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Access Denied: Information Policy and the Limits of Liberalism

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In 1968 the United States military's Defense Advanced Research Project (DARPA) established the world's first computer-based e-mail system. In the intervening two and a half decades the computer network has emerged as one of the central technological forms of the twentieth century. From local e-mail systems to a planned nationwide fiber-optic "superhighway," computer networks have proliferated to interconnect businesses, governments, and individuals around the world. Estimates of the worldwide market for the interactive information industry run as high as \$3.5 trillion by the year 2000.¹ As the site of such intense economic development it is not surprising that the computer network has also been subject to a process of intensive ideological staging. A set of mythologies circulates around the utopian or dystopian implications of the computer network, ranging from the malevolent, inter-connected defense computers of *Terminator* (1984) by James Cameron, to the visions of artists for whom computer networks herald "our emergence into the new world of telematic culture ... [a world] that can link us with superconnectivity, mind to mind, into a new planetary community."²

These mythologies are, by and large based on an existing narrative framework that first emerged during the industrial revolution. Within this framework new technologies or technological forms, (the mechanical loom, the assembly line, electricity, the telephone, etc.), are celebrated—or feared—for their capacity to generate unlimited power, mobility, or productivity, and to transcend the boundaries of existing forms of social experience and organization. The *sheer magnitude of speed, distance, and scale* opened up by these technologies locates our experience of them within the domain of what Leo Marx

describes as the “technological sublime”; their dimensions or limitations are literally beyond our imagination.³

In his essay, “The Mythos of the Electronic Revolution,” James W. Carey examines the utopian myths that surrounded technologies such as steam power and the printing press in nineteenth century America. Carey cites a contemporary address on the impact of the industrial revolution that describes steam as a “great motive agent” that will “...bring everything into harmonious cooperation ... triumphing over space and time ... to subdue prejudice and to unite every part of our land in rapid and friendly communication....”⁴ He then charts the transition that took place in the late nineteenth century from the celebration of the “mechanical sublime” of the industrial revolution, embodied in the steam power, to the nascent “electrical sublime.” While mechanization had promised abundance and freedom it had resulted in overcrowded cities, industrial pollution, social fragmentation, and a growing division of labor. Electricity, however, would be different, it would:

... give us universally high standards of living, new and amusing kinds of jobs, leisure, freedom and an end to drudgery, congestion, noise, smoke, and filth. It can overcome the objections and problems of a steam civilization. It can bring back many of the mourned virtues of the handicraft age without the human toil and curse of impending scarcity that marked the age.⁵

In short, “Electricity promised ... the same freedom, decentralization, ecological harmony, and democratic community that had hitherto been guaranteed but left undelivered by mechanization.”⁶ Carey goes on to cite a fascinating passage from a late nineteenth century economic treatise titled *The Unity of Law*, in which electrical power functions as the metaphorical embodiment of democratic organization.

The actual relation of each and every member of a community as giver and receiver, teacher and learner, producer and consumer is positive and negative by turns and relatively [sic] to every difference of function and force in his associates, the whole mass constituting a great electric battery to which each individual contributes his pair of plates. Perfect circulation being established as a consequence of perfect development of all individualities, the economic force flows smoothly through every member of the body politic, general happiness and prosperity, improved mental and moral action following in its train....⁷

The “economic force” flows through the “great electric battery” of society, bringing about the “perfect development” of each individual, even as it promotes the health of the larger body politic. Electricity here functions as a kind of Adam Smith-ian “invisible hand” providing a providential coordination of the otherwise disparate and self-interested actions of individual citizens. This statement is emblematic of the close relationship between free-market ideologies and notions of individualism and democratic freedom in

the American liberal tradition. It is also significant because of the curious relationship these first two have with technology. A technological form, in this case, electricity, takes on a metaphoric relationship to systems of economic value and to a model of democratic will formation.

Electricity doesn’t simply function as a technology in the service of particular forms of production, rather, the physical process on which electricity operates becomes a paradigm for a form of social organization. Electricity is simultaneously a normative model for democratic community and the technological agent that will bring this community about. This paradigmatic function is absolutely central to understanding the way in which new technologies are rhetorically framed. Networks, whether they are the rail transportation links made possible by steam technology, the high-tension power lines of rural electrification, or the data matrix of computer telecommunications, have traditionally made the same interconnected promises of material abundance, decentralization, and democratic community.

