requirements are quite slim.[179] In a recent study of young adults, the National Assessment of Educational Progress (NAEP) found, for example, that while most of those surveyed were not illiterate neither were they literate,[180] in that they were not equipped to handle complex tasks. According to NAEP's findings:

> The overwhelming majority of America's young adults are able to use printed information to accomplish many tasks that are either routine or uncomplicated. It is distressing, however, that relatively small proportions of young adults are estimated to be proficient at levels characterized by the more moderate or relatively complex tasks.[181]

Looking specifically at the match between jobs and skill levels, *Workforce 2000,* prepared by the Hudson Institute, draws similar conclusions. It notes:

> In 1986, minorities accounted for about 21 percent of the jobs in the American workforce of 115 million. Between 1986 and the year 2000, the number of jobs will increase by 21 million—and an astonishing 57 percent of those additional jobs will be filled by minorities. Yet if present trends continue, a dispro-

portionate number of those workers will lack the skills needed *to* do the job properly. Put another way, unskilled minorities are a growing fraction of the workforce and unless their abilities are upgraded, the nation's overall skill level will not be sufficient for tomorrow's economy.[182]

Businesses are also faced, at least in the short run, with a dearth of telecommunication talent.[183] Before divestiture, firms looked to AT&T to provide whatever limited telecommunication expertise they required. Today, however, their need for expertise is much greater, and the technologies they use are much more complex. Firms such as Westinghouse Electric, in Pittsburgh, PA, for example, have a real mix of facilities to manage, including T1 lines from four different carriers, a variety of multiplexer, channel banks, and AT&T 85 switches.[184] To meet their staffing needs, many companies have had to establish their own training programs. And the International Communications Association (ICA), which 5 years ago spent $50,000 annually in support of telecommunication education, today spends $305,000, which it distributes to telecommunication programs in 17 universities.[185]

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[179] For one discussion, see "Human Capital: The Decline of America's Work Force," *Business Week,* Special Report, Sept. 19, 1988, pp. 100-141.

[180] NAEP defined literacy as: "Using printed and written information to function in society, to achieve one's goals, and to develop one's knowledge and potential." Irwin S. Kirsch and Ann Jungeblut, *Literacy: Profiles of Americans Young Adults,* Report No. 16-PL-02, p. 3, n.d.

[181] Ibid., p. 6.

[182] *Workforce 2000,* Hudson Institute, 1988, as quoted in Arnold Packer, "Retooling the American Worker," *The Washington Post,* July 10, 1988, p. C3.

[183] David S...ps, "The Tough Search for Telecom Talent," *Datamation,* December 1987, pp. 65-72. See @ı Glen Rifkin, "Facing Up to Hire Stakes," *Computerworld,* Feb. 13, 1989, p. 13.

[184] Ibid., p. 66.

[185] Ibid.

Chapter 6

Communication and the Democratic Process

CONTENTS

Box

Figures

Tables

Communication and the Democratic Process

INTRODUCTION

Political theory holds that political organization is limited by prevailing modes of transportation and communication and that it changes with improvements in these modes. Before the age of modem communication and transportation, political philosophers-ranging from Plato and Aristotle to Rousseau and Montesquieu—agreed that size and population served to limit democracy.[1] Based on the model of the Greek city-states, the ideal size for a democracy was a unit "so small that any citizen could travel on foot from the most remote point in a city-state to its political center and return in one day."[2] Similarly, the population of a democracy had to be small and contained enough to allow interaction among its members. A polity so configured provided not only for popular representation, but also for effective government administration.

Given this relationship between the size and configuration of a community, its transportation and communication infrastructure, and its political organization, it is clear why the growth and expansion of the United States went hand in hand with the advancement and deployment of communication and information technologies. As James Beniger has pointed out, the advancement and application of these technologies were essential in providing the degree of control necessary for coping with the organizational complexity and scale of operation to which the industrial revolution gave rise.[3]

Today, the United States is taking its place in a global economy--one that is increasingly information-based. Just as the shift from an agricultural to an industrial society posed a number of challenges for the U.S. Government, so too will this most recent development. These major structural changes will give rise to problems of representation as well as problems of control.

Given the centrality of communication to all political activities, how the United States responds to such problems of governance will depend, in part, on the evolution of the U.S. communication infrastructure, and on the rules that establish its development and use. This chapter will examine some of the political challenges that might arise and discuss how new communication technologies might be employed to address them. To this end, it will:

- characterize the political realm and describe the role of communication in it,
- discuss the past role of communication in the American political system,
- identify key political activities and actors,
- describe the political context in which the new technologies are emerging, and
- identify and analyze the opportunities afforded by new technologies and the major factors determining the political outcomes that these technologies might have.

THE POLITICAL REALM AND THE ROLE OF COMMUNICATION

The polity is the realm of power. It is the area of social activity where disputes are resolved and social justice is defined, and where resources and values are allocated in accordance with the general idea of justice. The basic value that maintains the polity is "legitimacy"—the general adherence of the people to the conception of justice embodied in the society's traditions or constitution, and acknowledgment of the authority that governs on its behalf.[4] In the political realm, change comes about somewhat haphazardly through the competition for power and influence. In a democratic polity, the means of bringing about change are participation and persuasion; individuals and groups seek to gain access to resources and values by shaping attitudes and beliefs about what constitutes justice. To be effective, they must have the right to obtain information as well as the right to distribute it.

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[1] James W. Carey, *Communication as Culture: Essays on Media and Society* (Boston, MA: Unwin Hyman, 1989), p. 3.

[2] Ibid.

[3] James R. Beniger, *The Control Revolution: Technology and the Economic Origins of the Information Society* (Cambridge, MA: Harvard University Press, 1986).

[4] Daniel Bell, *The Cultural Contradictions of Capitalism* (New York, NY: Basic Books, 1976), p. 1.

Communication and information pervade political life. Without them there could be no Nation, for it is through the process of communication that people first develop a sense of community and a shared set of values that legitimize political authority.[5] By magnifying and amplifying some actions, the communication process distinguishes between what is a private act and what is a public affair. It organizes what appear to be random activities to show how individuals and groups are related to one another in the pursuit of power, providing a roadmap for individuals who want to influence the course of political events.[6] Citizens rely on the communication process to gather information, to identify like-minded people, to organize their forces, and to articulate their political preferences. Furthermore, because it generates a common fund of knowledge and information, the communication system facilitates productive and rational debate. Without some knowledge and understanding of how others are informed and what they believe, individuals could not make reasoned and sensible arguments and decisions.[7]

The communication process also provides guidance to political leaders. Because communication channels flow in two directions, communication serves not only to inform citizens about political events; it also provides feedback to political leaders about the values and attitudes of their constituents.

Political activities not only depend on communication; they also require constraints on the manner in which communication occurs. Thus, those in powerful positions have always attempted to control, or even restrict, access to communication paths.[8] As Donohue et al. have noted:

When man devised the first rudimentary form of mass communication centuries ago, he immediately developed ways of controlling it. Printer, king, teacher and merchant were almost equally inventive in contriving ways to bring information under control. Their diligence arose from man's historic recognition of a fundamental social principle: knowledge is basic to social power.[9]

While limitations on communication may not accord with some characterizations of democracy, many political theorists have argued, in fact, that some constraints on participation are necessary in order to preserve democracy. Aristotle, for example, favored "constitutional government" but was opposed to "direct democracy," which he called perverted because it failed to protect the rights and interests of the rninority.[10] James Madison made much the same case in Federalist Paper 10, when he argued on behalf of "a government in which a scheme of representation takes place." Such concerns have also been echoed more recently by social scientists such as Joseph Schumpeter and B.R. Berelson. According to Schumpeter, for example: "The electoral mass is incapable of action other than a stampede."[11] Similarly, Berelson contends that, given the wide variety of citizens and their values, the range of issues on which public choice is allowed must be limited, if political democracy is to survive.[12]

Democracy depends, then, on the establishment of a delicate balance between "too little" and "too much" political communication. In negotiating this balance, "communication gatekeepers" play a criti-

[5] Karl Deutsch, *Nationalism and Social Communication* (New York, NY: Free Press, 1963).

[6] Lucian W. Pye (ed.), *Communications and Political Development*, Studies in Political Development (Princeton, NJ: Princeton University Press, 1%5), p. 6.

[7] Ibid.

[8] Such control can be traced to the beginnings of recorded history. For example, in 213 B. C., the Chinese Emperor burned all the books in his kingdom and buried alive every scholar he suspected of having memorized them. John H. Gibbons, "Future Directions for Information Technology Policy," Leaders, February/March 1987, vol. 10, No. 1, p. 84. For more modern examples, see Ben H. Bagdikian, *The Information Machines: Their impact on Men and the Media* (New York, NY: Harper and Row Publishers, 1971); Ithiel de Sola Pool, *Technologies of Freedom* (Cambridge, MA: The Belknap Press of Harvard University Press, 1983); and Brian Winston, *Misunderstanding Media* (Cambridge, MA: Harvard University Press, *1986).* For a theoretical discussion of why restricting access to communication paths is important, see Martha Feldman and James March, "Information in Organizations as Signal and Symbol," *Administrative Science Quarterly, 1981,* vol. 26, pp. 171-186.

[9] George A. Donohue, Phillip J. Tichenor, and Clarice N. Olien, "Gatekeeping: Mass Media Systems and Information Control," F. Gerald Kline and Phillip J. Tichenor (eds.), *Current Perspectives in Mass Communication Research* (Beverly Hills, CA: Sage Publications, 1972).

[10] *Aristotle* in *Twenty-Three* Volumes, XXI Politics, translated by H. Rackham (London: Heinemann, 1977), Book III, p. 207.

[11] Joseph A. Schumpeter, *Capitalism, Socialism and Democracy* (New York, NY: Harper Torchbooks, 1950), P. 283.

[12] B.R. Berelson, P.F. Lazarsfeld, and W.N. McPhee, "Democratic Theory and Democratic Practice," *Voting* (Chicago, IL: University of Chicago Press, 1954).

cal role.[13] Gatekeepers are the individuals or groups in a society who execute decisions about the formulation, exchange, and interpretation of information and knowledge. A gatekeeper might include, for example, a parliamentary representative, a government bureaucrat, or a member of the press. As Donohue et al. have noted, gatekeepers have an "immense potential for developing power over other human lives."[14] The gatekeeper decides who has access to communication pathways, and thus who can actually play political roles and place issues on the political agenda.

How, and to whom, the role of communication gatekeeper is assigned varies across cultures, in different historical contexts, and in different organizational settings. Technological developments can also determine where and how gatekeeping takes place, and who will assume this role.

For example, in western societies, before the age of print, the church played a major role in controlling access to and the distribution of knowledge, as Umberto Eco's novel, *The Name of the Rose,*[15] so intriguingly illustrates. With the development of print technology, a new system of information control was established, namely copyright, and new communication gatekeepers were required. Seeking to end the dissemination of heretical and seditious literature, while at the same time continuing to profit from the burgeoning printing trade, the British Government assigned publishers the role of gatekeeping. In exchange for the publishers' agreement to enforce the censorship laws, the government granted the publishers' guild, known as the Stationers, a monopoly right to print, publish, and sell their works.[16]

In the United States, the role of communication gatekeeping, and the rules governing the flow of information, were set early in American history in the first amendment to the Constitution, which protects freedom of speech, the freedom of the press, and the right of people to peaceably assemble. *7 Although these freedoms are not absolute and must be balanced against other political and social values, freedom of expression, especially for political purposes, has been recognized by the Supreme Court as being in a "preferred position."[18]

NEW COMMUNICATION TECHNOLOGIES AND THE CHANGING ROLE OF GATEKEEPERS IN HISTORICAL PERSPECTIVE

Given the importance of communication to political affairs, is is not surprising that as new technologies provided new communication pathways, policymakers had to reconsider the rules for access and gatekeeping. Before considering what policies might be appropriate for the new communication technologies, it is useful, therefore, to begin by examining how new technologies historically have affected access and gatekeeping.

The issue of control over access to communication pathways was already apparent during the colonial period, when, as in England, the British Government manned the gateways to communication paths. The working out of this issue during the course of early U.S. history illustrates a long, historical appreciation of the political relevance of communication policy.

Newspapers were plentiful and very important in the daily life of the colonies. Describing their central role, the Rev. Samuel Miller wrote in 1785:

A spectacle never before displayed among men, and even yet without a parallel on Earth. It is a spectacle, not of the learned and the wealthy only, but of the great body of the people; even a large portion of that class of the community which is

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[13] The term "gatekeeper" is borrowed from the field of journalism. For a discussion, see D.M. White, "The Gatekeeper: A Case Study in the Selection of News," *Journalism Quarterly, vol. 27,* Fall 1950, pp. 383-390.

[14] Donohue et al., op. cit., footnote 9.

[15] Umberto Eco, *The Name of the Rose,* translated by William Weaver (New York, NY: Harcourt Brace, 1983).

[16] Lyman Ray Patterson, *Copyright* in *Historical Perspective* (Nashville, TN: Vanderbilt University Press, 1968), ch. 4.

[17] These freedoms are at the core of what Thomas Emerson terns "the system of freedom of expression." For a discussion, see Thomas I. Emerson, *The System of Freedom Of Expression (New* York, NY: Vintage Books, 1970). For a good review of the rules and regulations that establish the rights and responsibilities of the press as gatekeeper, see Doris Graber, *Mass Media and American Politics* (Washington, DC: CQ Press, 1984), ch. 2.

[18] See Justice Stone's footnote 4 i. *U.S.* v. *Caroline Products, Co.,* 304 U.S. 144 (1938), Some constitutional scholars, most prominently Alexander Meiklejohn, have argued that the first amendment is designed to give absolute protection to speech related to self-government. He argues that: "The primary purpose of the First Amendment is, then, that all the citizens shall, so far as possible, understand the issues which bear upon our common life." See Alexander Meiklejohn, *Free Speech and Its Relation to Self-Government (New* York, NY: Harper & Bros., 1948), pp. 88-89.

destined to daily labor, having free and constant access to public prints, receiving regular information of every occurrence, attending to the course of political affairs, discussing public measures, and having thus presented to them constant excitements to the acquisition of knowledge, and continual means of obtaining it. Never, it may be safely asserted, was the number of political journals so great in proportion to the population of a country as at present in ours. Never were they, all things considered, so cheap, so universally diffused, and so easy of access.[19]

Although extremely popular and of high quality, colonial newpapers were decidedly conservative in their political outlook. This conservatism was due not only to the threats of censorship and libel action, but also to the fact that, as the printers' largest customers, the colonial governments basically sub-sidized the very first newspapers.[20]

British concerns about the distribution of sedi-tious literature in the colonies were not unfounded, however. Newspapers and pamphlets served as the primary vehicles for public protest and revolt, providing a network of political communication that was crucial to revolutionary activities. And, with the onset of the revolution, printers, functioning as editors and publishers, took over the gatekeeping role.[21] In fact, it was in their shops that many a political story and idea were exchanged. It is interesting to note that, although much of the political opposition to British rule was directed at British restrictions on communication paths within the Colonies,** these new gatekeepers were as adamant as their predecessors in suppressing dissi-dent ideas.[23]

This appreciation of the power of the pen, together with their concerns about potential opposition, may account for the reluctance of the Constitution's authors to have journalists interpret the events of the Constitutional Convention for the public. For even

though they prohibited newspaper coverage of the proceedings, they made effective use of newspapers and other communication paths to build support for the ratification of the Constitution. Disguised as the columnist Publius, Alexander Hamilton, John Jay, and James Madison wrote a series of newspaper articles on behalf of the Constitution. These *Feder-alist Papers* proved critical in generating public understanding of, and support for, the new form of government.

