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- Ballot
 - Production
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INTRODUCTION

The use of ballots in the United States has only been around for 150 years. This sounds like a long time but in the grand history of casting ballots to determine power and influence, ballots date back to the Republican city state of Ancient Rome. Many things have changed since that time. In recent years, while technology has moved us toward electronic voting, paper ballots still remain the most popular means of voting for their security, ease of use, cost and familiarity.

HISTORY OF BALLOTS

Beginnings

The word “ballot” comes from the Italian word “ballotta”, meaning “little colored ball.” In 13th century Italy, votes were cast by submitting these ballottas, with different colors representing different votes.

This practice eventually evolved into the use of “papers”, little slips of paper on which voters would hand write their votes. Although paper ballots started in Ancient Rome around 139 B.C., they really didn’t catch on in America until the mid-1800s. In fact, it wasn’t until 1889, nearly 100 years after the United States became an independent country, that the traditional voting ballot was first used.

Early Days in the United States

The first state-printed ballots were implemented in the United States in New York in 1889. By the turn of the century, these ballots became widely adopted and popular since they were successful in minimizing ballot-counting fraud and maintaining voter secrecy. These ballots eventually replaced pre-filled ticket voting and introduced the standard of allowing the voter to mark the ballot himself.

Ballots through the 20th Century

As voting became more sophisticated into the 20th century, many different types of ballots and tabulation processes arose. The purpose of these varying methods was to decrease fraud, assure greater voter confidentiality and speed up the voting and tabulation process. Two methods that became the most popular were mechanical lever machines and punch card ballots.

Mechanical Lever Machines

The late-1800s saw the introduction for the first mechanical voting machines. Inventor Alfred Gillespie introduced many refinements to the then current models and **in 1900 started the U.S. Standard Machine Voting Company**. The company consolidated other voting machine companies and eventually held the majority of voting patents.

This gear-and-lever voting machine was simple, accurate and easy to use; the three basic voting steps included pulling a handle to close the booth curtain, turning the voting levers to expose the names of the chosen candidate and pulling the handle back to register the vote

and re-open the curtain. From 1898 through the 1960s, the gear-and-lever voting machine became the go-to standard for U.S. elections. For example, **in the presidential election of 1960, over half of the estimated 65 million ballots were cast on mechanical lever voting machines.**

However, gear-and-lever voting machines were far from perfect. Critics cited the lack of a paper trail left by these machines as reasons to discontinue their use. The machines used an internal counter to tally votes, which could easily be tampered with and reset by poll workers. As a result of these security problems, gear-and-lever machines eventually lost favor and became discontinued.

Punch Cards

The punch card ballot was introduced in the United States the year after the 1960 presidential election. Votomatic introduced its punch ballot in 1965 and rapidly replaced its long-standing predecessor, the gear-and-lever voting machine. The Votamatic featured a stylus and paginated ballot that was keyed to an underlying ballot card. **By 1992, approximately 40 percent of American voters were voting via the punch card system.**

Twenty years later, major controversy in **the Florida 2000 presidential election involving punch ballots nearly halted their use for good in the United States.** Theresa LePore, the Palm Beach County Supervisor of Elections, implemented a two-page “butterfly ballot” to accommodate the large number of presidential candidates that year. However, the ballot’s design confused voters and allowed for incorrect punches and “hanging chads”—incomplete punches with one or more corners still attached that the tabulation machine did not count as a valid vote.

Usually national elections had very large victory margins that overshadowed any voting-system shortcomings, but the closeness of the presidential race of 2000 brought these shortcomings to the national forefront. Many people claim these errors lost the election for the Democratic candidate, Al Gore. As a result of the controversy, Congress passed the Help America Vote Act (HAVA) of 2002, which encouraged jurisdictions to discontinue the use of the stigmatized and antiquated punch ballots and mechanical lever voting machines by 2006.

Looking Forward

While mechanical lever machines and punch cards became prevalently used in the 20th century, many other voting alternatives arose. These methods have gained popularity to a certain degree, but have not been universally adopted.

