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See also **Forest Service; Land Office, U.S. General and Bureau Plans Management; Land Policy; Public Lands, Fencing of; West, American.**

PUBLIC LANDS, FENCING OF. During the nineteenth century, Congress enacted several laws that allowed individuals to stake a claim to public land, yet none of the laws permitted a claim of enough acreage to sustain the raising of stock in the arid west. Therefore, the range cattle industry that emerged on the GREAT PLAINS after the CIVIL WAR was based on the use of the public domain for grazing purposes. Few objected to this practice as long as the range remained open and the country was not wanted by settlers.

During the 1870s, however, the number of settlers and the number of CATTLE increased substantially. Farmers and new cattlemen began to use public land that established cattlemen had considered theirs. After the invention of barbed wire, complaints began to pour into the General Land Office that large ranchers and cattle companies were making illegal enclosures of public land. A series of investigations revealed a startling situation. In 1884 the commissioner of the General Land Office reported thirty-two cases of illegal fencing. One enclosure contained 600,000 acres; another included forty townships. And one cattleman had 250 miles of fence. Investigations during the succeeding years showed a rapid increase in illegal fencing, until 531 enclosures were reported in 1888, involving more than 7 million acres of the public domain.

Cattlemen, sheepmen, and farmers who had been fenced out of public land sometimes responded by cutting the fences. In the mid-1880s, fence cutters in Colfax County, New Mexico, cut a line of wire almost ninety miles long. Unable to defend their claims to the public domain in court, large ranchers often responded with violence. Fence-cutters' wars erupted in several states.

Cattlemen's associations urged that Congress resolve the fencing conflicts by leasing public land to ranchers.

Instead, on 25 February 1885, Congress passed a law prohibiting the enclosure of the public domain. And on 7 August 1885, President Grover Cleveland issued a proclamation that ordered the removal of the fences. These measures were not vigorously enforced, however. Bad weather, mismanagement, and overstocking of the range probably did more than the law to eliminate the illegal practice of fencing public land.

The FEDERAL GOVERNMENT allowed leasing and fencing of public lands for grazing in 1934.

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Dan E. Clark / c. p.

See also **Cattle Drives; Fencing and Fencing Laws; Land Acts; Land Office, U.S. General and Bureau Plans Management; Land Policy.**

PUBLIC OPINION has formed a part of American politics ever since the authors of the *Federalist Papers* declared that "all government rests on opinion." They drew on a long tradition stretching from before Machiavelli's counsel that princes should not ignore popular opinion through Hume's dictum that it is "on opinion only that government is founded." The idea that the right to govern is grounded in the consent of the governed led over time away from instrumental reasons for gauging public opinion (to avoid being overthrown) to normative ones (to govern rightly and justly). This democratic doctrine prevailed in the New England town meetings, although it was only in the latter half of the twentieth century that the "public" whose opinion was to be sought expanded to its present size, concomitant with the extension of the right to vote to almost all adult citizens. The struggles to obtain the franchise and to contest the view of someone like Alexander Hamilton that popular opinion is seldom right are well documented. Today, as Harold Lasswell wrote, the open interplay of opinion and policy is the distinguishing mark of popular rule.

Early Straw Polls and Social Surveys

A precondition of measuring public opinion is an awareness of who constitutes the public, the potential universe of those whose opinion is to be measured. One of the

most authoritative descriptions of the public is the government census, which in the United States was first carried out in 1790. Popular attitudes were not surveyed until newspapers and magazines introduced “straw polls,” a term that refers to determining the direction of the political winds, much as a farmer might gauge the direction of the wind by throwing a handful of straw into the air. The *Harrisburg Pennsylvanian* is held to have carried out the first straw poll in the United States in 1824, showing Andrew Jackson a clear winner over John Quincy Adams and Henry Clay in a survey of 532 respondents from Wilmington, Delaware. Other newspapers of the time carried out similar straw polls.

The development of more extensive public opinion surveys can be credited to the social surveys of the late nineteenth century. Inspired by the sanitary surveys of health and housing conditions conducted by the statistical societies established in England in the 1840s, American surveyors of social conditions sent letters to businesses and conducted door-to-door interviews. None of these efforts was comparable in scope to Charles Booth's *Life and Labour of the People in London*, the first volume of which was published in 1889. Booth developed the theory of a poverty line and produced a poverty map of London, color-coded for eight economic levels. American social reformers used Booth's methods to document poverty in American cities. In one study, Hull-House workers canvassed door to door in a Chicago neighborhood in order to produce maps of nationality and wages, collected in the *Hull-House Maps and Papers* of 1895. The following year, W. E. B. Du Bois undertook a study that was published in 1899 as *The Philadelphia Negro*, collecting data on nearly 10,000 residents of the Central Ward.

Encouraged by the example of these social surveys being undertaken by reformers, newspapers and magazines adapted straw polling to their business. In 1896, the *Chicago Record* mailed postcard ballots to every registered voter in Chicago and every eighth voter in twelve mid-western states. Based on the results, the *Record* predicted that William McKinley would win 57.95 percent of the Chicago presidential vote; he received 57.91 percent on election day. Outside Chicago, however, the results were far off the mark. Publishers focused on the marketing potential of straw polls; postcard ballots often included subscription offers intended to boost the sponsor's circulation.