A more permanent indication of the Founders' recognition of the political role of communication can be found, of course, in the Constitution's first-amendment provisions, protecting freedom of speech and press. Reflecting a distrust of govern-ment, and an appreciation for the importance of open communication to popular sovereignty and to main-taining a pluralistic society, James Madison, for example, wrote:

> Popular government without popular information, or the means of acquiring it, is but a prologue to a farce or tragedy, or perhaps both. Knowledge will forever govern ignorance, and a people who mean to be their own governors must arm themselves with the power which knowledge gives.[24]

The Founders also fostered the development of the post system, recognizing its importance in developing the widespread public exchange of information necessary to create a sense of nation-hood. Thus, as early as 1792, both political parties agreed that the government should subsidize news-papers. Also recognizing their own postal needs to communicate with constituents, the Members of the First Continental Congress granted themselves free postage. This franking privilege was continued after the Constitution was adopted.[25]

With the development of different political groups in the 19th century, political parties began to

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[19] As quoted in Daniel J. Boorstin, *The Americans: The Colonial Experience (New* York, NY: Vintage Press, 1958), P. 327.

[20] Ibid., pp. 233-234.

[21] See Richard Buel, Jr., "Freedom of the Press in Revolutionary America: The Evolution of Libertarianism, 1760-1820," Bernard Bailyn and John B. Hench (eds.), *The Press and the American Revolution* (Worcester, MA: American Antiquarian Society, 1980), pp. 59-97; and Frank Luther Mott, *American Journalism (New* York, NY: The Macmillan Co., 1941).

[22] Edwin Emery, *The Press and America* (Englewood Cliffs, NJ: Prentice-Hall Inc., 1962).

23 Boorstin, op. cit., footnote 19.

[24] Saul K, Padover (cd.), *The Complete Madison: His Basic Writings* (Millwood, NY: Kraus Reprint, 1953), P. 337.

[25] *Inside Congress* (Washington, Dc: Congressional Quarterly, *1979),* p. 127. Franking still provides an important means for Members of Congress to communicate with constituents, as reflected by the fact that on July 21, 1989, the House Appropriations Committee, Subcommittee on Legislative Appropriations, approved a record $134 million for 1990 for mailings by Members of Congress. "Panel Votes Record $134 Million for Growing House Mailings," *The Washington Post,* July 22, 1989, p. A2.

serve as gatekeepers, linking the public and the government. Party newspapers became a:

> ... major force for factional or party cohesion, communicating partisan information and views from the centers of power to the outlying communities.[26]

At the same time, through postage-free printers' exchanges, the party papers received political information from States and localities. Thus, their editors helped to synthesize a national political community that transcended local orientations.[27] Print communication remained relatively open throughout the 1800s, largely because of government efforts to ensure access. Subsidized postage rates allowed readers to subscribe to distant publications. Any town with a newspaper and post office could become a source of news for the rest of the Nation.

Although the telegraph dramatically increased people's ability to communicate quickly across the country, its high cost restricted access,[28] and thus its primary impact on the public was through the mediation of the press as gatekeepers.[29] Nevertheless, newspaper-owners feared that the telegraph companies themselves might enter the news business, thus usurping the owners' gatekeeping role. And, in fact, a new group-telegraph reporters-- tried to establish itself as a gatekeeper, selling news to newspapers. However, within a short time these reporters joined the Associated Press (AP).[30] The telegraph did alter newsgathering and dissemination, however, and press associations such as AP were formed to share the costs of these activities.

By the late 1800s, some believed that AP and Western Union had become too powerful as gatekeepers, exploiting their monopolies to make it difficult for new papers and journals to get started. Congress considered over 70 bills for reforming the telegraph system. One would have given the government ownership and control of the telegraph system, while another would have subsidized a competitor of AP and Western Union. With the decline of the Populist movement, however, calls for telegraph reform diminished in the face of strong lobbying from Western Union.[31]

Although telephones increased people's opportunities to communicate with one another in an informal and unmediated way, their expense limited widespread use for political purposes. At the turn of the century, telephones cost $200 a year, a sum well beyond the means of most workers.[32]

Politicians gradually came to see telephones as being central to their activities. In 1878, Congress set up the first telephones in Washington to connect the Public Printer's Office with the Capitol so that members could order extra copies of their speeches. William McKinley was the first President who was comfortable with the telephone, using it in his 1896 campaign and later in the White House. With the deployment of telephones in more and more homes, they began to be used to canvass voters. By 1910, one commentator noted: "In apolitical campaign the telephone is indispensable."[33]

Radio initially provided a local or regional path of communication. However, it soon became more national through the use of telephone networks and commercial advertising. Throughout the 1930s and 1940s, commercial radio was the primary communication path by which politicians and national leaders could reach the Nation. President Roosevelt used his "fireside chats" to lift spirits during the depression and to rally Americans behind the war effort.

Early broadcasting law tried to ensure equal service and prevent a few urban centers from dominating radio. In an attempt to lessen the power of commercial radio as the gatekeeper for reaching

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[26] William N. Chambers, *Political Parties in a New Nation* (New York, NY: Oxford University Press, 1%3), p. 42. Chambers credits the press with forging national links among like-minded partisan factions.

[27] Richard B. Kielbowicz, "Newsgathering by Printers' Exchanges Before the Telegraph," *Journalism History*, vol.9, Summer 1982, PP. 42-48; and Samuel Kernell, "The Early Nationalization of Political News in America,''*Studies in American Political Development* (New Haven, CT: Yale University Press, 1986), pp. 255-278.

[28] In Europe, where the telegraph was a government monopoly supervised by the postal authorities, people made greater use Of it. In the United States, if Samuel Morse had had his way, the telegraph would have become a government monopoly. Congress did subsidize the first experimental line, but decided not to buy the system, despite the recommendations of the House Ways and Means Committee (1845) and the postmaster general (1845, 1846). See Daniel J. Czitrom, *Media and the American Mind* (Chapel Hill, NC: University of North Carolina Press, 1982), p. 22.

[29] Ibid., p. 14.

[30] Ibid., pp. 16-17.

[31] Ibid., pp. 28-29.

[32] Ithiel de Sola Pool, *Forecasting the Telephone: A Retrospective Technology Assessment* (Norwood, NJ: Ablex Publishing Co., 1983), p. 82.

[33] As quoted in ibid., p. 79.

the Nation, the Wagner-Hatfield amendment, proposed in 1934, would have required the Federal Communications Commission (FCC) to broaden radio station ownership. The amendment called for the redistribution of all broadcasting channels and an allotment of one-fourth of all the radio broadcasting facilities to education, religious, labor, and other nonprofit associations. The amendment was defeated in the face of intense lobbying by commercial broadcasters. [34]

Television's critical role as a gatekeeper for communication in the political realm was recognized as early as 1948 when the Republican, Democratic, and Progressive parties all held their conventions in Philadelphia to take advantage of the coaxial cable, which allowed them to broadcast the proceedings over 4 networks to 18 stations in 9 cities. [35] The first daily network newscasts began later that year. Since that time, TV has become the most important path for national political communication. Network television coverage, as well as its production, of national political events has had a profound influence on the course of politics. As Christopher J. Matthews, the principal assistant to former House Speaker Thomas P. O'Neill, has described these changes:

> At a dizzying pace, the TV news networks have absorbed many of the democratic functions traditionally held by political parties: the elevation of key public issues, the promotions of new leaders, the division of executive and legislative authority, and the constitution of political opposition. [36]

As the role of gatekeeper of political communication was shifted from the local newspaper proprietor, to the legislative representative, to the political party leader, to the television news analyst, politics in America was transformed in a number of significant ways. Local issues were superseded by national ones, while the production of political events began to take precedence over political debate. Changes on this order are also likely to occur in the future, given the widespread deployment of the new communication technologies. In fact, as described below, many such changes are already under way.

As new communication technologies come to play an enhanced role in the political realm, the key political questions that emerge are:

. Who will assume the gatekeeping role with respect to new communication technologies?
. What values and rules will govern the gatekeeper's behavior?
. Where will the balance between "too little" and "too much" information be set? and
. What will be the consequences for governance?

As Ithiel de Sola Pool has noted in this regard:

> The important point about the way in which electronic and mass media operate is the fact that, as new sources of information or belief, they create counterweights to established authorities. Simultaneous radio coverage of war, a moon walk or whatever absorbs and fascinates the mass audience directly, cuts out traditional local purveyors of information and interpretation. It is not the imam or the chief of state who tells the people what happened and what it means. The people were there, along with the camera crew. The broadening of the arena of action transfers authority from the village bigwig returned from a visit to the district town, to nouveau powerful national leaders and eventually beyond them to world figures. [37]

KEY POLITICAL ACTIVITIES AND ACTORS

Derived from the rich philosophical and cultural roots of the American past, political activities in the United States often call for different, and occasionally conflicting, values and role requirements. One philosophical tradition relates to the maintenance and operation of the minimal requirements of a government, and stresses the need for internal stability, integrity of the borders, and national sovereignty. A second fundamental American tradition is that of ensuring a democratic system—that is, providing for openness, participation, and represen-

[34] Daniel J. Czitrom, "Goals of the U.S. Communication System: An Historical Perspective," OTA contractor report, September 1987, p. 32.

[35] Reuven Frank, "1948: Live ., . From Philadelphia . . . It's the National Conventions, "The *New York Times Magazine,* Apr. 17,1988, pp. 37,62-65. The networks' motivations were somewhat less than public-spirited, as gavel-to-gavel coverage was cheaper than carrying entertainment from studios, and TV-set manufacturers, who were also owners of two of the networks, saw this as a way of increasing sales. Sponsorship of the gavel-to-gavel coverage of three political conventions came to less than $250,000. *Life Magazine* was the sole sponsor of NBC's coverage of all three conventions.

[36] As cited in Everett Carll Ladd, The *American Polity: The People and Their Government,* 3d ed. (New York, NY: W.W. Norton & Co.,1989),p. 17.

[37] Ithiel de Sola Pool, "Direct-Broadcast Satellites and Cultural Integrity," Arthur Asa Berger (cd.), *Television in Society (New* Brunswick, NJ: Transaction Books, 1987), p. 231.

Table 6-I-Relationships Between Political Activities and Information Gatekeepers

Political activity	Information gatekeepers
National security/ national sovereignty	President; Congress; State Department; foreign governments
internal security/ social welfare	Federal agencies, both law enforcement and public assistance; Congress; State & local governments
Providing for openness	Congress; news media; interest groups; Federal agencies
Providing for participation	Political parties; media; Congress; Interest groups; political consultants
Providing for representation	Political consultants; interest groups: electorate; parties

SOURCE: Office of Technology Assessment, 1989.

tation. A third philosophical tradition, which stems from the American liberal heritage, requires government to protect individual rights and to preserve a free-market system. And a fourth, and more recent, tradition commits the government to providing for the social welfare of the people, requiring government to devise and effectively administer or implement public programs.[38]

Drawing on these traditions, five basic political activities are identified for analysis in this chapter:

1. maintaining national sovereignty and national security,
2. maintaining internal security and social welfare,
3. providing for openness,
4. providing for participation, and
5. providing for representation.

Communication is essential to all five, although the gatekeepers of information and communication pathways may differ in each case. For example, the President and the Departments of State and Defense have long been the primary gatekeepers over the flow of messages between the United States and officials in other countries. But in providing for openness, the traditional press--daily newspapers, radio, TV, and national magazines-have played the primary role. In political campaigns, political parties have been the most important gatekeepers for the flow of messages.

The relationships between political activities and information gatekeepers are laid out in table 6-1. Together, these activities and actors constitute much of the political realm. By examining how new communication and information technologies are affecting these relationships, it is possible to draw a rather comprehensive picture of what the future impact of these technologies on American politics might be.

SOCIAL/POLITICAL CONTEXT IN WHICH NEW TECHNOLOGIES ARE EMERGING

The values and rules about access and gatekeeping change in response to the development of new communication technologies and changing communication pathways. They are also affected by the societal context in which political activities are carried out. Thus, to understand the impact of new communication technologies on the political realm, it is necessary to look first at the context in which these technologies are being developed and deployed.

Declining Political Participation

One development that has colored the perceptions of, and expectations about, communication technologies in politics is the general decline of political participation in the United States over the past several years. Because technologies can offer new modes of participation, they have sometimes been viewed as a potential means of reengaging the public in political affairs.[39] On the other hand, some technologies, such as television, have been faulted for being the major contribute to the decline in public activism.[40]

Political participation can entail any number of activities ranging from keeping abreast of public affairs to running for public office. However, regardless of the activity involved, it is clear that political participation in the United States has been on the decline. Looking at the minimum level of

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[38]For some discussions of American values, see Garry Willis, *Explaining America:* The Federalist *Papers* (Garden City, NY: Doubleday, 1981); Robert N. Bellah et al., *Habits of the Heart: Individualism and Commitment in American Life* (Berkeley, CA: University of California Press, 1985); and Louis Hartz, *The Liberal Tradition in America (New* York, NY: Harcourt, Brace and Co., 1955).

[39]See Richard Hollander, *Videodemocracy* (Mt. Airy, MD: Lomond Publications, Inc., 1985).

[40]See Austin Ranney, *Channels of Power: The Impact* of Television on American Politics (New York, NY: Basic Books, 1983).

participation--that of political awareness--we see, for example, **that** of the adults polled by the Roper Organization in 1982, only one-third had even a rough idea of the size of the current Federal deficit.[41]

The results are similar with respect to voting. Despite the fact that most of the institutional barriers to voting have been removed, the percentage of those voting in elections has actually been falling. For example, in the 1984 presidential election only 53 percent of those eligible voted; in 1988, the figure was only 51 percent. Voting for seats in the House of Representatives has been even lower, with only 38 percent of the voting-age public participating in 1986.[42] These low voting levels are even more striking when compared to voting levels in other advanced industrialized countries (see table 6-2).

Political analysts have offered a variety of explanations-some of them contradictory-for the low level of political participation in the United States. Some say that low participation reflects a general feeling that voting provides no real payoff. According to Ruy Teixeira, for example, "quite simply, for many Americans voting just doesn't seem worth the bother."[43] Similarly, but with a slightly different twist, Seymour Martin Lipset has attributed poor turnout to the stability of the system, and to the public's confidence that nothing too monumental, or extreme, will occur.[44] Others have explained the decline of public interest in terms of a loss of confidence in the system,[45] while still others believe that the need to actively register to vote has served to inhibit the uneducated and the poor.[46]

Although there are no single or definitive explanations of why many Americans do not vote or become active politically, there are some clues to suggest why people do. Correlations of socioeconomic factors with voting behavior show that education and affluence are the most important explanatory variables, with strong religious and moral beliefs also playing a role in encouraging participation.[47] Considered in light of the explanations cited above about nonvoting, these correlations are not surprising. The more educated and affluent people are, the more likely they are to feel they have something important at stake and can make a difference.

These observations suggest that the extent to which new communication technologies serve to foster or to discourage political participation will depend in large measure on whether or not they provide people with a greater sense of empowerment. If they are difficult to use or hard to come by, people will be discouraged and may be even less willing to take political initiative. On the other hand, if new technologies are employed to provide people with a greater sense of control over their lives, they could serve to generate an interest in politics.

Blurring of the Boundaries Between Public Affairs and Entertainment

News has been treated as an economic commodity since the days of the telegraph.[48] However, the economic value of public affairs information was greatly enhanced by the development of more technically advanced ways to package and process it. This increase in economic value has been accompanied by a blurring of the boundaries between what constitutes entertainment and what constitutes public affairs.

Nowhere is this development more evident than in the televised, political, media event. With television, in fact, some would say that politics has become a

[41] As cited in Ladd, op. cit., footnote 36, p. 342. See also Norman Ornstein, Andrew Kohut, and Larry McCarthy, *The People, the Press, and Politics: The Times Mirror Study* of the American Electorate (New York, NY: Addison-Wesley Publishing Co. Inc., 1988), p. 54. In this survey, participants were asked: 1) whether they knew that the U.S. Government was in support of the opposition in Nicaragua; 2) whether there had been an increase in the Federal budget deficit over the last 5 years; and 3) whether the White House Chief of Staff was Howard Baker. Although 76 percent of those questioned said that they were aware of political issues, only 26 percent were able to correctly answer all three questions, while 32 percent were able to answer two out of three, and 42 percent could give only one or no correct answers.