There is a striking similarity in the claims advanced for electricity around the turn of the century, and the rhetoric surrounding computer networks today. We might designate this, following Carey, as the transition from the “electrical sublime” to the “informational sublime.” Each technological form promises to eliminate the “drudgery” of conventional manual labor, transforming us all into “knowledge workers”⁸; each will replace the pollution of conventional manufacturing with clean, “high technology” industries, and most importantly, each will encourage a decentralized, democratic and community ethos in American culture. Under the influence of computer technology the fragmented anomie of late capitalist society will be transformed into the vital, democratic polls of the fiber optic network. From Ross Perot’s televised “town hall” meetings to Roy Ascott’s “telematic embrace,” the computer network has been widely posited as the very embodiment of a liberal public sphere.⁹

The speculative culture that surrounds network technology today, particularly in what might be identified as its “alternative” guises—in the pages of publications such as *Mondo 2000* and *Wired*, in the work of the Electronic Frontier Foundation (EFF), or the writings of Jaron Lanier, Howard Rheingold, and others—is based on a particular conjunction of the informational sublime and the discourse of the modernist avant-garde. Their pronouncements center around the liberatory potential of the network, and by implication, of the computer-skilled artist/rebel. Within this subculture, network technologies are posited as representing a profound break with existing forms of community, communication, and political organization. These claims are, by and large, oriented toward predicting the future possibilities of network technology. But network systems have been in place, both commercially and in the government and the military, for some time, and any subsequent developments in network culture will inevitably be informed by the institutions into which they will be inserted.

Here I will investigate the performance of an existing network system. My goal is to analyze the ways in which network technology actually functions within a particular institutional location: the executive branch of the Government. This network has been the site of a particularly interesting legal confrontation that bears directly on the function of network technology within the liberal state. I will discuss the bureaucratic and ideological context of federal information policy and the impact that computer systems have had on it. I will conclude by looking at the rhetoric that surrounds network technology more generally in relation to the sub-culture that has grown up around Internet.

Executive Privilege and the Freedom of Information Act

In the fall of 1792 General Arthur Saint Claire, acting under orders from President George Washington, led a military expedition into Native American territory in what is now northwestern Ohio. On the morning of November 4 his expedition was attacked by a "small but determined Indian band" and over half of the company killed.¹⁰ When word of the attack reached Congress a committee was formed to investigate the incident, in which Washington had effectively engaged in an act of war without Congressional consent. The committee requested the relevant records and papers of Washington and Secretary of War Henry Knox. During an initial meeting Washington suggested that included among these documents "there might be papers of so secret a nature that they ought not to be given up."¹¹ Although Washington did, ultimately, surrender the material the committee requested the incident established the principle of "executive privilege" which states that, in response to requests from Congress, "the Executive ought to communicate such papers as the public good would permit, and ought to refuse those, the disclosure of which would injure the public."¹²

Thus was formed the bureaucratic scene within which debates over federal information policy would unfold for the next two centuries. Within this scene the legislative and executive branches engage in a highly ritualized *pas de deux* of accusation and moral censure, solicitation, and coy denial over topics ranging from presidential appointments to land fraud investigations to foreign treaty negotiations to covert military operations. The theater in which this drama plays itself out includes the floor of Congress as well as the federal court system. But what exactly is being "performed" in confrontations between the President and Congress over the control of information? It is the spectacle of democracy, and the tripartite division of power that both governs and insures democratic rule. I will return to examine this performance more closely. For now I simply want to note that the debate over government

information policy should be more specifically understood as a debate about the relative authority held by the President, Congress, and the courts in determining, defending, or speaking on behalf of the "public good."

Within this debate the President has traditionally relied on the doctrine of executive privilege to assert final authority in determining the public good. The doctrine of executive privilege derives primarily from concerns that the President, in his capacity as commander of the armed forces, must be free to determine the "best interests" of the state due to his privileged access to the details of complex military and diplomatic negotiations and relationships. Prior to the twentieth-century this doctrine was applied in a fairly unsystematic fashion, and debates over government information were relatively sporadic. In fact, it wasn't until the U.S. military was exposed to the protocols governing information secrecy employed by the French and British armies during World War I that it began to employ an organized system for classifying documents.¹³