At the same time, government began to take a more active interest in public opinion, combining detailed straw polls with methods from the social surveys. For example, the Country Life Commission organized by President Theodore Roosevelt sent out a questionnaire to over half a million rural residents in what is likely the first major quality-of-life survey. The results were starting to be tabulated by the Census Bureau when Congress cut its funding; later, the questionnaires were burned as useless. Undaunted, the Department of Agriculture several years later started its own surveys of farm conditions, collecting the attitudes and opinions of farmers as early as 1915.



George Gallup. The nation's leading pollster starting in 1936; he sought to apply scientific methods to public opinion surveys. GETTY IMAGES

Polling in Transition

Scientific research into public opinion proliferated in the 1930s with the development of new statistical techniques. The New Deal was characterized by a growing number of government contracts in applied research, some of which employed surveys. Market researchers also adopted the techniques of applied sampling, but newspapers and magazines tended to be concerned not with technique, but rather with how polls would boost their circulation. Despite methodological problems and errors of often over ten percent, straw polls continued to be published by newspapers and magazines until the 1936 election. The *Literary Digest*, the largest-circulation general magazine of the time, had claimed “uncanny accuracy” for its previous straw polls and, in 1936, predicted Alf Landon winning with 57 percent of the vote over Franklin Roosevelt. Roosevelt won the election with 62.5 percent of the vote. The *Digest* prediction, based on almost 2.5 million unrepresentative straw ballots, was off by nearly 20 percentage points, and the magazine soon went bankrupt. Meanwhile, pollsters George Gallup, Elmo Roper, and Archibald Crossley correctly predicted the outcome. In fact, Gallup had written in July—before the *Digest* had even sent out its ballots—that the magazine's straw poll would show Landon winning with 56 percent. A marketing whiz, Gallup encouraged newspapers that subscribed to his poll to run it alongside that of the *Digest*, and he sold his column with the money-back guarantee that his prediction would be more accurate. He also pointed out

the reasons why the *Digest* would be wrong: sampling bias based on the above-average incomes of the *Digest's* readership, and response bias inevitable in mail-in questionnaires. As a result of his success, Gallup quickly became the country's top pollster.

The Gallup, the Roper, and the Crossley polls relied on quota sampling, intended to ensure that the poll sample looks demographically like the general population. However, their polls had a persistent Republican bias. Although he had the outcome correct in 1936, Gallup had actually underestimated Roosevelt's win by 6.8 percent. The pattern continued until 1948, when the Gallup Poll, the Roper Poll, and the Crossley Poll all predicted that Republican Thomas Dewey would defeat Democrat Harry Truman. In a thorough investigation of these 1948 failures, the Social Science Research Council urged replacing quota sampling with probability sampling, the method still employed in contemporary public opinion polls.

The Application of Social Science to Polling

Before World War II, however, and encouraged by the clear superiority of his techniques of survey research over those of the *Digest*, Gallup famously declared that there was a "new science of public opinion measurement." Indeed, the government's manpower policy and wartime research needs attracted social scientists to work on social research problems. Some of these government units conducted polls and surveys, especially to study wartime morale. The units were interdisciplinary and problem-oriented, and social scientists worked alongside market researchers, advertising and media professionals, and specialists from the armed forces, the Bureau of the Census, the Federal Reserve Board, and the Treasury.

When the war ended, Congress stopped funding these government research groups, and the social scientists they had employed returned to their universities. Three key university research centers were founded: the Bureau of Applied Social Research at Columbia University, the National Opinion Research Center (NORC), originally at Denver and later at Chicago, and the Survey Research Center (SRC) at the University of Michigan. Before the war, government research funds had gone primarily to its own agencies. Between 1945 and 1959, however, government research funding to universities and colleges increased tenfold. Although almost all of this funding went into the physical and life sciences, the small share that went to the social sciences was substantial relative to existing standards. For example, the SRC's \$230,000 of federal funding for its first year of operations in 1946 was over four times the University of Michigan's annual allocation to the Department of Sociology for salaries and operating expenses.

Modern Developments and Techniques

Polling spread around the world in the postwar decades, and by the 1960s there were several hundred survey organizations in the United States, many of them university-

affiliated. The SRC started the National Election Studies (NES) in 1948, and the Studies are still carried out every two years. The NES asks respondents hundreds of questions in the autumn before elections and then interviews them again once the election is over. NORC started its General Social Survey in 1971, asking a general set of questions usually repeated from year to year alongside a changing topical module. Both the GSS and the NES interview respondents for several hours in their homes and are thus expensive to carry out, but the data are well-respected and widely used by social scientists.