[42] Ladd, op. cit., footnote 36, p. 417.

[43] Ruy A. Teixeira, "will& Real Nonvoter Please Stand Up?" *Public Opinion,* vol.11, *No. 2,* July/August 1988, pp. 42, 44.

[44] Seymour Martin Lipset, *Political Man* (Garden City, NY: Doubleday. 19@)> p.181.

[45] See, for example, "The End of American Exceptionalism," *The Public Interest,* Fall 1975, pp. 197-198.

[46] See Frances Fox Piven, *Why Americans Don't Vote* (New York, NY: Pantheon, 1988).

[47] See Ornstein et al., op. cit., footnote 41, pp. 2-5.

[48] In the late 1870s, when the Associated Press was criticized for seeking control, it argued that collecting news was a business just like any other. As the AP general agent, James W. Simonton, said in 1879: "I claim that there is a property in news, and that property is created by the fact of our collecting it and concentrating it." As cited in Czitrom, op. cit., footnote 28, p. 27.

Table 6-2--Turnout of Registered Voters in 24 Countries

Country	Vote as a percentage of registered voters	Compulsion penalties [a]	Automatic registration
Belgium	94.6	Yes	Yes
Australia	94.5	Yes	No
Austria	91.6	No(some)	Yes
Sweden	90.7	No	Yes
Italy	90.4	Yes	Yes
Iceland	89.3	NA	NA
New Zealand	89.0	No(some)	No
Luxembourg	88.9	NA	NA
West Germany	88.6	No	Yes
Netherlands	87.0	No	Yes
United States...	86.8	No	No
France	85.9	No(some)	No
Portugal	84.2	NA	NA
Denmark	83.2	No	Yes
Norway	82.0	No	Yes
Greece	78.6	Yes	Yes
Israel	78.5	No	Yes
United Kingdom..	76.3	No	Yes
Japan	74.5	No	Yes
Canada	69.3	No	Yes
Spain	68.1	Yes	Yes
Finland	64.3	No	Yes
Ireland	62.2	No	Yes
Switzerland	48.3	No(some)	Yes

NA=notapplicable

a %compulsion penalties" refers to whether or not law in each country provides for penalties (fines, etc)fOrnOtWing.

SOURCE: David Glass, Peverill Squire, and Raymond Wolfinger, "Voter Turnout An international Comparison," *Public Opinion*, December/January 1984, p. 52. The authors based this table on the most recent election held in each country as of 1981. Reprinted with the permission of the American Enterprise institute forPublic Policy Research, Washington, DC.

spectator sport, with the public playing the role of passive audience. As one newspaper columnist has written:

> Television has produced a couch-potato constituency... In some curious way, the most experienced political viewer becomes expert at one thing: television criticism. We become better equipped to criticize performance than policies. It is, after all, easier. . . I cannot prove that the rise of politics-as-television is responsible for the decrease of actual real, live voters. But how many viewer-voters have learned from television that they can reject politics because the program is boring? . . . In front of the television set, citizens are transformed into an audience.[49]

Given this development, some are concerned that television news now "sets the terms by which political judgments are rendered and 'political choices made,'"[50] a development that has negative implications for democratic government.[51]

How the media can serve to structure public affairs events can be seen by looking at recent political conventions. In the past, such events were designed primarily to provide a public forum for choosing a presidential candidate, and the party platform on which the candidate would run. Discussion and debate were essential to the process, and delegates were active participants, often stomping and whistling in accompaniment to long-winded speeches.[52] Today, in contrast, candidates are chosen prior to the convention and party discussions take place off-camera, allowing producers to create a more pleasing, unified picture for their viewing audiences .[53] While such programming may be more appealing from the perspective of entertainment, it
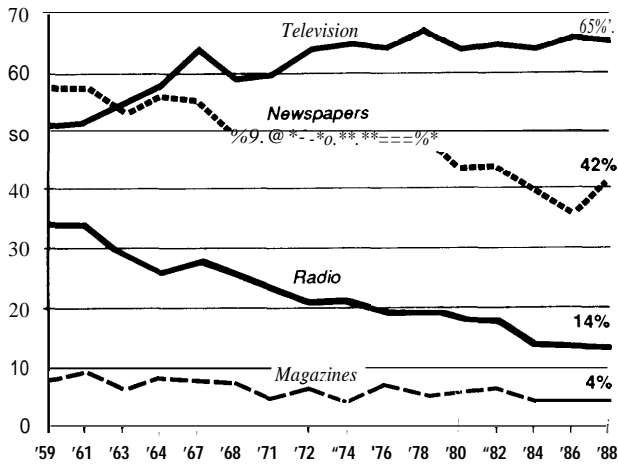
@Ellen Goodman, "Couch-Potato Campaigns," *The Washington Post,* Mar. 8, 1988, p. A19.

[50]Shanto Iyengar and Donald R. Kinder, News *That Matters: Television and American Opinion* (Chicago, IL: The University of Chicago Press,1987), p. 4. For a discussion of how media can distort the news, see David L. Altheide, *Creating Reality: How* TV News Distorts Events (Beverly Hills, CA: Sage Publications, 1976).

[51]See David L. Altheide, *Media* Power (Beverly Hills, CA: Sage Publications, 1985).

[52]Nicholas von Hoffman, "Conventional History," *The New Republic,* Aug. 1,1988, p. 27.
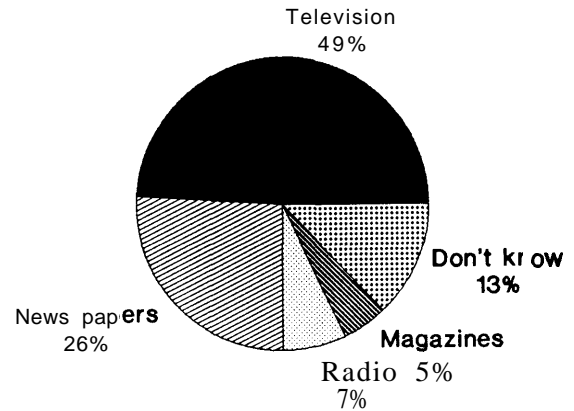
[53]Ibid.

Figure 6-1—Americans' Primary Media Sources of News (multiple responses permitted)

SOURCE: Reprinted with permission of the NationaAssociation of Broadcasters from "America's Watching, The 19S9 TIO/Roper Report," p. 14.

Figure 6-2-Which Media Report Is Most Credible?

SOURCE: Reprinted with permission of the National Association of Broadcasters from "America's Watching, The 1989 TIO/Roper Report)" p. 15.

can also distort the public's perception of politics and public affairs.

Whether or not such effects will be problematic for democracy will depend, in part, on the extent of the public's exposure to this kind of programming, the existence and availability of alternative media presentations, and the degree to which television substitutes for more active forms of political engagement. To date, most analyses suggest that television does have a significant political impact, although the relationship is much more complicated than was once believed.[54]

According to a recent survey by the Roper Organization, for example, television continues to serve as the "public's primary window on the world."[55] As can be seen in figure 6-1, about two-thirds of all adults generally get their news from television; 42 percent use newpapers as their major source of news; while 14 percent of the respondents rated radio tops and *4* percent named magazines. Moreover, as depicted in figure 6-2, almost one-half of the adult public view television as being the most credible media for news. In addition, more people cite television, as opposed to any other media, as

their primary source of information about political candidates.[56]

Comparing media choices in terms of socioeconomic and demographic data, a recent Gallup Poll finds that different kinds of voters rely on different kinds of media. According to this poll, those who turn to newspapers rather than to television for information on national affairs are:

> . . . more sophisticated and, on balance, more Republican than the nation as a whole. Newspaper readers are more tolerant, less alienated, yet less religious and less in favor of social welfarism.[57] . . . [T]hose who rely on newspapers, in contrast to those who rely on television for providing information on national affairs, are better educated, possess a higher level of interest and involvement in politics and are more likely to vote.[58]

Data such as these raise the possibility that, instead of serving to provide a common, national political perspective, the role of broadcast media in politics may actually be to reinforce socioeconomic differences.

Despite concerns about the negative impact of television in politics, some people believe that new

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[54]The relationship between media and the audience is discussed in more detail in ch 7.

[55]*America's Watching*, the 1989 Television Information Office Report, p. 14.

[56]Ibid., p. 18.

[57]Ornstein et al., op. cit., footnote 41, P. 5.

[58]Ibid., p. 61.

communication technologies could actually serve to reawaken the public interest. They emphasize, however, that if technologies are to play such a role, they will need to be much more engaging than they have been in the past. As one communication scholar points out:

> The public will begin to reawaken when they are addressed as a conversational partner and are encouraged to join the talk rather than sit passively as spectators before a discussion conducted by journalists and experts.[59]

Increase in the Number and Complexity of the Demands Being Placed on Government

Although the government has always played some role in sustaining the Nation's economy,[60] it is only in the wake of the Depression and World War II that government began to intervene on a large scale, not only in economic affairs but in all phases of social life. This shift in the Federal Government's role is depicted in table 6-3,

Given the growing responsibility of government, some social scientists fear that the government may become overloaded. Problems of overload could take a number of forms. Anthony King predicts, for example, that in the future:

* government policies will fail more often,
* political arrangements will be called into question,
* there will be problems of complexity in addition to those of scale, and
* the state will have to compete with other groups and institutions for power.[61]

Similarly, Richard Rose postulates that big government is likely to lead to:

. a loss of effectiveness due to the lack of explicit and tested techniques for realizing social goals;

● more conflicts among policy programs, given the interdependencies among problems; and

. less consent for government to act beyond its traditional responsibilities.[62]

And, according to Claus Offe, with the emergence of such problems, citizens will withdraw from official channels for resolving conflicts and articulating their preferences. As he predicts:

> Politics as the struggle over substantive issues and politics as the institutional form of conflict resolution degenerates into informal and mutually disconnected modes of struggle and decision. The constitutional bridge that democratic theory takes for granted is in the process of breaking down.[63]

A significant sector of the public also registered concern about the growth in size and poor performance of government, as illustrated by opinion polls conducted over the past two decades.[64] The number of those rating the government's performance favorably has increased considerably since hitting a low point of 21 percent in 1980. However, after the stock market crash in October 1987, this number fell 11 points to 58 percent from a high of 69 percent in July 1986.[65] One paradoxical feature revealed in these surveys is that, while the public is often critical of the government's size and performance, a great many people continue to view the government's role as one of providing public support, as can be seen in figure 6-3. Thus it would appear that, even in the face of continued protests, the trend toward greater demands on government is unlikely to disappear.

Communication and information technologies contributed solutions to problems of control generated during the course of industrialization. Similarly, new communication technologies offer potential solutions to the problems of governing a post-industrial society. However, to the extent that the demand for technological solutions increases in the face of greater demands on government, extra attention will need to be paid to maintaining the appropriate balance between communication access and control.

[59] James W. Carey, "The Press and the Public Discourse," *The Center Magazine,* March/April 1987, p. 14.

[60] While in theory the government's role under a laissez-faire arrangement is merely to provide a stable legal framework in which business relationships can take place, in practice, the government has played a much more substantial role, providing the social overhead capital-canals, roads, railroads, communications, education, and training-that allowed businesses to flourish, See Bruce L. I?. Smith (cd.), "The Public Use of the Private Sector," *The New Political Economy: The Public Use of the Private Sector* (London: Macmillan Press Ltd., 1976), p. 4.

[61] Anthony King, "Overload: Problems of Governing in the 1970s," *Political Studies,* vol. 23, Nos. 2-3, June-September 1975, pp. 162-174.

[62] Richard Rose, "What If Anything Is Wrong With Big Government," *Journal of Public Policy,* vol. 1, No. 1, pp. 5-36.

[63] Claus Offe, "The Separation of Form and Content in Liberal Democratic politics," *Studies in Political Economy,* Spring 1980, p. 11.

[64] Ladd, op. cit., footnote 36, p. 366.

[65] Ibid., p. 368,

Table W-The Main Features of the "New" Political Economy in Post-Industrial Society

Early industrialization	Managed economy	"New" political economy
Early and Middle 19th century in U.S. and U.K.	Late 19th and early 20th centuries	Post-World War II
Government intervention in the provision of social overhead capital	Laissez-faire gradually replaced by regulation	Massive governmental intervention in all phases of social and economic life; public-private tines blurred
Episodic ad hoc interest groups, beginning of mass-based political parties	National trade unions and manufacturing associations, strong parties	Looser interest groups; "military-industrial complex," environmental lobby; weakening of parties
Gentlemen amateur and/or 'common man" tradition in civil service	Emergence of highly disciplined, hierarchical, and professionalized civil service	Permeable civil service drawing its professional energies outside of government
Stakes of government law and order, land grants, special charters, and other favors (distributive politics)	Conditions of labor, curbing of industrial abuses, promotion of economic growth and employment, preoccupation with standard of living (regulatory politics)	Preoccupation with quality of life, "universal entitlement," Spaceship Earth, price stability and "delicate tinkering" with economy (consumer politics)

SOURCE: Bruce L.R. Smith, *The New Political Economy: The Public* Use *of the Private* Sector*(New York, NY:* The Macmillan Press, 1975), p. 4. Reprinted with permission.

Erosion of National Sovereignty in the Context of an Increasingly Global Economy

The notion of national sovereignty began to take form in the 16th century, in conjunction with the rise of the nation-state system.[66] It implied that, within a given territory, a sovereign power was self-contained and autonomous, and enjoyed mutually exclusive jurisdiction over all activities.

In the United States, the idea of national sovereignty found support among the Founding Fathers who, in writing the Constitution, sought to improve on the failings of the Articles of Confederation. In Federalist Paper Number 23, Alexander Hamilton described national sovereignty as being necessary to provide for:

> ... the common defense of the members; the preservation of the public peace, as well against internal convulsions as external attacks; the regulation of commerce with other nations and between the states; [and] the superintendence of our intercourse, political and commercial, with foreign countries.[67]

Many shared Hamilton's view that the United States needed a strong national government capable of taking direct action to protect and develop U.S. interests.[68]

Today, many of these traditional assumptions about national sovereignty are unraveling. In a global community and global economy, nation-states are more interdependent in terms of the kinds of problems they face. In addition, new forms of business enterprise have altered the nature of private power and its relationship to public sovereignty. Together, these developments weaken national authority, both domestically and abroad, exacerbating government problems of control.

Just how interdependent nation-states have become was first made clear with the development of nuclear weapons and their potential for mutual destruction.[69] More recently, governments have had to join together to address a broad range of issues, including those having to do with the environment, international trade and finance, health, and communication. In some cases, such as that of the European Community, nations have had to formally renounce aspects of their sovereignty in order to cooperate effectively.

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[66]For an account of the rise of the nation-state *system, see* John H. Herz, *The Nation-State and* the *Crisis Of World Politics (New* York, NY: D. McKay, 1976).

[67]Federalist Paper, #23.

[68]William N. Eskridge, Jr., "Sovereignty and the Constitution in the Era of Multinational and Translational Business Enterprises," OTA contractor report, April 1987.

[69]For a discussion of the impact of nuclear weapons on the nation-state system, see Herz, op. cit., footnote 66.