The real expansion in classification systems and government secrecy in the U.S. occurred during World War II, as the U.S. in conjunction with its allies developed a sophisticated apparatus for collecting, transmitting, analyzing and archiving military and political "intelligence" on a global scale.¹⁴ After the war this control became increasingly centralized and coordinated under the apparent threat posed by the USSR and "world communism."¹⁵ The establishment of the Central Intelligence Agency (CIA) and the National Security Agency (NSA) along with the close relationship between high-technology weapons research and "national security" (President Truman referred to the secret of the atomic bomb as America's "sacred trust"),¹⁶ led to the creation of a system in which every piece of information generated by key government agencies and affiliated private businesses and universities was subject to a complex calculation of potential risk. It was an environment in which it was assumed that almost *any* piece of information could, if it fell into the wrong hands, pose a threat to America's national security. Thus, post-war information policy was ultimately inseparable from the larger attempt by the American government to manage Cold War-era global politics. Within this scenario any consideration of the "public good" that involved the access of the American public to information employed by or generated by the President in the process of governing was overridden by the larger external "threat" posed to the nation by the Soviet Union. This gave the doctrine of executive privilege an almost irresistible political authority.

During the late '50s and early '60s the climate of opinion around government information policy began to shift, in part due to the relative decline of rabid anti-communism following Joseph McCarthy's loss of credibility in the Army-McCarthy hearings. It was at this time that the doctrine of executive privilege began to be challenged by a coalition of liberal members of

Congress and groups such as the American Civil Liberties Organization (predecessor to the American Civil Liberties Union), the American Bar Association, and the American Society of Newspaper Editors.¹⁷ One of the most outspoken Congressional critics of government secrecy was Rep. John Moss (D-CA), the chairman of the House Foreign Operations and Government Information Subcommittee. The committee had been established by the Democratic Congress in 1955 to “curb the rampant suppression of government information during the Eisenhower administration.”¹⁸ For over a decade Moss’ committee held a series of hearings that finally resulted in the drafting of the Freedom of Information Act (FOIA), which was signed into law by a “reluctant” President Lyndon Johnson on July 4, 1966.¹⁹ The FOIA was strengthened in 1974, in the wake of Watergate, in an attempt to bring more pressure to bear on recalcitrant government agencies and in order to make it easier, and faster, for researchers to gain access to records.²⁰

The arguments developed in support of the FOIA constitute what I would describe as a “liberal” position on government information policy. This position is based on the classic model of liberal democracy in which the will of the people is the ultimate determinant and legitimation of government policy. This “will” is enacted through the participation of the people in periodic elections in which the majority vote to elect an individual who will then go on to represent their interests in the legislature through the drafting of laws and through open debate with other duly elected representatives. There is thus a signifying relationship between the elected representatives specifically, and the state in general, and the individual citizen on whose behalf the representatives speak. Within this system, it is argued, each individual voter must have access to as much information as is necessary to develop an informed opinion about the issues of the day, and thus be able to elect the individual who most fully represents that opinion.

Within the liberal model information functions as the veritable life blood of the democratic process. As Harlan Cleveland notes in an essay written on the twentieth anniversary of the passage of the FOIA, “To consider government information policy is not far from considering the essence of government itself.”²¹ The liberal position is conveyed in the Supreme Court’s decision in *NLRB versus Robbins Tire and Rubber Co.* in which the Court observed that

... the basic purpose of FOIA is to ensure an informed citizenry, vital to the functioning of a democratic society, needed to check against corruption and to hold the governors accountable to the governed.²²

In an essay on the relationship between the judicial system and the FOIA, Phillip Cooper relates what he calls the “Free Flow” theory of information to arguments developed by the Supreme Court in support of the freedom of

expression—placing the FOIA clearly within the liberal political canon. Cooper goes on to argue that the FOIA is “...concerned with assuring *the capacity of the citizenry to address specific substantive policy issues* and with the maintenance of important structural features of the governing framework such as elections and the arrangement of checks and balances” (emphasis mine).²³ Cooper’s comment is representative of the general set of beliefs held by proponents of the “liberal” position on information theory. The paradigmatic “user” of the FOIA in this view would be an individual citizen who requests government information in order to “address substantive policy issues,” and to become a better-informed voter. It is thus presumed that the FOIA functions as a direct conduit or channel for information that “flows” from the state to the “citizenry,” whose political will then “flows” back to the state in the form of their voting behavior. Information here functions as a cognate of the “economic force” that circulates within the “battery” of the electrical sublime. In this view the moral economy of the FOIA is constituted around a binary logic in which the sheer fact that “information,” in whatever form it might take, is “flowing” and “accessible” constitutes a progressive movement. The flow of information in both is taken as a paradigm for a broader cultural progress towards the telos of a democratic society.