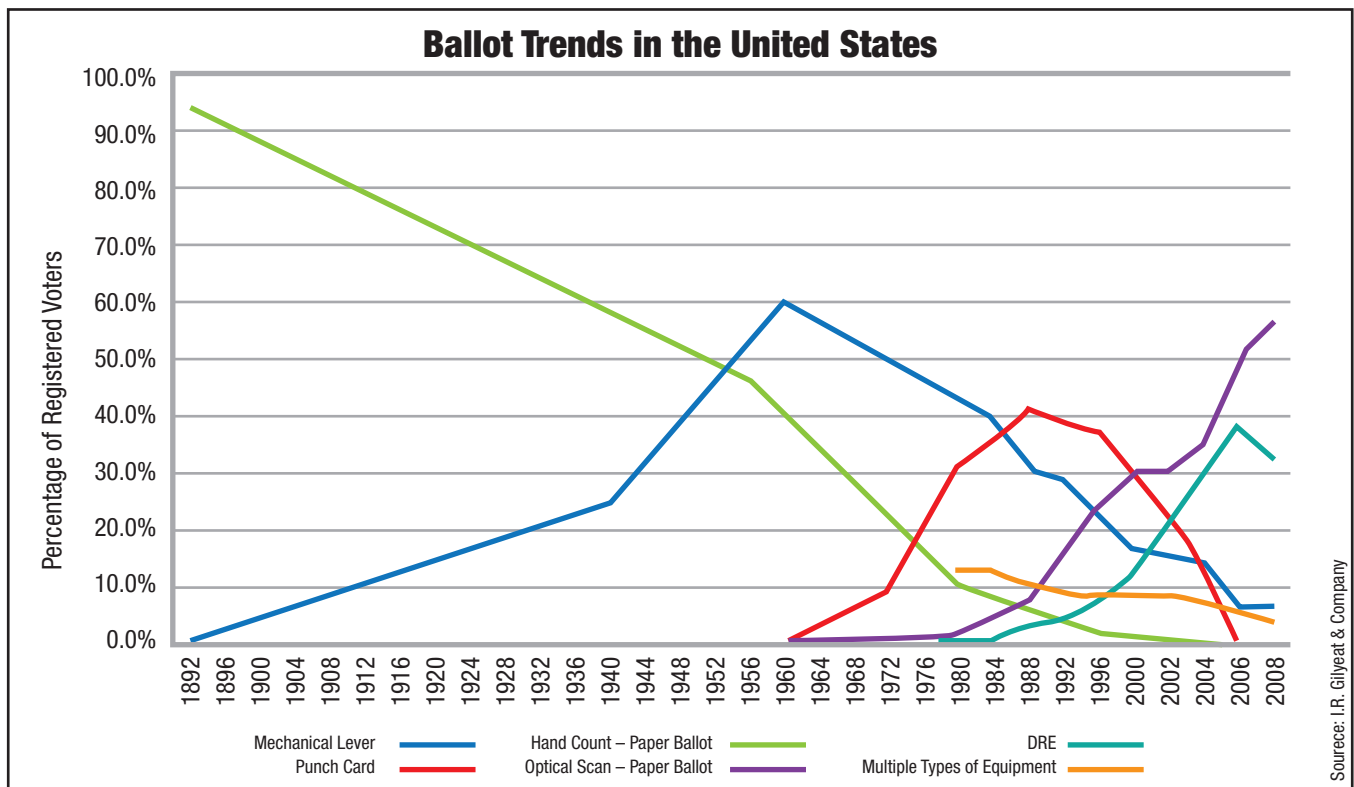


Figure 1: Ballot Trends in the United States

Optical Scan/Marksense

Optical scan voting systems are devices that can read voter ballots and translate that vote to a digital form. The voter marks a paper ballot by using a dark felt-tip marker, pen or graphite pencil to fill in a circle, oval, rectangle or complete an arrow. The ballot is fed into a scanner in which the scanner “reads” the darkest part of the ballot, recognizing that as the vote.

Although optical scan technology had been used for scoring standardized tests since the 1950s, these devices did not emerge as a viable replacement to the mechanical lever system for counting votes. In reality it took a major fiasco with punch ballots, courtesy of Florida in 2000, to mobilize the market in a new direction. Out of Florida came the initiative and public influence to move the country toward the current trend of paper ballots with optical scanners. In the 2004 election, 34% of Americans voted using a paper ballot and optical ballot scanner.

Electronic Voting Developments

The controversy surrounding the 2000 presidential elections also caused many changes in election administration and ballot production. Help America Vote Act (HAVA) was passed in 2002 to help states and localities adopt new technology to replace punch card and lever machines. As a result, there arose a nationwide shift from punch cards to alternative electronic voting methods.

As a whole, electronic voting has increased in popularity over the last 20 years. During the 2008 Presidential Election they accounted for 34.26% of ballots cast. Direct Recording Electronic (DRE) voting machines are electronic devices in which voters use push buttons, a touch screen and/or a keyboard (for write-ins) to cast their ballot. The machine records and tabulates the ballot while creating an electronic record of the vote. The machines have been helpful in providing immediate feedback to voters in detecting overvoting and undervoting and help to establish voter intent.

Although DREs are a noteworthy development, they have lost favor in recent years due to fears of them being vulnerable to fraudulent attack. Many studies have shown the security of these machines can be rapidly breached and compromised, causing public distrust and criticism. As a result, there has been a shift away from “traditional” DREs back to paper ballots and optical scanners.