Figure 6-3-Gallup Poll Results on Government Involvement

The federal government should run only those things that cannot be run at the local level

19%

When something is run by the government, it is usually inefficient and wasteful

31%

The federal government controls too much of our daily lives

58%

37%

Agree
Disagree

The federal government should be very Involved or only somewhat Involved in

Helping people meet their health needs

74%

24%

Helping people who are poor

29%

Helping people receive an affordable education

67%

30%

Very involved
Somewhat

SOURCE: Survey by the Gallup Organization for Times-Mirror Co., Apr. 25-May 10, 1987; and survey by *Time*/Yankelovich Clancey Shuylman, Feb. 17-18, 1987. Reproduced from *The American Polity*, 23rd ed., by Everett Carll l-add, by permission of W.W. Norton & Co., Inc. Copyright (c) 1989, 1985 by W.W. Norton & Co., Inc.

National sovereignty has also been weakened by the rise of the translational corporation.[70] Given their size and resources, translational corporations have their own bases of power. Such corporations are now big enough to compete with government as buyers, and they are dispersed enough to play nation-states off against one another. Moreover, corporate actions can constrain the ability of the state to act, especially in such areas as the balance of payments, income distribution, and regional development.[71] Characterizing this situation, Barnet and Muller point out:

When we say that the new international economy now being built by global corporations threatens the sovereignty of the nation-state, we mean that its principal domestic powers and functions-the power to raise revenue, maintain employment provide adequate social services, encourage the equitable allocation of income and wealth, maintain sound currency, keep prices and wages in line; in short the power to maintain a stable social equilibrium for the greater majority of its population-is being seriously undercut.[72]

Serving as the means for organizing and interconnecting business operations, communication technologies continue to play a key role in facilitating the development of a global economy. Recognizing this fact, businessmen are now seeking to become more active in the design and development of the international communication infrastructure. The Society for Worldwide Interbank Financial Telecommunications (SWIFT'), for example, was set up by the banking community to simplify international electronic funds transfers. And private companies are

[70]To some extent, the modern corporation has always been problematic with respect to the question of national sovereignty, given its size and the range of its activities. As one observer has described: "Those who own economic goods exercise a kind of governmental power. Being entitled to their property or part with it as they choose, the owners like petty sovereigns can dictate the terms and conditions their neighbors must perform to access to the property. In this sense every lawful economic power becomes a type of political power." Edmond Cabn, as cited in Arthur S. Miller *Modern Corporate State: Private Governments aria' the American Constitution* (Westport, CT: Greenwood Press, 1976), p. 41.

[71]Raymond Vernon, "Sovereignty at Bay Ten Years After," *International Organization*, No. 3, Summer 1981, pp. 517-529.

[72]Richard J. Barnet and Ronald E. Muller, *Global Reach: The Power of the Multinational Corporations* (New York, NY: Simon & Schuster, 1974), p. 373.

increasingly viewing international standards-setting problems from the perspective of the translational corporation rather than from the perspective of the nation-state.

Taken together, these four political trends set the context in which new communication technologies are emerging. The first two trends highlight the need for government to keep in mind, when considering policy relating to new technologies, the problem of political access. The latter two focus on problems of effective governance and control.

IMPACT OF NEW COMMUNICATION TECHNOLOGIES ON POLITICAL ACTIVITIES

Maintaining National Security and Sovereignty

To maintain its sovereignty and security, a nation-state needs to:

- communicate with the heads of other countries (diplomacy),
- influence public opinion in other countries (propaganda),
- gather information on what is occurring in other countries (intelligence), and
- be able **to** assume control of national communication in a national emergency (emergency preparedness).

Central to the performance of these activities is a global communication system that provides for secure and reliable communication and is invulnerable to outside interference or jamming.

Before rapid global communication, communication for state purposes, such as diplomatic functions, took place through ordered channels, usually at the highest levels of governments. Communication was generally rather slow, with time for deliberation on both sides. It was, moreover, somewhat hidden from the view of those without a "need to know." The traditional gatekeepers in the area of national sovereignty--exercising control over access to state-related information, the means of communication, and the audience or receiver of the message— have been the President, the Department of State, and the Department of Defense. AT&T, as the dominant domestic and international telecommunication service provider, has operated in concert with the Federal Government as the gatekeeper for the flow of communication between countries and within the United States defense community. The national and international press, as reporters and interpreters of national and international events, have also played important gatekeeping roles.

Today, these gatekeepers are changing in response to two major communication-related developments-the proliferation of telecommunication networks and the use of remote-sensing satellites. Altering communication pathways on a global scale, these developments will have a significant impact on the Nation's sovereignty and security.

Proliferation of Telecommunication Networks in a Competitive Environment

Because the government is a major user of telecommunication services, and because it must be able to "take over" telecommunication in case of a national emergency or war,[73] any changes in the ownership and management of the network will affect the government and its ability to maintain security. Two recent developments raise concerns in this regard-the growth in competition with the divestiture of the Bell telephone system,[74] and the proliferation of private telecommunication networks, many of which now operate on a global scale.

One of the largest government users of the commercial telecommunication system is the Department of Defense (DoD), which uses nongovernment lines for about 95 percent of its data and voice

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[73] Section 706 of the Communications Act of 1934 allows the President to commandeer the communication industry during a crisis that he believes threatens the sovereignty of the Nation. See Harold Relyea, "Stretch Points of the Constitution: National Emergency Powers," Ralph S. Pollack (cd.), *Renewing the Dream* (Lanham, MD: University Press of America, 1987), pp. 75-91; and Robert L. Chartrand and Trudie A. Punaro, "Information Technology Utilization in Emergency Management," Library of Congress, Congressional Research Service, Report No. 85-74S, Apr. 9, 1985.

[74] Surprisingly, little attention was given t. the national security implications of the AT&T divestiture during the AT&T antitrust suit. The Department of Justice case was focused almost exclusively on AT&T's past anticompetitive behavior, although DoD testified on AT&T's behalf. See Martin Edmonds, *"Defense Interests and United States Policy for Telecommunications,"* OTA contractor report, June 1988, pp. 22-26, for the role of DoD during the antitrust settlement,

communication at a cost of over $1 billion annually.[75] DoD, moreover, is not an ordinary customer; it has special needs. To fulfill its mission, DoD must have access to a communication system that, among other things, provides:

- the connectivity required to join the National Command Authority with the U.S. Armed Forces before, during, and after an attack;
- support for mobilization;
- operational control during conflict;
- support for the continuity of the government after attack or a natural disaster;
- the capability to be reconstituted after such events; and
- the ability to protect sensitive and secret information at all times.

In the past, AT&T, as the only company effectively supplying end-to-end telecommunication services to the Defense Communications Agency (DCA), was able to meet these needs. To do so, however, it played a major role in designing and managing the system. For example, AT&T was directly involved in the formulation of national security telecommunication specifications and requirements; in telecommunication research and development; in the planning, routing, and installation of networks; and in making provisions to govern system robustness, ubiquity, and restorability. Given AT&T's monopoly, end-to-end connectivity was assured. Not infrequently, AT&T would install a telecommunication line or circuit for DCA, reroute or harden a cable to enhance survivability, or retain redundant lines without making a direct charge to the defense budget; the cost would be absorbed in the overall rate base to AT&T subscribers.[76] Finally, the sheer size of AT&T and the extent of its network meant that it was able, as a company, to meet the more demanding requirements of the U.S. Armed Services. For example, because of the spare capacity that AT&T had, and the "last-mile" provision that

linked out-of-the-way military units and command posts, it was possible to have a fast emergency response.[77]

Breaking up this highly integrated telephone system, the Modified Final Judgment (MFJ) completely restructured the communication environment for defense. However, some provisions for national security coordination were made. The MFJ, for example, required the regional Bell operating companies to establish a single point of contact through Bell Communications Research Inc. Moreover, with Executive Order 12382, President Reagan formally established the National Security Telecommunications Advisory Committee (NSTAC). Comprising the chief executive officers of the major telecommunication companies-27 in all--NSTAC was charged with the task of advising the President on national security emergency preparedness (NSEP) telecommunication matters. Moreover, in 1984, responding to one of NSTAC's first recommendations, the government also set up the National Coordinating Committee, comprised of industry and government representatives, to coordinate their respective companies' efforts in conjunction with government agencies such as DCA and the Federal Emergency Management Administration in the event of an emergency .[78]

Now that the telephone system is no longer one "network," managed by one company and supplied from a limited number of equipment providers, the government must provide for its own communication needs, dealing with a variety of new telecommunication service and equipment providers.[79] This management problem can be quite complex, as the National Research Council (NRC) has described with respect to the case of customer premises equipment (CPE). As NRC notes:

> The bewildering diversity of available CPE can seriously complicate NSEP management. When Western Electric was the sole CPE manufacturer for

[75] It is a matter of national policy that Federal Government requirements for telecommunication services, including those of defense, should be procured from the commercial sector, unless special circumstances dictate otherwise. In 1981, it was estimated that 85 percent of the Federal Government and 94 percent of critical U.S. national security communication needs within the continental United States were leased from the commercial telecommunication carriers. Ibid., p. 18.

[76] U.S. Senate, Committee on the Judiciary, Hearings on Department of Justice Oversight, *U.S. v. AT&T, 97th* Cong., Aug. 6, 1981, p. 42.

[77] G. Boiling, "AT&T: Aftermath of Anti-Trust," National Defense University, Washington, DC, 1984, pp. 2'7-28.

[78] Ibid.

[79] In most cases, Computer II prevents an user, including DoD, from acquiring a complete system of equipment and manumission from AT&T. although for reasons of national security/emergency preparedness, AT&T is permitted to manage end-to-end control for 21 communication systems. For discussion of the changing communication environment, see John Horgan, "Safeguarding the National Security," *IEEE Spectrum,* November 1985, pp. 84-89; and Wey R. Irwin, "National Security and Information Technology: The New Regulatory Option?" Government *Information Quarterly*, vol. 4, No. 4, pp. 359-369.

the **integrated** Bell System, Bell System managers were fully acquainted with the characteristics of the CPE connected by wire to the network. By contrast, today, and even more so tomorrow, no network-based company is likely to have knowledge of more than a few major CPE systems. Customers are free to interconnect the equipment of their choice to the network, without even notifying the telephone companies. Further, the proliferation of interfaces between the customer's premises and the public and private networks will complicate loop testing and billing verification. Other future uncertainties would include CPE configured to be voice activated by specific users only.[80]

Competition in the telecommunication sector can also give rise to new problems for defense. In a highly competitive environment, there is less incentive for providers to build redundancy into their networks, and users, facing their own competitors, are more inclined to choose efficiency over robustness. Thus we see, for example, that a number of new technologies are being deployed—such as fiber optics, digital switching, and software control—that, while making a communication system much more efficient, also make it much more vulnerable.[81]

Deregulation and competition also facilitate the proliferation of private networks, a trend that, as discussed in chapter 5, is being reinforced by the enhanced role of information in the business realm. Although private networks could conceivably provide greater redundancy in the national communication network, they are not being set up to play this role. In fact, as NRC has pointed out:

> Many private data networks, both circuit and packet switched, are not fully interoperable with the public switched networks. Thus, as a source of potential network redundancy they are extremely limited, unless linked to the public networks by gateway architectures.[82]

To the extent that there is a wide variety of network providers as well as some very large private users, the government, in the future, may no longer be able to set its own priorities for the network. Private users may have their own set of communication needs apart from national security, and they may be unwilling to subsidize the government's requirements for network security and reliability.

Problems of security may be exacerbated, moreover, if government regulatory policies that foster competition provide widespread access to the internal workings of the public switched network. One area where this might happen, for example, is in open network architecture (ONA). As NRC cautions:

> ONA can increase network vulnerability to such disruptions in two ways. First, ONA increases greatly the number of users who have access to network software. . . Second, as more levels of network software are made visible to users for purposes of affording parity of network access, users will learn more about the inner workings of the network software, and those with hostile intent will learn more about how to misuse the network.[83]

Remote Sensing Satellite Systems

Remote sensing refers to photographing Earth from space. First carried out in the 1960s with the launch of the TIROS weather satellite, the process entails a number of steps:

- taking a picture from space,
- transmitting it in the form of raw data to a relay satellite,
- communicating the information to a receiver on the Earth,
- converting the raw data into photographic images or computer tapes,
- processing and removing geometric and other distortions, and
- interpreting and analyzing the images.

The components of a remote sensing system are described in box 6-A. At present there are two operational remote sensing systems: Earth Observation Satellite Co. (EOSAT)--formerly the U.S. Government's Landsat system—and SPOT, a French system that is responsible for marketing data from the satellite owned by the French Government.[84]

[80] National Research Council, *Growing Vulnerability of the Public Switched Networks Implications for National Security Emergency preparedness* (Washington, DC: National Academy Press, 1989), pp. 70-71.

[81] Ibid., pp. 46-47.

[82] Ibid., p. 29.

[83] Ibid., p. 36.

[84] EOSAT (Earth Observation Satellite CO.) is a private company that now handles the operation and marketing of data for Landsat, formerly owned by NASA. For a history of the transfer of the Landsat system to the private sector, see U.S. Congress, Office of Technology Assessment, *Remote Sensing and the Private Sector: Issues for Discussion,* OTA-TM-ISC-20 (Springfield, VA: National Technical Information Service, March 1984).

Box 6-A—A Remote Sensing Satellite System

A remote sensing satellite system consists of four major components, each of which is critical to producing useful data:

1. *The Spacecraft, Sensors, and Transmitters:* The spacecraft provides a stabilized platform and power for the sensors and their optics, the receiving and transmitting antennas, and the associated electronics necessary to control the spacecraft and to deliver data to Earth. Some remote sensing spacecraft may also carry tape recorders to store data until the spacecraft is within sight of a receiving station.

2. *The Receiving Station and Other Communications Components:* A ground station may receive data in digital form directly from the satellite as it passes overhead, or, if the satellite is not in a position to communicate with the ground station, through a system equivalent to NASA's 3-satellite Tracking and Data Relay Satellite System (TDRSS).* In the latter case, data are passed from the remote sensing satellite to a communication satellite in geosynchronous orbit and then retransmitted to a ground facility. From the ground facility, the data are then passed directly to a processing laboratory.

3. *The Data Processing Facilities:* Before the raw data can be converted into photographic images or computer tapes capable of being analyzed by the end user, they must be processed to remove geometric and other distortions inevitably introduced by the sensors. For the purposes of newsgathering, high-speed mainframe computers may be required to process the data from current spacecraft.

4. *Interpretation of the Data:* After the raw data are processed and converted to computer tapes or photographs, they must be interpreted. Part of the interpretation process may involve merging or integrating other data either directly on the computer tape, or comparing such data with photographs. At this stage, computer analysis could be performed by micro- or mini-computer. A variety of advanced techniques are available to turn remotely sensed data into new products for different users.

*Only one TDRSS satellite is currently in orbit.

SOURCE: U.S. Congress, Office of *Technology* Assessment, *Commercial Newsgathering From Space—A* Technical Memorandum, OTA-TM-ISC-40 (Springfield, VA: National Technical Information Service, May 1987), p. 8.

As the cost of such systems declines and the resolution of satellite data improves, the value of remote sensing for intelligence; environmental, and commercial purposes will increase, raising the question of who should have access to remote sensing data and on what basis. While greatly enhancing access to information, an increase in the use of remote sensing systems could also impair national security and constrain the government's ability to exercise national sovereignty. One instance in which such a conflict might arise, for example, is in the case of the use of remote sensing by the press.

With declining costs and increased quality, remote sensing could prove to be an especially useful means of newsgathering. For example, it would allow the media to gain access to remote places or sites to which access has been denied; to perform real-time data recovery; and to provide the kind of repeated coverage of an area that is necessary to monitor changes.