The status of the FOIA was considerably complicated by the growing use of computer systems to store federal documents. In 1955 (the year the Moss Committee was chartered) the government had 45 mainframe computers—by 1970 there were 5277 in use.²⁴ Between 1980 and 1985, according to the Office of Technology Assessment, the number of personal computers in federal agencies went from a few thousand to over 100,000.²⁵ The rapid proliferation of computer systems was in part a response to the literal flood of government records generated by the expansion of the federal bureaucracy during the 1960s, which eventually led to the passage of the Federal Paperwork Reduction Act in 1980. The transition to computerized data storage systems did much to heighten both the promise and the contradictions of the FOIA. On a practical level the technical and logistical skills required to file and process FOIA requests were complicated by the presence of computers. In addition, the FOIA had no provisions for dealing with documents that existed solely in the form of magnetic impulses on tape. Thus, the epistemological status of computer records (a topic of some interest in the PROFS case that I will examine subsequently) was uncertain.

But more importantly for my analysis, the introduction of computer technology into government record-keeping marks a paradigmatic intersection between the “informational sublime” sketched above and the liberal discourse surrounding the FOIA. With the introduction of computer technology into the existing set of arguments about democracy and political empowerment via the FOIA, the technological form of the network would

seem to have found its ideal bureaucratic setting. The individual users of the FOIA are transformed into a democratic collective via their participation in the “interactive” mechanism of representative government. The existence of computer systems in government record-keeping promised to provide an unprecedented level of access to the workings of the state, and to profoundly alter the balance of information power between the state and the citizen. The introduction of computers presaged a new era of government accountability, and the end of “official secrecy.” This combination of telecommunications technologies and the rhetoric of “open government” played a central role in the last presidential election, with candidates Bill Clinton and Al Gore presenting themselves as committed to the “on-line” accessibility of the government to the American people.

The “free flow” model correlates with what Carl Schmitt, in his classic study, *The Crisis of Parliamentary Democracy* (1923), describes as the “metaphysical system” or liberalism, which is based on the belief that “...the truth can be found through an unrestrained clash of opinion, and the competition will produce harmony.”²⁶ According to Schmitt, the system of liberalism is based on two discursive structures. The first is the principle of a free and open discussion among political equals that will result in the formation of a natural consensus. This consensus represents the highest “truth” of the liberal system: “What was to be secured through the balance guaranteed by openness and discussion was nothing less than truth and justice itself.”²⁷ Necessary to the formation of a consensus is an openness in the conduct of governmental affairs. Schmitt traces the emergence of openness as an “absolute” political value to the debate over state secrets or *Arcana rei publicae*, in the 16th and 17th centuries: “The postulate of openness finds its specific opponent in the idea that *Arcana* belong to every kind of politics, political-technical secrets.... Openness becomes an absolute value, although at first it was only a practical means to combat the bureaucratic, specialist-technical secret politics of absolutism.”²⁸ The second postulate is the “division of powers,” a “competition,” according to Schmitt, “from which the truth will emerge” in the “division or balance of different state activities and institutions.”²⁹ We find each of these postulates effectively expressed in the debates over Government information policy. The liberal state is meant to be the expression of a general social will formed via discussion and debate among equal subjects. It is protected from undue bias through a balance of powers mechanism in which the legislative, judicial, and executive functions are separated. Thus the FOIA is primarily a product of the leverage exerted by the judicial and legislative branches against the threat of an excessive influence wielded by the executive branch.

The claims of proponents notwithstanding, the path taken by information requested through the FOIA does not, by and large, flow directly from the state to the citizen, but rather from the state, through various mechanisms

within the media or the “access community,” and then into books, news articles, and investigative projects that will, eventually, reach the public, or at least that segment of the public that gains access to the book, newspaper, journal, or television show in question. In most FOIA scenarios the mediating role of the press is elided. The media or the individual researcher is made equivalent with the public, and the simple fact that government information is accessible to the media is presumed to be tantamount to that information reaching “the public,” and satisfying the requirement for public deliberation of “substantive issues” that is at the basis of democratic systems of government. Thus, Supreme Court Justice Powell has defined the press simply as “*the means* by which the people receive that free flow of information and ideas essential to intelligent self-government (emphasis mine).”³⁰ Here the press is cast as a neutral carrier of information, rather than a form of institutional “mediation” that exerts its own influence and discretion on the material it conveys.

