onto a computer that tabulates the total vote at the polling station.

The problems associated with this system have been well-documented since the late 1960s, and several reports published by the National Bureau of Standards during the 1980s called for the abandonment of punch cards. Studies have shown that the rate of uncounted ballots for punch card voting systems is significantly higher than is the case with any other voting system. The most problematic is the existence of chad, the waste produced by the punching of cards.

Often, the chads do not fully detach from the card, and they can work their way back into place, or they can block holes from other ballots. The events of the 2000 presidential election in Florida, where Votomatic ballots were used, was an accident waiting to happen. As a result, Congress enacted the Help America Vote Act (HAVA), which mandated the replacement of older voting technologies with modern ones. By 2006, fully 63 percent of registered voters were using new voting equipment compared to 2000, which makes these changes the largest shift in voting technology in U.S. history.

One of these new technologies is optical scanning. This method, which has its roots in standardized testing, requires voters to record their vote by filling ovals on a form with machine-readable ink or soft lead pencils. Currently, about half of registered voters in the United States use this voting technology.

Major advantages of optical scanning are the existence of individual ballots, which can be checked for errors or used for a parallel counting, if needed, and being less error-prone and more reliable than other methods. The other new technology used in U.S. elections since the 1980s is electronic voting, the electronic version of the old mechanical lever system. Instead of pulling levers, the voter uses a touch-screen, push buttons, or a similar device.

Electronic voting is more expensive than optical scanning. Furthermore, there is no paper trail, and therefore no possibility of independent verification of the results. Power outages are another serious concern, as the machine is the only place where the vote tally is stored during the results. Finally, computer experts have raised serious concerns about the security of electronic voting.

These concerns have led many localities to either replace newly-purchased electronic voting machines with optically scanned ballots, or retrofit electronic machines to add paper trails. As of 2006, 38 percent of registered voters in the United States were using electronic voting. Electronic voting is used on a large scale in a number of countries, including Belgium, Canada, France, India, and the Netherlands, but the only country where it is currently used in all elections is Brazil.

The cutting-edge voting technology is internet voting. Estonia became the first country in the world to conduct national elections using the internet (during February/March 2007). However, security-related concerns make internet voting an unlikely candidate for adoption in the United States in the foreseeable future. Another concern is that the introduction of internet voting risks to widening the gap between those who vote regularly and those who are less likely to vote, such as the poor, the less educated, and ethnic minorities, who also may have little or no access to the internet, and may not be familiar with using it.

**SEE ALSO:** Australian Ballot; Ballot Controversies; Ballot Issues; Help America Vote Act; Technology.

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