Were the media to make use of remote sensing satellites for newsgathering, there might also be a number of benefits for the public-at-large. Circumventing geographic and political barriers to the free flow of information, for example, remote sensing might encourage the development of a global village. Using such systems would, moreover, increase public information on world affairs, as happened in the case of the Chernoble nuclear accident. In addition, to the extent that nations temper their behavior in the face of world opinion, such transparency might have a stabilizing influence on world affairs. Used by the U.S. Government to gather intelligence, remote sensing satellites could also serve to enhance national security and national sovereignty .[85]

Such transparency, however, could also be destabilizing. Nation-states have traditionally served as the gatekeepers of international information, and they would certainly be reluctant to renounce such control. At the very least, they would not want to risk increased visibility of their military operations. Moreover, media coverage on such a scale might reveal sensitive information; complicate foreign relations and reduce diplomatic channels; lessen the

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[85]For a discussion, see Daniel Charles, "Spy Satellites: Entering a New Era," *Science, Mar. 24, 1989,* pp. 1541-1543.

government's control during a crisis; and erode **citizens' expectations** of privacy.[86]

Recent events in China demonstrate some of the benefits and problems that might result from this kind of enhanced international news coverage. The international media coverage of the Chinese student protesters generated international support for their cause. However, by rallying such support, the media coverage may have actually provoked the Chinese Government to take more extreme retaliatory measures.

A number of factors will determine how the balance between access and national security will be struck in the case of remote sensing. Two important factors are the further development of the technology and a reduction in its costs. With respect to the media's use of remote sensing, the OTA technical memorandum, *Commercial Newsgathering From Space, points* out:

> To be financially viable, a mediasat would have to generate revenue sufficient to offset the costs of the system. Experts have estimated that a complete one or two satellite mediasat system capable of 5 meters resolution, designed to operate about 5 years, could cost between $215 million and $470 million to establish, and $10 million to $15 million a year to operate, Even if each network used satellite images every day, only a few thousand images would be used per year; hence the system's development and operating costs could only be paid back if networks were willing to pay $35,000 to $73,000 per "story," an order of magnitude more than existing expenditures for daily news coverage.[87]

Technological factors will also determine the vulnerability of a system to manipulation or interference from other countries or hostile forces, or the possibility that it might be targeted and destroyed in space.

The impact of remote sensing on national security will also be determined by the rules governing its use. One important set of rules will be those that govern commercial ownership. Until 1984, U.S. satellite remote sensing services were government-run, first by the National Aeronautical and Space Administration (NASA) and then by the National Oceanic and Atmospheric Administration (NOAA). However, in 1984, Congress privatized remote sensing, and EOSAT won the contract for offering these services within standards determined by national security .[88]

Other rules that will affect the use of remote sensing technology are those pertaining to the first amendment. However, these rules are unclear at present. One source of confusion is that the Supreme Court has not determined whether newsgathering is itself a protected first-amendment activity, separate from speaking and publishing.[89] Nor has the Court decided whether the government has a positive duty to allow journalists special access to information.[90] As the OTA report, *Science, Technology, and the First Amendment,* points out, technology is likely to blur distinctions between gathering information and publishing it, and hence the Court will eventually have to confront the question of whether the press interest in gathering news merits constitutional protection under the first amendment, and whether remote sensing constitutes a tool that should be made available to the press for such purposes.[91]

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[86]For a discussion, see U.S. Congress, Office of *Technology* Assessment, *Commercial Newsgathering From Space,* OTA-TM-ISC-40 (Springfield, VA: National Technical Information Service, May 1987), p. 4.

[87] Ibid.

[88]Irwin, op. cit., footnote 79, P. *363.*

[89]The Supreme Court said *in Branzburg* v. *Hayes that* "it is not suggested that news gathering does not qualify for First Amendment Protection: without some protection for seeking out the news, freedom of the press could be eviscerated." *Branzburg v. Hayes, 408* U.S. 665 (1972).

[90]The press has access to government proceedings, records, or other information that is available to members of the public generally. And presumably the converse is also true: access denied to the general public may also be denied to the press, but the government may not close down avenues for gathering and acquiring news that are generally available to the public, without a compelling reason. See *Pell v. Procunier, 417* U.S. 817 (1974); *Saxbe* v. *Washington Post CO., 417* U.S. 843 (1974); *Houchins v. KQED, 483* U.S. 1 (1978). See also Rita Ann Reimer, Library of Congress, Congressional Research Service, "Legal and Constitutional Issues Involved in Mediasat Activities," CRS Report No. 86-823A, 1987, pp. 6-8. When the United States invaded Grenada in 1983, the government imposed a total news blackout and prohibited members of the public and the press from traveling to Grenada. The press sought prospectively to enjoin the Executive from imposing any such future ban. The case was dismissed as moot, but the court went on to say that "[the] decision whether or not to impose a press ban during military operations and the nature and extent of such a ban if imposed are matters that necessarily must be left to the discretion of the commander in the field." *Flynt v. Weinberger, 588* F. Supp. 57,61 (D.D.C. 1984) affirmed (on the basis of mootness), 762 F.2d 134 (D.C. Cir. 1985).

[91]U.S. Congress, Office of Technology Assessment, *Science, Technology, and the First Amendment,* OTA-CIT-369 (Washington, DC: U.S. Government Printing Office, January 1989), pp. 9-10. In July 1987, the Department of Commerce issued a final regulation for licenses for private ownership of satellites such as Mediasat, which is owned by the electronic and print news media, on national security grounds. See Ramon L. Lopez, "Remote Sensing and the Media," *Space Markets,* Autumn 1987, pp. 148-151.

Maintaining Internal Security and Social Welfare

To maintain internal stability and social welfare, government must provide for law and order, collect revenue, and administer programs. The growth in the number and scope of these activities has been accompanied by the growth of an administrative state.[92] The large bureaucracies that carry out these activities are organized in a hierarchical fashion and operate in accordance with set rules and procedures. To perform internal security and social welfare activities, the collection, retention, and exchange of information on individuals is critical.

To assure that such practices are consistent with democratic ideals, agencies are required to perform these functions in accordance with the principles of limited government and government accountability. In the American Federal system of government, these principles require that power be shared among Federal, State, and local agencies. Thus, most social welfare programs, while funded primarily at the Federal level, are administered at the State or local level. In addition, in carrying out its functions, the government must respect individual rights such as the right to freedom of expression, the right to privacy, and the rights of the accused.

Before large-scale computerization of agency record systems, the information gatekeepers, in carrying out internal security and social welfare functions, consisted primarily of the government bureaucrats in the Federal and State operating/line agencies, and individual citizens themselves. Individual citizens were able to perform this gatekeeping function because the difficulties involved in transmitting data from manual record systems via the post and telephone constrained agency exchanges of information.

Advances in computer and communication technologies have greatly transformed this situation. Today, computers linked to telecommunication networks have become central to modern law enforcement, revenue collection, and program administration. Enhancing the government's ability to communicate nationally on a real-time basis, these systems are being used to store, retrieve, manipulate, and exchange billions of pieces of data necessary for investigations, audits, histories, etc. In the process, individual citizens have lost control over information about themselves.

To understand how these developments might affect the realm of government, two rapidly growing technological applications will be considered here: networked computerized information systems and online financial systems.

Networked Computerized Information Systems

Telecommunication linkages between and among government agencies allow for direct online inquiries from one agency terminal to a computerized database of another agency. Although online databases are electronically linked and therefore are distributed in a physical sense, they constitute a centralized database in a practical sense. As computer and telecommunication costs decrease, more and more agencies will automate their files and have the capability to communicate online, allowing this virtual centralized database to grow.

A number of computerized databases are now accessible online. The Federal Bureau of Investigation's (FBI's) National Crime Information Center (NCIC), for example, has a number of computerized files, including the Interstate Identification Index (Triple I). The Department of the Treasury has developed an online system, the Treasury Enforcement Communications System (TECS), for identifying people coming into the country. Both the Immigration and Naturalization Service and the Social Security Administration maintain a number of databases that other government agencies can access electronically. Additionally, private sector fins, such as credit bureaus and medical insurers, maintain a number of centralized databases that are accessible by government agencies.[93]

These networked computerized information systems have created a de facto national database, maintaining up-to-date and complete information on all individuals. Using such a system, the Federal Government could centralize control at the expense of State and local agencies. Moreover, it could use these networked systems for surveillance purposes

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[92]See Beniger, op. cit., footnote 3; and Stephen Skowronek, *Building a New American State* (Cambridge: Cambridge university Press, 1982).

[93]U.S. Congress, Office of Technology Assessment, *Federal Government Information Technology: Electronic Record Systems and Individual Privacy,* OTA-CIT-296 (Springfield, VA: National Technical Information Service, June 1986).

to exercise more subtle and invisible means of control over citizens, thereby shifting the relationship between the government and the governed. And decisions about the scope and use of networked computerized systems could be driven by technological possibilities rather than by program needs, so that the costs of the systems exceed their benefits.

Yet, under some circumstances, the networking of computerized information systems could benefit individuals in several ways. In fact, this kind of networking could allow people to have more control over information exchanges. Individuals could access their own records through online networked systems, and perhaps even prevent unnecessary exchanges of information. If agencies were required to do cost/benefit analyses before network systems were deployed, these systems might also increase the efficiency of government operations. Moreover, if standards were established for record quality, inaccurate and incomplete information could be purged from agency files.

How such systems will operate in practice will depend on a number of factors. The design of the systems will, of course, be critical; for systems can be constructed to foster either centralization or decentralization of data. In the case of the NCIC and the National Driver Register, for example, policymakers gave primary control to the States by deliberately designing the system to serve as an index for the State systems. Thus the NCIC's Triple I contains only the names and locations of files-the actual content of the records is maintained by the FBI or State agencies. This design preserves State control over its records, while allowing other States and Federal agencies to become cognizant of additional records.[94]

The quality of the data in the systems is also a critical factor in their operation. Setting quality standards would assure that the data contained in agency databases are accurate, timely, and complete. Without a way to judge the reliability of database information, agencies will have to spend considerable time verifying it. Setting quality standards is particularly important with respect to collecting information about individuals, who may be unaware

that data about them are being compiled. The need for such standards has been formally recognized in the Privacy Act of 1974, which establishes requirements for data quality. The Federal Government might also influence the quality of data, and the care with which they are treated, through financial incentives. For example, the funding of such networks could be made contingent on the adoption of particular standards or the use of specific software.

A third important factor in determining the system's effects on maintaining internal security and social welfare are the rules for gaining access to data contained in it. The fact that systems are, or can be, networked should not drive decisions about who should use them, and for what purposes. Privacy, national security, and program integrity may all be legitimate reasons for limiting access.

Automated Financial Transaction Systems

Today, there are more than 70 different Federal benefit programs that provide care, goods, and services to people who meet eligibility requirements based on income level or need. Almost 75 percent of these programs are funded by the Federal Government, with funding for the remainder provided by States and localities. These programs are generally administered at the State and local levels in accordance with Federal guidelines that may be very detailed or quite general.[95]

Although the processes by which these programs are administered can vary significantly, there are five steps that are more or less common to them all. These are:

1. determining eligibility and benefits;
2. verifying the eligibility of recipients;
3. issuing benefits;
4. verifying the receipt of benefits; and, in some cases,
5. redeeming benefits.

Because these steps all entail the storage, retrieval, and exchange of information, each could be automated using state-of-the-art communication and information technologies. With automation, for example, tax authorities could electronically collect financial records from banks, employers, investment

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[94]U.S. Congress, Office of Technology Assessment, *An Assessment of Alternatives for a National Computerized Criminal History System*, OTA-CIT-161 (Springfield, VA: National Technical Information Service, October 1982).

[95]The major types of benefit programs include: medical (e.g., Medicaid and Maternal and Child Health Services); cash (e.g., Aid to Families With Dependent Children (AFDC) and Supplemental Security Income (SS1); food (e.g., Food Stamp and School Lunch Programs); housing (e.g., "Section 8" and public housing); education (e.g., student loans); jobs and training (e.g., under the Job Training Partnership Act); and energy assistance.

houses, and mortgage lenders; determine a person's tax assessment; and then electronically credit or debit his or her account. In similar fashion, government agencies could employ new technologies to electronically deliver public assistance benefits such as cash, food stamps, and Medicaid benefits.

There are at present a number of pilot projects automating the issuance and/or redemption of public assistance programs. For example, New York State has established an Electronic Medicaid Eligibility Verification System in order to verify, at the time of issuance, clients' eligibility for certain treatments or medications. And Ramsey County, MN, has begun to use automatic-teller machines and point-of-sale terminals to issue cash for certain public assistance programs.[96] The impetus to take advantage of such systems is likely to mount in the future, given growing concerns about government expenditures, fraud, waste, and program abuse.

Automated financial transaction systems that would provide such capabilities could be devised as online systems in which a real-time communication link to a centralized database is used to make a transaction. Or they can be systems constituted of smart cards containing a microchip that can be inserted into a read/write terminal to conduct a transaction. Both systems require a reliable and secure identity card with a unique personal identifier. Some systems, however, might be designed to be dedicated to a specific government program, while others might be setup to be used by more than *one* program or in conjunction with commercial systems.

Automated systems could help to streamline the administration of government programs, while improving the accuracy and completeness of financial records. However, if they are poorly instituted, these systems could easily deteriorate to become bureaucratic mazes where the lines of authority among program officials and between the public and private sectors are very unclear. And, without clear lines of authority, such systems could not be held publicly accountable.

One factor that will affect the costs, use, and impact of automated transaction systems is the technological choice about how these systems should be devised. Although online systems are less costly than smart cards and could be more readily put into place, they are also more vulnerable and are subject to counterfeiting. Choosing the technology is also complicated by problems of technological uncertainty. The technology is changing so rapidly that, even if the government were to begin now to deploy online electronic systems using magnetic stripe cards, these systems might become obsolete before they are fully implemented. On the other hand, a commitment now to a microchip smart-card system might be premature not only for technical reasons, but also because as yet there is no commercial basis for such a system in the United States.

Careful consideration will also need to be given to the privacy and security implications of using such automated systems, since their development and widespread deployment will result in the establishment of a de facto national database. At a minimum, the operation of such systems would have to comply with the requirements of the Privacy Act of 1974[97] and the Computer Security Act of 1987.[98] In addition, proposals for establishing an electronic system for distribution and redemption of public assistance benefits, which depend on the use of a magnetic stripe card or smart card, would give rise to concerns about the adoption of a national identity card. Americans have traditionally been adamant in their opposition to the use of a single identity card, associating it with authoritarian forms of government.[99] This concern would loom particularly large

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[96] For a discussion, see U.S. Congress, Office of Technology Assessment, *Electronic Delivery of Public Assistance Benefits: Technology Options and Policy issues,* OTA-BP-CIT-47 (Springfield, VA: National Technical Information Service, April 1988).

[97] Personal information in Federal agency databases receives some protection under the Privacy Act of 1974, which gives individuals certain rights to exercise some control over the content and uses of personal information about themselves. They have the right, for example, to see and correct information, and to challenge secondary uses of that information. The act also requires agency staff to handle personal information in a manner consistent with individual privacy. Thus, they must ensure that information is current and accurate, that it is collected directly from the individual, and that adequate safeguards are provided to prevent its misuse. To ensure agency compliance with these principles, the act lets individuals bring civil and criminal suits in cases where information was willfully and intentionally handled in violation of the act. In addition, the Office of Management and Budget was assigned responsibility for overseeing agency implementation of the act.

[98] The Computer Security Act of 1987 assigns to the National Institute of Standards and Technology the responsibility for developing technical, management, physical, and administrative standards and guidelines for the security of sensitive information in Federal computer systems, and for developing guidelines for training in security awareness and practice for personnel operating Federal computer systems,

[99] The most recent national debate on the creation of an identity card took place in the early 1980s. It was generated by a proposal of the Select Commission on Immigration and Refugee Policy to create an employee-identification card.

if the Social Security Administration were included in a national, automated system. Moreover, if the card were used only by those participating in benefit programs, it might be opposed on the grounds that it stigmatized an economic and social subset of the population.