In spite of the cloud over DREs, they may make a resurgence with the popularity of the consumer tablet. In Oregon, the state has begun tests using Apple’s iPad as a solution for disabled voters. It allows those with visual limitations or other challenges to bring up their ballot, select their choices and then vote, with their ballot then printed out on a wireless printer. This ballot is then dropped off at an election station or mailed in.

BALLOT PRODUCTION TODAY

The voting environment today is vastly different than it was during the infancy of the United States. Many new technologies, trends and requirements have developed. Fueled by events in Florida in 2000 and sustained by the chatter of social media, public interest has stepped in as a high-profile motivator to innovation.

Print on Demand

In order to adapt to increased demands for innovation in the voting environment, print on demand (POD) voting has emerged as a prominent solution. POD allows ballots to be printed early to support “absentee voting” need or on Election Day, on-site or at remote locations, in multiple languages and in vote centers that serve many districts.

Prior to POD ballots, states and counties would have to estimate the number of ballots needed for Election Day. Many times this would lead to an overprinting or underprinting of ballots depending on the voter turnout. If voter turnout was low, then the county was left with many unused ballots and an incredible amount of waste. If voter turnout was high, the county ran out of ballots and needed to obtain more, leading to stress, chaos and upset and empty-handed voters at the polls. Election officials cannot afford to run out of ballots, so usually more ballots were pre-printed than were actually needed and used. POD ballots are printed on-demand, anywhere and when they are needed, leaving zero excess ballots and zero empty hands.

UOCAVA

The Uniformed and Overseas Citizens Absentee Voting Act (UOCAVA) of 1986 is a US law that requires states and territories to provide elections and voter access to citizens who reside overseas. These citizens include members of the military and merchant marines, expatriates and government officials.

UOCAVA creates a requirement largely dependent upon new technologies such as internet connectivity, print on demand, scanners and software. Pulling all of these pieces together, essentially allows citizens anywhere around the globe to vote quickly and easily, even while creating a paper ballot to be tabulated with all ballots cast in a local election.

Multiple Language Requirements

For nearly half a century, the US government has been assisting voters who speak languages other than English. The Voting Rights Act of 1965 mandated that certain jurisdictions provide voting and language assistance to voters in a “language minority group”, which includes American Indian, Hispanic, Alaska Native and Asian voters. According to section 203 of the Voter Rights Act, this assistance includes translation of written materials (including ballots), bilingual staff at polling places, community outreach and promotion of the availability of language assistance.

Local jurisdictions must provide voter assistance in languages that meet one of the following requirements:

- More than 5 percent of voting age citizens are considered part of the language minority group and have limited English proficiency
- More than 10,000 voting age citizens belong to the language minority group and are limited-English proficient. In addition, the total voting age population with limited English proficiency and less than a fifth grade education must exceed the national rate

Findings from the 2010 US census required certain states to provide language assistance in jurisdictions that were previously not required. The US Census Bureau released a list of 248 jurisdictions that required them to provide language assistance to voters. These jurisdictions include various counties across the country with higher than average needs identified in Florida, Texas and California.

“Absentee Voting” creates All Vote-by-Mail States

Early voting began in 1963 when two states adopted practices whereby citizens could vote at designated satellite locations for a limited period prior to Election Day. While many states today offer absentee or early voting, only two conduct their elections entirely via mail: Oregon and Washington.

Oregon and Washington are unique in that there are no physical precinct locations, no poll workers and no typical Election Day voting. Instead, voters receive their ballot in the mail and then return the completed ballot via mail or in person to a drop box.

Vote Centers

Vote centers are polling locations which combine multiple precincts, permitting voters to vote at places other than their designated polling places located near their place of residence. The first vote center was implemented in 2003 in Larimer County, CO. On Election Day, a voter could vote at any vote center within the new larger jurisdiction or “super precinct”, typically set up as a vote center within the county. The creation of vote centers allows greater flexibility for voters, who can now vote near their home, across town, near their workplace or anywhere they find it most convenient. Vote centers are somewhat controversial, yet appear to be successful in cutting costs since fewer poll workers are needed. They may also improve voter turnout although it is still too early to tell.

CONCLUSION

Although many different types of ballots have been used in the United States over the years, paper ballots have always been the most trusted, reliable and traceable way for casting and counting votes. Voters remain leery of DREs and other electronic voting methods, trusting the familiarity and security of the simple paper ballot. Even as technology evolves and innovation accelerates, the paper ballot remains constant. Paper ballots are now combined with scanners, software and tablets – all for the benefit of the voter. Vote centers, early voting and all vote-by-mail trends continue to expand – bringing us to one conclusion. Paper ballots are here to stay. It is a form and method that has survived for nearly 2,000 years and simply gets better as technology marches on.