New techniques for randomly sampling telephone numbers cut the cost of surveys, and the news media once again took an interest in polling: the *New York Times* and CBS News started polling together in 1976 and they were soon joined by the NBC/*Wall Street Journal* and ABC/*Washington Post* polls. Exit polls, developed in the late 1960s, were first used to predict the outcome of a presidential election in 1980, causing complaints that Democrats on the West Coast were dissuaded from voting by the news that President Jimmy Carter had already been defeated. Social scientists remain critical of many commercial and journalistic polls, for example, the popular "call-in" polls, which are the modern version of the straw poll: unrepresentative and self-selecting.

Other public opinion polls are connected with the marketing of political candidates and positions. The darker side of public opinion polling came to light with President Lyndon Johnson's use of polls to manipulate opinion rather than simply report it. In commissioning and interpreting polls, Johnson's staff employed shallow analysis and outright misrepresentation to exaggerate domestic support for the war in Vietnam. Instead of engaging them as a tool to judge public opinion, Johnson thus used poll results to convince the media and policymakers of his personal popularity and that of his policy proposals. A more recent innovation is so-called push polls, in which campaign staff posing as pollsters provide respondents with false information in an attempt to influence their opinion or their vote. The American Association for Public Opinion Research asserts that push polls constitute an unethical campaign practice. Another recent development is decreasing response rates as potential respondents refuse to take part in polls. This raises methodological concerns because people who decline to participate in a survey may differ in significant ways from those who do complete it. A related problem is incomplete surveys, as respondents refuse to answer particular questions on a survey. Pollsters tend to compensate for nonresponse by weighting their results, but the best way of doing so is the subject of much debate.

Conclusion

Although technical questions about the best way of measuring public opinion remain, there have been clear methodological advances since the days when utilitarians such as Jeremy Bentham emphasized the difficulty of even de-

fining public opinion. Current public opinion research in sociology and psychology generally focuses on the ways in which individual beliefs interact with those of the wider community or of others within the individual's social network, since public opinion cannot form without communication and social interaction. Political scientists, by contrast, generally tend to study the influence of public opinion on public policy.

A question of an entirely different nature from technical concerns is that of the relationship between public opinion and public policy. Walter Lippmann argued that the "pictures in our heads" that form our opinions can be manipulated by organized interests. He concluded that the public should choose political leaders, but that policy ought to be set not by the public or their leaders, but by expert social scientists working within a "machinery of knowledge." Lippmann refused to consider that these policy specialists might also hold opinions divergent from pure reason, admitting only that the methods of social science were still far from perfect.

Recent research emphasizes the fact that most journalistic polls merely report horse-race information, such as between two or more candidates for office, and thus cannot actually influence policy. There is normative debate about the extent to which changes in public opinion should influence policy. Political leaders today rarely follow the model of Pericles, who thought the role of the leader was to convince the public to back policies they might originally have resisted. Advances in communications technology mean that modern democratic leaders can more often represent public opinion, which has led to calls for more direct democracy. However, a final argument is the suggestion that, simply by posing questions in a certain way, polls may actually create opinions about matters that had previously remained unexamined. The relationship between public opinion and democratic governance remains in question.

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See also **Polling**.

PUBLIC OWNERSHIP. See **Government Ownership**.

PUBLIC SCHOOLS. See **Education**.

PUBLIC UTILITIES. In the United States, public utilities supply consumers with electricity, natural gas, water, telecommunications, and other essential services. Government regulation of these utilities considered vital to the "public interest" has waxed and waned. In the nineteenth century, canals, ferries, inns, gristmills, docks, and many other entities were regulated. However, in the early twentieth century, emerging electric companies initially avoided regulation. These rapidly growing power companies often merged, creating monopolies that controlled the generation, transmission, and distribution of electric power. By 1907, entrepreneur Samuel Insull of Chicago Edison had acquired twenty other utility companies. He and others argued that building multiple transmission and distribution systems would be costly and inefficient. Nevertheless, reformers clamored for state regulation of the monopolies. By 1914, forty-three states had established regulatory polices governing electric utilities. Insull and other electric power "barons" found a way past regulation by restructuring their firms as holding companies. A **HOLDING COMPANY** is a corporate entity that partly or completely controls interest in another (operating) company. Throughout the 1920s, holding companies bought smaller utilities, sometimes to the point that a holding company was as many as ten times removed from the operating company. Operating companies were subject to state regulation, holding companies were not. Holding companies could issue new stock and bonds without state oversight. This pyramid structure allowed holding companies to inflate the value of utility securities. Consolidation of utilities continued until, by the end of the 1920s, ten utility systems controlled three-fourths of the electric power in the United States. Utility stocks, considered relatively secure, were held by millions of investors, many of whom lost their total investment in the stock market crash of 1929.

Public Utility Holding Company Act

With strong support from President Franklin D. Roosevelt, Congress passed the Public Utility Holding Company Act (PUHCA) in 1935. PUHCA outlawed interstate utility holding companies and made it illegal for a holding company to be more than twice removed from its operating subsidiary. Holding companies that owned 10 percent or more of a public utility had to register with the Securities and Exchange Commission and provide detailed accounts of all financial transactions and holdings. The legislation had a swift and dramatic effect. Between 1938 and 1958 the number of holding companies fell from 216 to eighteen. This forced divestiture continued until deregulation of the 1980s and 1990s.