Providing for Openness

In the United States, open communication is considered to be fundamental to maintaining democracy, as is indicated by the first amendment's protection of freedom of speech and press. At the very least, openness requires a two-way flow of information from the government to the public and from the public to the government. Openness will truly flourish, however, only when there is an active exchange and debate of information and ideas— what Justice Holmes termed a "marketplace of ideas." As Holmes said:

> The ultimate good desired is better reached by free trade in ideas-that the best test of truth is the power of thought to get itself accepted in the competition of the market.[100]

The primary gatekeeper mediating the exchange of messages between government and citizens and providing a forum for the "marketplace of ideas" has been the traditional press-daily newspapers, national magazines, radio, and TV networks.[101] Because the press has played such an important gatekeeping role,[102] a number of rules and regulations have been adopted that establish its rights and responsibilities. The first amendment recognizes the watchdog role of the press and thus protects it against prior restraint, libel, etc. The Fairness Doctrine requires that broadcasters meet a "public trustee" standard by allowing the public to respond to broadcasts involving personal attacks or political editorials. The press has also benefited from the

Freedom of Information Act, which requires agencies to make nonclassified records available on request. In addition, there are rules restricting concentration of media ownership, which are designed to maintain diverse sources of information.

New technologies directly affect these points of public access, and hence they will help to determine how open the American political system will be. Two new technological applications are considered here: the use of satellites by local and regional news outlets, and the political uses of electronic bulletin boards.

Use of Satellites for Local and Regional Newsgathering

New satellite technology and portable transmission equipment have made it possible for television stations to videotape news events, relay them to a satellite, and then transmit them to receiving stations for direct broadcast or editing so they can be included in a later newscast. To do this, stations use Ku-band satellites and a van with video equipment, together with a dish that allows the van to send and receive TV signals via satellite.

Network television no longer serves as the primary gatekeeper covering public events.[103] Using satellite technology, for example, Cable Network News, other news stations, and local network affiliates can now send their own crews to cover stories. There are, moreover, a number of news services, such as Conus's Washington Direct, that use satellite technology to feed members of their cooperative live, unedited coverage of events and press briefings from the Nation's capital. Taking advantage of these services, local stations may have access to more sources of news, and may also find it easier to cover national and international news with a local slant.[104] Ideally, local viewers will be able to

[100]*Abrams* v. *United States,* 250 U.S. 616, 630 (dissenting).

[101]Additionally, Federal agencies and depository libraries have been important gatekeepers for disseminating public information. See U.S. Congress, Office of Technology Assessment, *Informing the Nation: Federal Information Dissemination in an Electronic Age, OTA-CIT-396* (Washington, DC: U.S. Government Printing Office, October 1988).

[102]See Laurence Parisot, "Attitudes About the Media: A Five Country Comparison," *Public Opinion,* January/February 1988, pp. 18-19, 60; Robert MacNeil, "The Mass Media and Public Trust," Occasional Paper No. 1, Gannett Center for Media Studies, April 1985; and "The Media and the People: Americans' Experience with the News Media: A Fifty-Year Review," Gannett Center Working Paper, 1985.

[103]See "The Futurist i. Charge at NBC News" (interview with NBC News President Larry Grossman), *Broadcasting,* Feb. 29, 1988, pp. 44-54; Alfred J. Jaffe, "Early News Surge Continues," *Television/Radio Age,* May 16, 1988, pp. 39-40; David G. Shaffer, "By Van and Satellite, Local Newscasts Are Going National,' 'The New York Times, Dec. 21, 1986; Eliot Tiegel, "Independents Find News Niches," *Television/Radio Age,* Jan. 25, 1988, pp. 70-71, 99-100; and "The Business of News," *Gannett Center Journal,* vol. 1, No. 1, spring 1987.

[104]In less than 10 years, the number of Press members in the Senate Radio and TV gallery has grown from 750 in 1979 to over 2,300 in 1987 (3:1 ratio of support personnel to correspondents). See Howard Fields, "D.C. Crowded As Stations Elbow In For News Feds," *Television/Radio Age,* Sept. 14, 1987, pp. 51-52, 84; and Dan Tuden, "Hometown TV Coverage Is Booming," *National Journal,* Aug. 29, 1987, pp. 2174-2175.

watch national and international news with an analysis of how events affect their local area.

Notwithstanding these potential benefits, some fear that widespread use of satellite newsgathering will reinforce the trend of treating "news as entertainment."[105] Others are concerned about the loss of network control and its effect on the role of the news media in shaping a national agenda. As a former vice president and director of news for CBS asked:

> Are the networks soon to become a kind of electronic Associated Press, simply feeding stories to affiliates who will then repackage them in their own newscasts?[106]

Some are concerned that the cost of satellite uplinks may lead to further concentration in the industry. At present, a number of satellite newsgathering services have developed to compete with the networks in selling feeds to local and regional stations, among them Hubbard's Conus, Turner's CNN, Westinghouse's Newsfeed, and the Chicago Tribune's Independent News Network.[107] However, in covering certain events, such as the 1988 national political conventions, there may be too many vans and not enough transponder time, which may lead to further cooperative action in purchasing satellite time and sharing vans on location.[108]

The role of satellite systems in delivering the news will depend in part on the conditions and rules of access to them. If, for example, access to satellite uplinks is very expensive, some stations will probably be excluded. Access could also be limited due to geographic location.

Regulatory policies will also determine access to satellite uplinks. In the fall of 1987, the FCC relaxed restrictions governing the use of transportable Earth stations, which eased operations for satellite newsgathering vehicles. Previously, FCC licenses had required 5 days' notification of intent to use a transportable uplink. However, networks, independents, and associations argued that "news" does not give such notice. Agreeing, the FCC began to allow operations without notifications within a reasonably small geographic area.

If competition among news programs were to become greatly accelerated, advertisers might play a greater role as information gatekeepers, in some cases even dictating programming. Under such circumstances, networks and affiliates might be more reluctant to air straight political material, such as Presidential speeches or news conferences, as proved to be the case when President Reagan delivered his February 1988 speech on Contra aid.[109] Under highly competitive circumstances, gaining a percentage point becomes more important than preserving the integrity of political events. Such a conflict took place, for example, during the 1980 election when the race to be first led the networks to project Ronald Reagan as the winner even before the polls on the west coast had closed.

Electronic Bulletin Boards

To effectively champion one's views, individuals do not just act alone; they act in concert. The new technologies, with their capabilities to store, manipulate, retrieve, and network, are optimally suited to help them in this regard. With a personal computer and a modem, individuals can collect and store information related to their concerns; they can maintain lists of potential supporters and contributors and target specific messages to them; they can match organizational resources with organizational needs; and they can gain constant feedback about the progress being made. Figure 6-4 illustrates, for example, how the new technologies can be used to manipulate and structure information in a way that will improve both the efficiency and effectiveness of a political campaign.

[105]See Altheide, op. cit., footnote 50; Leo Bogart, "Television News as Entertainment," Percy H. Tannenbaum, *The Entertainment Functions of Television* (Hillsdale, NJ: Lawrence Erlbaum Associates, 1980); and K. Lang and G.E. Lang, *Politics and Television* (Chicago, IL: Quadrangle, 1968).
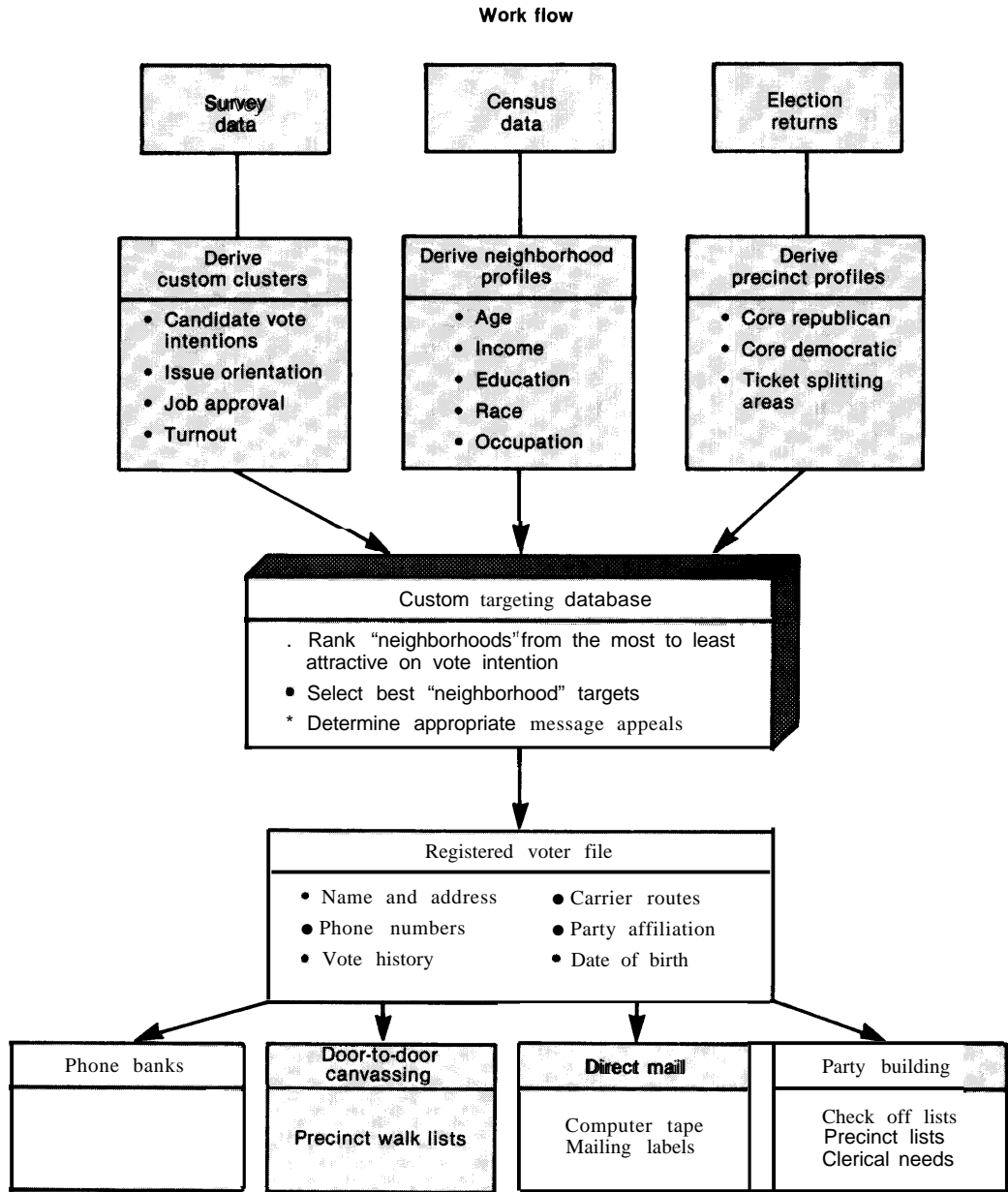
[106]Burton Benjamin, "Technology and the Bottom Line Create Profound Challenges, " *The New York Times,* Aug.17,1986.

[107]Ibid.

[108]"SNV's t. Play Major Role in *1988* Campaign Coverage," *Broadcasting,* July 20, 1987, pp. 46,48, 52.

[109]"White House Faults Networks for Skipping Reagan Speech," *Broadcasting*, Feb.8,1988, pp. 113-114. There are other times when network needs dictated scheduling of Presidential speeches. In February 1978, CBS delayed President Carter's address on ratification of the Panama Canal treaty because it had a made-for-TV movie scheduled. President Reagan's 1986 State of the Union speech was delayed because of the Challenger disaster and had to be rescheduled during the first week of February, which is also the time for the network ratings sweeps. To avoid interfering with scheduled programs (e.g., NBC's Peter the Great miniseries), President Reagan began his speech an hour earlier, which required passage of a joint resolution of Congress. This meant the people on the west coast were still at work during the President speech, and resulted in more people watching the Democratic response to it.

Figure 6-4-Development of Custom Targeting Database

Work flow

Survey data	Census data	Election returns

Derive custom clusters	Derive neighborhood profiles	Derive precinct profiles
• Candidate vote intentions • Issue orientation • Job approval • Turnout	• Age • Income • Education • Race • Occupation	• Core republican • Core democratic • Ticket splitting areas

Custom targeting database

. Rank "neighborhoods" from the most to least attractive on vote intention
● Select best "neighborhood" targets
* Determine appropriate message appeals

Registered voter file

• Name and address	● Carrier routes
● Phone numbers	● Party affiliation
• Vote history	• Date of birth

Phone banks	Door-to-door canvassing	Direct mail	Party building
	Precinct walk lists	Computer tape Mailing labels	Check off lists Precinct lists Clerical needs

One does not need to be a seasoned political activist to take advantage of these new capabilities.[110] Acting on his own, one man in Colorado Springs, for example, led a successful campaign to block a local ordinance placing restrictions on home-based entrepreneurial activities. Surprised that he was the only citizen to attend the first hearing on the ordinance, he brought the issue to the community's attention by publishing it, together with a list of his concerns, on his computer bulletin board. A small notice in the local newspaper helped to advertise his plan. A number of people contributed their comments via the computer bulletin board. When a second hearing was held several weeks later, 175 people appeared to defeat the ordinance.[111]

To provide citizens with a new means of learning about government activities, some electronic bulletin boards have been established by State or local governments. In May 1987, for example, the Utilities and Commerce Committee of the California State Assembly set up an electronic bulletin board system, "The Capitol Connection," which enabled participants to learn about legislative and regulatory issues and to engage in debate with other participants on these issues.[112] Accessible via four telephone lines, forums were set up to comment on various pieces of legislation. Although this bulletin board had about 1,000 registered users, it was recently discontinued for lack of funding.[113]

These experiences illustrate how electronic bulletin boards could give rise to new electronic communities, promoting discussions and the exchange of information on a range of public issues. Moreover, with software that provides text on demand as well as sophisticated graphics, bulletin boards could lower the barriers of entry into the world of publishing. In addition, by taking advantage of the interactive nature of this technology, individuals could also use electronic bulletin boards to become their own media gatekeepers, structuring the content of the information they receive.[114]

But the deployment and use of electronic bulletin boards for political purposes could also have some less positive effects. Not only will new groups be established outside of traditional political channels; within existing groups, there is likely to be a shift in the chain of command. In addition, to the extent that electronic bulletin boards are employed to target specific people, they could lead to the fragmentation of the body politic.

The rules and conditions governing access will be a major factor affecting the impact that electronic bulletin boards have on political life. Access, for example, could be limited by the costs of such systems or by the lack of skills to use them. Some groups have sought to address these problems by making computer terminals available in public places. For example, the Community Memory Project in Berkeley, CA, installed public access terminals in a food cooperative, cultural center, and community store.[115] Similarly, recognizing the importance of public access to such systems, Assemblywoman Gwen Moore introduced legislation into the California State Legislature designed to make computer terminals more widely available in public libraries.[116]

For electronic bulletin boards to be widely accessible, they must be able to interconnect with the public telecommunication network and/or with private networks. The development of, and agreement on, standards is therefore also important.

Ownership of systems, registration requirements, and system gatekeepers will also be important determinants of the openness of such communication systems. Thus, a number of questions will need to be answered with respect to rules of access and use:

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[110]For a primer on how to use such systems to achieve political objectives, see Pacific Bell, *Electronic Citizenship,* October 1988.

[111]Dave Hughes, "The Neighborhood ROM, Computer-Aided Local Politics," *Whole Earth Review,* vol. 45, March 1985, p. 89.

[112]David W. Batterson, "The Capitol Connection," *Computer Currents*, Aug. 25. Sept. 7, 1987, p. 20; and Mary Eisenhart, "California Lawmakers M@ the Electronic Age," *Microtimes*, February 1988, p. 118.

[113]Personal communication, Robert Jacobson, consultant to the California Assembly Utilities and Commerce Committee, Feb. 5, 1988.

[114]A survey of users of a political computer bulletin bored system, The Political Forum—located in a university community near a State capitol and carrying two interactive programs, Messages and Issues, in which a State senator provides a weekly legislative update-revealed that overall use was motivated equally by surveillance (finding out what was going on), personal identity, and diversion. See Gina M. Garramone, Allen C. Harris, and Ronald Anderson, "Uses of Political Computer Bulletin Boards," *Journal of Broadcasting & Electronic Media*, vol. *30, No. 3,* Summer 1986, pp. *325-339.*

[115]''New CM *Network Gets Good* Response," Community *Memory News, No. 2,* pp 1-2,7.

[116]"State Assembly Experiments with 'Electronic Democracy' via Computer Bulletin Board, 'The Capitol Connection.'" Press release from California Assemblywoman, Gwen Moore, Sacramento, CA, May 27, 1987.

- Should anyone be allowed to get on a bulletin board?
- Would open access on such a scale lead to problems of information overload?
- Are there ways to set quality standards for content or provide some form of evaluative review?
- How are agendas set, and who has the authority to set them?

Providing for Participation

Classical political theory posits that a democracy exists when all citizens actively participate in public affairs. In reality, all democracies limit citizenship and the ways in which citizens can participate in politics.[117] In addition, people differ with respect to the ways and the extent to which they participate, depending on estimations of their own effectiveness.[118]

Although direct participation is possible— through letter-writing, visits to government officials, testifying at meetings, demonstrations, and running for elected office-most participation is indirect, as in the case of voting for representatives.[119] This indirect participation has been mediated primarily by political parties and interest groups, both of which articulate and aggregate preferences, recruit members and candidates for political office, persuade voters and government officials, and disseminate information on public issues.[120]

Allowing people to circumvent parties and interest groups, new communication technologies are certain to affect the American political system and how people participate in it.[121] Two applications are examined here: the use of cable television to target potential voters, and the use of networked computer systems in political campaigns.

Use of Cable Television to Target Potential Voters

In political campaigns, advertising has been a traditional mechanism for persuading voters. Campaigns have advertised in newspapers, on radio, and on television. Between 1980 and 1988, the total cost of running Senate and House campaigns has almost doubled, from $239 million to an estimated $540 million. A significant proportion of this increase has gone to advertising, as can be seen in table 6-4.[122]

W i t h programming provided by cable channels now accounting for 33 percent of total viewing among cable households, this medium has become a very cost-effective means by which advertisers can target political messages to specific audience groups. Not only has the cable audience increased considerably over the last several years; in addition, of all television viewers, cable viewers are the most politically active. The Cabletelevision Advertising Bureau notes, for example, that according to some studies:

> Cable subscribers are 26 percent more likely to support a political group or a candidate than non-cable viewers. By a 30 percent margin, cable subscribers are more likely to engage in political fundraising; they are 36 percent more likely to be involved in local issues, 56 percent more likely to have personally visited an elected official in the past year and 34 percent more likely to have expressed an interest in writing to public officials.[123]

Moreover, a candidate's message can be targeted to specific geographic and demographic audiences. As Sabato and Beiler describe this advantage:

> The process of "targeting" involves cross--referencing polling and census data to enable a campaign to send key voters the precise message they want to hear. Until recently that has meant

[117]See Carole Pateman, participation *and* Democratic *Theory* (Cambridge, MA: Cambridge University Press, 1970); and Benjamin Ginsberg, *The Consequences of Consent (New* York, NY: Random House, 1982).

[118]Angus Campbell, Phillip E. Converse, Warren E. Miller, and Donald E. Stokes, *The American* Voter (Chicago. IL: The University of Chicago Press, 1960); and Herman H. Nie, Sidney Verba, and John R. Petrocik, *The Changing American Voter* (Cambridge, MA: Harvard University Press, 1976).

[119]Sidney Verba and Norman H. Nie, *Participation in America—Political Democracy and Social Equality* (New York, NY: Harper and Row, 1972).

[120]Political parties can be distinguished from interest groups by the broader base of their membership and their much greater role in structuring elections. See Clinton Rossiter, *Parries and Politics in America* (Ithaca, NY: Cornell University Press, 1%0), for an account of political parties in the United States. For a general account of the role of interest groups, see Jeffrey M. Berry, *The Interest Group Society* (Boston, MA: Little Brown, 1984).

[121] For a collection of articles and materials relating to this subject, see Joel M. Swerdlow (cd.), Media *Technology and the Vote: A Source Book* (Boulder, CO: The Westview Press, 1988).

[122]According to Curtis Gans: "In 1974, the average overall cost per vote was 67 cents. In 1984, it was $7.74. In 1974, the average media cost per vote was 12 cents. In 1984, it was $3.S4. Overall campaign costs have increased since 1974 about fivefold. Media costs have increased tenfold." As cited in Swerdlow (cd.), op. cit., footnote 121, p. 81.

[123]Lloyd Trufelman, "Audio/Visual Targeting Through Cable Television," ibid., p 27.

Table 6-4--Political Advertising on Television

Year	Network	Spot/local	Total
1970	$260,900	$11,789,000	$12,049,900
1971	30,000	5,490,000	5,520,000
1972	6,519,100	18,061,000	24,580,100
1973	1,199,000	7,865,800	9,064,800
1974	1,466,200	21,781,600	23,267,800
1975	1,744,200	6,251,000	7,995,200
1976	7,906,500	42,935,700	50,642,200
1977	—	14,992,600	14,992,600
1978	1,065,800	56,545,000	57,610,800
1979	255,000	16,891,700	17,146,700
1980	20,699,700	69,870,300	90,570,000
1981	713,100	20,114,300	20,827,400
1982	861,900	122,760,300	123,622,200
1963	2,739,700	24,609,700	27,349,400
1964	43,652,500	110,171,500	153,824,000
1985	—	22,680,500	22,680,500
1986	459,300	161,164,000	161,643,300
1987	.	24,923,200	24,923,200
1988	38,520,700	189,379,500	227,900,200

SOURCE: Television Bureau of Advertising, Broadcast Advertisers Reports. Spending figures compiled by the National Association of Broadcasters. Reprinted with permission of the Television Bureau of Advertising.

defining demographic "clusters" that react with supposedly predictable political behavior, identifying their geographic presence and then exposing them to highly specific and often dramatic direct mail... Cable services are becoming more segmented, but the expanding scope of system "interconnects"--computer networks organized by groups of local cable systems that can facilitate placement of messages innumerous demographically homogeneous communities simultaneously-will further"fine tune" the audience. The cost Per thousand viewers is as much as one-third lower than the shotgun approach of network television.[i24]

Given this ability to offer the visual and audio impact of mass media advertising with the specificity of point-to-point communication, one media lawyer has characterized cable advertising "as a perfect merger between TV and direct mail."[125]

Another attractive feature of cable is its flexibility. Cable stations accept longer advertising spots than do broadcast stations, allowing candidates to prepare personality profiles or pieces on specific issues.

Although cable companies have only recently targeted political candidates as a new source of advertising revenues, as early as the 1960s they recognized that political candidates were potential advertisers. In 1968, Presidential candidates were, for the first time, given free time on cable, and the National Cable Television Association (NCTA) urged them to take advantage of cable's special features.[126] In 1987, the Cabletelevision Advertising Bureau and NCTA held a workshop on Capitol Hill designed to promote political advertising on cable. More recently, focusing on their targeting advantage, some cable systems and/or cable programmers are now designing systems in which messages can be addressed to a particular viewer.

Assessments of how cable advertising might affect American politics differ markedly. Noting that American politicians have only rarely been able to directly engage the electorate, Frank Luntz, in his evaluation, emphasizes how television and television advertising now permit political figures to do it. As he says:

Integration of television into the political environment in the 1960s and 1970s enabled candidates, for

[124]Larry Sabato and David Beiler, "Magic ... or Blue Smoke and Mirrors? Reflections on New Technologies and Trends in the Political Consultant Trade," Swerdlow (ed.), op. cit., footnote 121, pp.7-8.

[125]John Wolfe, "Tossing Its Hat Into Political Ad Ring," *Cablevision,* Feb. 1, 1988, p. 31; and "Cable Delivers the Electorate, Says Panel," *Broadcasting,* Jan. 15, 1988, pp. 76-77.

[126]Ithiel de Sola Pool and Herbert E. Alexander report, in "Politics a Wired Nation," Ithiel de Sola Pool (cd.), *Talking Back: Citizen Feedback and Cub/e Technology* (Cambridge, MA: MIT Press, 1973), that: "Both the Nixon and Humphrey campaigns made organized efforts to solicit cablecasters to present their candidates. The Nixon campaign reported that 415 systems with a potential audience of 4.7 million people carried the Republican materials, while the Humphrey campaign reported that 303 cable systems representing a potential audience of 3.5 million people earned the Democratic materials."

the first time, to appear in bodily form, in the homes of constituents. In the next decade, the typical statewide campaign will spend at least half of its dollars on political advertising, and will reach more voters more often with more information. Although still far away in Washington, DC, elected officials have become less obscure and more accountable figures. . . Television advertising has given many American voters the ability to recognize the candidates' names and faces—and learn something about the background of the people they are electing.[127]

Alternatively, others view cable advertising as providing one more device for media professionals to more effectively "market" their candidates, a development that they fear can only serve to make political figures more, and not less, remote from the general public. As voiced by former Senator Charles McC. Mathias:

> Under the current system, few candidates relish the task of getting elected. There is increasing awareness that modern campaign technologies have fostered a remoteness from the voters . . . The expertise of campaign professionals-political consultants, media advisors, pollsters, direct mail specialists-lies in the technique of mass marketing, not in fostering personal contact between candidates and the voters.[128]

There is also concern that cable's targeting ability might serve to fragment the body politic. Because politicians can vary their messages according to what particular audiences may want to hear, voters may be less informed about alternative points of view, and less inclined to consider their own opinions in light of a larger, national context.

Cable targeting may also reduce the politicians' dependency on traditional political information gatekeepers —in particular the press and political parties-a development that could have major consequences for public policy. As Swerdlow notes:

> Public policy is closely tied to this fragmentation. Politicians and public officials, following the lead of advertisers promoting goods and services, now target messages at groups such as DINKS (double income, no kids). This is far different than address-

ing Democrats or Republicans or conservatives or liberals, and is becoming the best way to mobilize voters in modern America.[129]

How cable advertising will affect American politics will depend on the development of the technology and its strength of appeal among media buyers. It will also depend on the costs of campaigning and the nature of campaign financing rules, as well as on the ability of parties, the press, and other media to continue to play their traditional political gatekeeping roles.

Success in using cable to target voters depends to a considerable degree on the quality of data employed. In the past, the demographic data about particular audiences within a specific cable system were fairly sketchy and often out of date. Lately, however, data have improved. NCTA has recently merged its databases, creating an online service that can identify cable advertising possibilities according to congressional district, together with demographic indexing and a list of current open ad slots.[130] As the quality of these tools increases so will their use by political media professionals.

Although media buyers in political campaigns are just beginning to recognize cable's potential, many are still unfamiliar with how to buy media time. Others are reluctant to use cable because they want to avoid the problems of having to make a number of different, separate deals with local franchises in order to buy time for a statewide or national race. In their efforts to attract political advertising, cable companies are now trying to alleviate some of these problems. To help media buyers plan and coordinate advertising for political candidates, a number of multiple system operators are planning to establish a nationwide "buyers service. ''131

Campaign financing and campaign-financing laws will also affect how cable advertising impinges on democratic politics. With campaign costs skyrocketing, politicians will increasingly be inclined to seek out the most cost-effective means of influencing voters, such as cable advertising.[132] Limits on campaign expenditures might constrain the

[127] Frank Luntz, "Campaign Technology and American Democracy," Swerdlow (cd.), op. cit., footnote 121, p. 100.

[128] As cited in ibid., p. 94.

[129] Joel Swerdlow, "Fragmentation of the Electorate," Swerdlow (cd.), op. cit., footnote 121, p. 107.

[130] Sabato and Beiler, op. cit., footnote 124, p. 9.

[131] Jeannine Aversa, "United Cable TV Among MSO's Considering Political Ad Service," *Multichannel News,* Jan. 18, 1988, p. 4.

[132] It should be noted that under provisions adopted in 1972 to section 315 of the Communications Act, stations are to charge the "lowest unit rate" for political advertising. In the 1980s, this rule has not been diligently enforced by the FCC.

amount of money spent on political advertising.[133] However, it might also induce politicians to spend their limited advertising budgets on cable TV, since cable costs less per voter and is rapidly becoming equal to network TV in effectiveness, if not more so.

Whether or not cable advertising will serve to fragment the public and displace traditional gatekeepers will depend not only on what happens within the cable industry itself; it will also depend on the development of other media and the deployment of new technologies. Thus, it is evident that political parties have not remained passive in the face of technological change.[134] In many cases, they have assumed the role of technological expert, offering their incumbents and candidates high tech services to help them make their cases to the public. These services might include, for example, the development of computerized voter lists, targeted appeals to get out the vote, and even video and satellite facilities.[135] To the extent that traditional gatekeepers find new niches-and there remain a number of different, although equally effective, paths by which politicians and the electorate can communicate-the impact of cable targeting is likely to be diminished. On the other hand, to the extent that cable advertising proves to be far superior to other means of political communication, its impact on American politics is likely to be considerable. Under such circumstances, the government may want to assure that other effective communication pathways not only remain available, but can also be accessed in an equitable manner.

Networked Computer Systems

All major and most minor political campaigns now use computers for scheduling, fundraising, speechwriting, demographic analyses, profiles on competitors, communication with field offices, direct mail campaigns, targeting swing voters, organizing volunteers, budgeting, and financial reporting to the Federal Elections Commission. Computer systems and software vary dramatically in sophistication and cost, with the price of campaign software packages ranging, for example, from $135 to $7,500. One political consultant estimated that in the 1985-86 congressional campaigns, about $2 million was spent on software and about $20 million on computer hardware, software, and services, including the purchase of voter lists.[136] It was estimated that by the spring of 1988, more than $19 million had been spent in Federal campaigns on computer programs, voter lists, and computerized fundraising.[137]

In addition to using their own computer networks, campaigns also subscribe to online information services that allow them to follow and analyze not only coverage of their own campaigns, but that of others as well. One of the most ambitious of these services to date is the "Presidential Campaign Hotline," which provides summaries of political news from electronic and print sources for a fee of $150 to $350 per month.[138] Subscribers include campaigns, new organizations, lobbyists, and political consultants who depend on this service for an "insider's news summary."[139] Hotline also offers "Campaign Reports," an electronic bulletin board

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[133] Although the power of money t. influence campaigns and thus affect the outcome of elections is well documented, it has been difficult to fashion public policies to address this problem. All other democracies establish some regulation over the use, timing, and/or format of political advertising on television by, for example, allocating free time, limiting time and money that can be spent, and applying restrictions on format. In the United States, however, the Supreme Court has protected campaign contributions, treating them as being equivalent to "speech." For discussions, see David H. Remes, "Memorandum on Constitutional Issues Raised by Proposed Restriction on Television Advertising in Federal Election Campaigns," appendix to testimony of Curtis B. Gans, Vice President and Director, Committee for the Study on the American Electorate, before the Senate Committee on Commerce, Science and Transportation, Sept. 10, 1985, p. 12. See also J. Skelly Wright, "Money and the Pollution of Politics: Is the First Amendment an Obstacle to Political Equality?" *Columbia Law Review,* vol. 82, No. 4, May 1982, reprinted in *Political Economy and Constitutional Reform,* hearings before the U.S. Joint Economic Committee, 97th Cong., 2d sess., Nov. 9, 17, 18, and Dec. 15, 1982, p. 173.

[134] For a general discussion of how parties are adapting, see Paul S. Herrnson, *Party Campaigning in the 1980s* (Cambridge, MA: Harvard University Press, 1988).

[135] For a discussion, see ibid. See also Robert Blaemire, "The Party as Consultant," *Campaigns & Elections* Magazine, July/August 1987, as reprinted in Swerdlow (cd.), op. cit., foomote 121; and Stephen Frantzich, *Political Parties in the Technological Age (New* York, NY: Longman Satellite Communications, April 1988).

[136] John Aristotle Phillips, president, Aristotle Industries, as quoted in Elizabeth Tucker. "Computers Enter the World of Politics," The Washington *Post,* Washington Business, Mar. 7, 1988, p. 9.

[137] Andrew Rosenthal, "Politicians Yield to Computers," *The New York Times,* May *9, 1988,* p. D5.

[138] For a description by this service's founder, see Larry Checco, "The Presidential Campaign Hotline," Swerdlow (cd,), op. cit., footnote 121, pp. 21-25.

[139] Eleanor Randolph, "A Hot-off-The-Wire Service for Political Junkies," *The Washington Post,* Oct.11, *1987,* pp. A18-A19.

for press secretaries, in which each candidate can run 200 unedited words.[140]

Networked computer systems could serve not only to make political campaigns more efficient and more responsive to citizen concerns; they could also make it easier for political candidates to network and share resources. Alternatively, these systems could increase the cost of political campaigns, enable politicians to manipulate citizens' perceptions, and make politicians more independent of political parties. The future role of such systems will depend, among other things, on who develops them, their costs, and their availability to all political contenders.

One important concern about the growing use of technology in politics is that it fosters the dependence of politicians on political consultants, rather than on political parties-a development that detracts from representative government. This concern derives from the fact that political consultants now play the pivotal role in engineering the use of new communication technologies in campaigns. As David Chagall describes in *The New Kingmakers:*

> *These* consultants are high-powered professionals versed in the skills of polling, communication, and computer planning. They plot the strategies, set the stages, choose the themes, and mastermind the interplay of candidate and media in the Klieg lights of today's electioneering carnivals.[141]

Similarly, political scientist Benjamin Ginsberg argues:

> The present-day change in the underlying strength of American political forces is a result precisely of the displacement of political party organizations by new mechanisms of electoral mobilization.[142]

Responding to the growing demand for political consultants, one university has established a Graduate School of Political Management. Political consultants have also formed their own trade association, the American Association of Political Consultants. Although in the past political consulting firms were small, privately held, and often disappeared with the end of an election cycle, there are now 300 ongoing companies providing computer services for politics.[143]

To the extent that political consultants assume the role of political gatekeeping, their values, and the incentives that motivate them, become matters of public concern. Looking back at the history of recent electoral campaigns, some political observers have expressed concerns about the basic ethics of the consulting profession. In his study of political consultants, Larry Sabato concludes, for example, that they "are businessmen, not ideologues."[l] Although they generally work for one particular party, political consultants tend to select the candidates they work for not on the basis of their viewpoints or world views, but rather on the "revenue-producing potential of a campaign. ''145 As characterized by one political consultant:

> Democracy is a growth business. The industry is growing, and the reason is because there is more money being spent overall by campaigns.[146]

Others claim that the use of computer networks and high technology consultants actually contributes little to the prospects of a campaign, apart from increasing its overall costs. As described by journalist Fred Barnes:

> It's partly fear that keeps consultants in demand, fear that your opponent will get a leg up. If one candidate hires a famous pollster or media consultant, the other candidates have to get expensive consultants of their own. In the end, the consultants nullify each other in most races. *47

If campaign costs continue to escalate in response to each new technological development, some of the best candidates may be excluded from politics, while others may become increasingly beholden to political professionals rather than to political parties.

The role of political consultants in American political life will depend to a large degree on how effectively the traditional gatekeepers adapt to

[140]Marjorie Williams, "The politicos' Instant Fix," *The Washington Post,* Feb. 19, 1988, pp. B1-B2.

[141]David Chagall, The *New Kingmakers* (New York, NY: Harcourt Brace Jovanovich, 1981), p. 5.

[142]Benjamin Ginsberg, *The Captive Public* (New York, NY: Basic Books, Inc., 1986), p. 178.

[143]Andrew Rosenthal, "Politics Yield to Computers," *The New York Times,* May 9, 1988, p. D1.

[144]Larry J. Sabato, The Rise *of Political* Consultants (New York, NY: Basic Books, Inc., 1981), p. 6.

[145]Ibid.

[146]Phillips, op. cit., footnote 136, PP. 1, 9.

[147]Fred Barnes, "The Myth of Political Consultants," *The New Republic,* June 16, 1986, reprinted in Swerdlow (ed.), op. cit., footnote 121, p. 190.

the new technological environment. As Robert Blaemire has pointed out American political parties could employ new technologies to rebuild and revive the role of parties.[148] By taking advantage of new technologies to create voter databases, or to make video production facilities and satellite feeds available to candidates, the parties could position themselves to be the lowest-cost consultant to political candidates. In so doing, they would enhance their own roles as political gatekeepers. Being in control of political communication services, they would also be in a position to allocate their assistance not so much on the basis of a candidate's ability to pay, but rather on the basis of a candidate's political perspective, which would be more in keeping with democratic politics.

Providing for Representation

The United States was designed to be a representative or republican form of government.[149] This design reflects the Founders' belief that, while government should be based on popular sovereignty, it should also protect the minority against majority rule. Thus, while power was given to the people, it was done in a limited, or restricted, fashion. Qualified participants were defined narrowly to include only white, property-owning males. Moreover, the President and Senate were not directly elected by the people, but rather were indirectly chosen by the Electoral College and the State legislatures. And finally, "the people" were themselves divided into two constituencies --one at the Federal and one at the State level.

In American politics, political parties have traditionally served as gatekeepers, providing a means by which representatives can organize their activities and constituents can hold representatives accountable. However, the widespread use of new technologies in politics is likely to disrupt this relationship, allowing individuals to circumvent their representatives and make their cases more directly. Although such a development might allow for a more direct form of democracy, it could also serve to further

fragment the body politic. To illustrate these possibilities, two technological applications are examined here: the televising of congressional proceedings and the polling of voters/constituents.

Televising Congressional Proceedings

Televising congressional hearings began in 1948 with the Senate Armed Services Hearings on Universal Military Training and the House Committee Hearings on Un-American Activities. In both instances, committee members allowed television coverage to publicize both the substance of the issues and the role of committee members. Throughout the next 40 years, congressional committees allowed television coverage of a number of key hearings-the Kefauver hearings on organized crime in interstate commerce in 1951; the Army - McCarthy hearings in 1954; the Senate Watergate hearings in 1973; the House impeachment proceedings in 1974; and, most recently, the Iran-Contra hearings in 1987.[150]

The regular scheduling of congressional events did not begin, however, until much later with the development of cable television. In 1979, the Cable Satellite Public Affairs Network (C-SPAN), a non-profit cooperative of 40 or so cable TV companies, began covering the proceedings of the House of Representatives. In 1986, using C-SPAN H, coverage was extended to include Senate activities. To meet its annual budget of about $12 million, C-SPAN receives its operating funds from the affiliate cable companies.

C-SPAN prides itself on its limited gatekeeping role. Although it selects subjects to be covered, it provides unmediated accounts in which the camera simply records the happenings, or the lack thereof, on the Senate and House floors. In addition, it provides full campaign coverage, and hosts a morning call-in program where candidates are questioned by the public. As Phil Roeder, Executive Director of the Iowa Democratic Party, describes C-SPAN's role:

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[148] Blaemire, op. cit., footnote 135, pp. 171-173.

[149] There have been two competing theories of representation. The first, and the more widely accepted, is the trustee theory. According to this theory, the representative translates constituents' views into what, *from the* representative's perspective, is in the best interest of the country. The second theory, the delegate theory, argues that representatives should literally represent the views of their constituents.

[150] There was no problem in gaining access t. the networks because, in each of these instances, the networks decided that there would be a substantial audience. Following each hearing, there was discussion of the effect that television coverage had with respect to the rights of the witnesses, the stance taken by congressional members, and the public's interest in the hearings. For a discussion, see Ronald Garay, *Congressional Television* (Westport, CT: Greenwood Press, 1988).

C-SPAN brings everything that the candidates are doing into the people's living rooms. It's the high tech version of retail politics.[151]

Although C-SPAN was virtually unknown when it began operation 10 years ago, it has gradually developed a loyal following, which includes a number of journalists and political junkies.[152] A 1987 survey commissioned by C-SPAN found that viewership had increased 43 percent since November 1984, from 7.6 million households to 10.9 million households.[153] Moreover, C-SPAN recently released a report claiming that its audience is competitive with MacNeil/Lehrer, Face the Nation, Meet the Press, and This Week With David Brinkley.[154]

Congressmen are also becoming more aware of C-SPAN and its potential impact on constituents. As Rob Stoddard has pointed out:

It was only a short time before members of Congress realized the power of the satellite-fed programming. Letters poured in from voters who had observed their congressman's actions on the floor or in an important hearing. And it wasn't long before House members began emphasizing issues important to them in speeches before an empty House chamber, merely to gain the exposure that C-SPAN offered.[155]

One positive outcome of televising congressional proceedings is that it could enhance the stature of Congress and its members, as well as revitalize the public's interest and participation in political affairs. Experience with C-SPAN has shown that live reporting of public events can also serve as an important source of information for traditional gatekeepers, such as party leaders and the press, helping them to monitor and keep track of events.

On the other hand, television coverage could serve to discourage substantive political debate if Congressmen chose either to posture before the public or to become more reticent. Moreover, with all their actions exposed to the public, Members may find it more difficult to arrive at compromise.

Television coverage might also detract from the idea of politics as public affairs by fostering the contrary notion of politics as entertainment.

One factor that will help to determine the impact of television coverage of politics will be the rules and norms that Congress establishes with respect to it. Both the House and the Senate control the cameras that cover floor activities, and they make the video feeds available to the media for their use. Cameras for hearings are supplied by the television stations, but the House and Senate Radio/TV Gallery acts as a gatekeeper to ensure an orderly process. To date, there have been few problems entailed in providing television coverage. However, to the extent that political programming becomes more popular, the political stakes in how coverage is allocated are likely to increase, giving rise to issues about which events should be covered and by whom.

The growth in the popularity of live political programming will also affect its development and how it is employed in the political process. In fact, it was precisely because C-SPAN did not enjoy a sizable audience that it was able to develop as a public service without a lot of undo attention. Were C-SPAN's popularity to greatly increase, inducing other networks to provide competing services on a for-profit basis, C-SPAN might be forced to adopt a much more commercial, but politically less useful, format.

Polling of Voter Preferences

Writing in 1916, the English political theorist, James Bryce, looked forward to the day when:

... the will of the majority (would) be ascertainable at all times, and without the need of its passing through a body of representatives, possibly without the need of voting machinery at all . . . To such a condition of things the phrase, "Rule of public opinion," might be most properly applied, for public opinion would not only reign but govern.[156]

Moreover, with the development of public opinion polling two decades later, a democracy built to this

[151] As cited in Andrew Rosenthal, "C-SPAN's Spotlight Brings Quiet Corners of Campaigning Into View," *The New York Times,* Oct. 22, 1987.

[152] As Thomas P. SouthWick points out, members of the press value C-SPAN, which allows them to follow issues in greater depth and to see candidates operating over time and in a variety of different contexts. "C-SPAN Plays a Pivotal Role in 1988 Presidential Elections," *Multichannel News, Nov. 30, 1987.*

[153] Jeannine Aversa, "Study: C-SPAN Viewership Up 43% Since November 1984," *Multichannel News,* Jan. 25, 1988, p. 20.

[154] Lloyd Trufelman, "Audio/Visual Targeting Through Cable Television," Swerdlow (cd.), op. cit., footnote 121, p. 27.

[155] Rob Stoddard, "Taking Politics t. th. Skies," *Satellite Communications,* April 1988, as reprinted in Swerdlow (ed.), op. cit., footnote 121, p. 178.

[156] James Bryce, The *American Commonwealth* (New York, NY: Macmillan, 1916), vol II, pp. 261-262.

form appeared reliable. Early public polling techniques, however, proved to be far too inadequate. Thus, it has been only recently, with the advance of communication and information technologies, that proponents of direct democracy have begun to reemerge. [157]

New communication technologies make polling not only easier, but also more accurate. Computers can be used to select random samples of voters or to target particular demographic groups. They can also be used to aggregate, analyze, and widely disseminate results.

Although most direct communication with respondents is still conducted by telephone, the process is now greatly facilitated, given automatic dialing and voice-stimulated response. Broadcast and cable stations also conduct polls—generally by posing a question, together with a range of answers, and inviting interested parties to respond via an 800 number. With new interactive media, such as cable TV and electronic bulletin boards, polling can now be done more directly. For example, with interactive cable, a viewer can respond to questions by pushing a button on the cable box, thereby sending a signal to the station. Conceivably, interactive technologies would allow polling to take place on every public issue, permitting one form of electronic democracy. [158]

These enhanced public polling techniques could be used to provide citizens with greater information and to stimulate their interest in public affairs. They could serve, moreover, to provide government representatives with additional information about their constituents' views. According to Christopher Arterton, who analyzed 13 local experiments in the use of interactive communication technologies, this kind of positive outcome is most likely when technology is not used to bypass government, but rather to improve citizens' access to decisionmakers and broaden participation. [159]

Others are much more skeptical, and in some cases even alarmed, about the future prospects of polling technologies. Many note, for example, that polling could enhance the voice of a self-selected subset of citizens. This is likely to be the case when members of an audience are given the option to respond. Self-selected participants may either be more intensely concerned about a given issue, or not very concerned at all. In either case, their opinions would not be representative of the general public.

New polling techniques could also be used to manipulate the public, a possibility suggested by political scientist, Benjamin Ginsberg. According to Ginsberg, the power to manipulate public opinion has affected its nature as well as its relationship to government. No longer a voluntary activity, but rather an externally subsidized activity, polling has been transformed from a spontaneous assertion to a constrained response, and from a property of groups to an attribute of individuals. As a result, argues Ginsberg:

> Polling has rendered public opinion less dangerous, less disruptive, and, perhaps, more amenable to governmental control. [160]

Others discount polling as being politically irresponsible because it tends to discourage deliberation and debate. However, some are more sanguine about the impact of polling, believing that the public will not support it. As Pool and Alexander note:

> The notion is that the ancient dream of direct democracy, in which the people themselves vote on the issues instead of merely periodically choosing representatives, can at last be made a reality. It rests upon a total misunderstanding of the legislative process . . . Clearly any instant referendum scheme is so destructive as to be inconceivable. [161]

Others agree. They criticize instant polls because they lack prior debate, provide only a sketchy presentation of positions and facts, and provide no overall context in which choices can be made. [162]

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[157] For a discussion, see Christopher Arterton, *Teledemocracy: Can Technology Protect Democracy?* (Beverly Hills, CA: Sage, 1987); Benjamin Barber, "The Second American Revolution," *Channels,* February-March 1982, pp. 25, 62; and Pool and Alexander, op. cit., footnote 126.

[158] Most systems have not yet been designed to allow real interaction between respondents and the pollster, or to allow discussion among respondents. Instead, the audience merely responds to preset choices defined by program producers. In 1977, Warner Amex set up a trial system such as this in Columbus, OH. Called QUBE, this system allowed subscribers to send signals back to the system via a hand-held keypad. It was eventually discontinued because of low demand and high financial costs. For a description of QUBE, see Everett M. Rogers, *Communication Technology (New* York, NY: The Free Press, 1986), pp. 62-64.

[159] Arterton, op. cit., footnote 157.

[160] Ginsberg, op. cit., footnote 142, p. 63.

[161] Pool and Alexander, op. cit., footnote 1*6, p. 79.

[162] For one discussion, see Barber, Op. cit., footnote 157, PP. 21-25.62.