Another level of mediation in the dissemination of federal information is introduced by the legal/logistical complexity of the FOIA procedures themselves. The process of writing and filing an FOIA request requires the bureaucratic skill, not to mention time, necessary to negotiate with the various federal agencies involved, to correlate document sets, formulate search parameters, submit search requests, and even mount court cases in the event of refusals to disclose. Thus, a cadre of access specialists and access activists has emerged, primarily within the academic, journalistic, and legal professions—writers and researchers who specialize in working with materials collected through FOIA requests. It is largely through the work of these individuals that documents released under the FOIA make their way into the sphere of public debate. At the same time, within the government, the process of responding to FOIA requests has spawned an entire civil service specialization around the figure of the “access professional” (the “American Society of Access Professionals” was formed in 1980) who reviews FOIA requests, determines what material can be released, develops arguments for withholding other materials, etc.³¹

In their essay “Information Poverty and Political Inequality: Citizenship in the Age of Privatized Communications,” sociologists Graham Murdock and Peter Golding identify three “relations” between citizenship and modes of communication. The first relation requires “access to ... information ... that will enable [people] to know what their rights are in other spheres.” The second states that people “must have access to the broadest possible range of information ... on areas that involve political choices, and they must be able to use communications facilities in order to register criticism, mobilize opposition, and propose alternative courses of action.” And the third contends that people “must be able to recognize themselves and their aspirations in the range of representations offered within the central communications sectors and be able to contribute to developing those representations.”³²

It is significant that the authors recognize the conceptual distinction between the sheer fact of access, and the capacity to effectively engage in political decision-making in their second relation. However, they never clarify exactly how access to information might be transformed into the ability of the individual to “mobilize opposition,” or “propose alternative courses of action.” Nor do we know what if any effect these proposed courses of action or criticisms might have. This seems to me to be a crucial question. Simply having access to an information network, or even possessing the ability to direct communication back to the government, while significant, is ultimately not sufficient if the existing system of government is unaccountable to, or, in Jürgen Habermas’s words, “immunized” from popular will. As Habermas argues in *Legitimation Crisis* (1973), one of the central components of modern liberal government is the process whereby decisions governing the systematic orientation of the state in relation to dominant economic interests are effectively partitioned off from the electoral process.

Democracy no longer has the goal of rationalizing authority through the participation of citizens in discursive processes of will-formation. It is intended, instead, to make possible compromises between ruling elites. Thus, the substance of classical democratic theory is finally surrendered. No longer *all* politically consequential decisions, but only those decisions of the government *still defined as political*, are to be subject to the precepts of democratic will formation ... [Habermas’s emphasis].³³

There are thus two criticisms to be made of the liberal, “free flow” model; two points at which the cybernetic loop of participatory democracy is, potentially, arrested. First, information does not by and large flow directly to “the public,” rather, it is mediated by a bureaucratic class of journalists and access professionals. And second, even if members of the public do get access to information, the “feedback loop” that could transform the opinions they construct based on this information into substantive changes in government policy is, arguable, not functional. These two criticisms are interrelated. In his classic study *The Structural Transformation of the Public Sphere* (1962), Habermas traces “...the dissolution and obsolescence of the link—still pretended to by liberalism—between public discussion and legal norm.”³⁴ Instead of a situation in which debate and opinion formation among individuals and communities is translated into political action, all “merely individual opinions” must be “mediatized” (or processed through the institutions of the press) to have any legitimacy as the expression or communication of a “public opinion.” Thus, debates or conflicts that take place between the legislative and executive branches, or between the press (or access activists) and the government, “stand in” for an actual public discourse.³⁵ In many cases, as the quote above from Justice Powell suggests, the press become virtually synonymous with the public interest. But, as Habermas notes:

... the formation of public opinion in the strict sense is not effectively secured by the mere fact that anyone can freely utter his opinion and put out a newspaper. The Public is no longer composed of persons formally and materially on an equal footing.³⁶

Computer technology promised to regulate the explosion of government information and to provide more efficient and effective forms of data storage, organization, and retrieval. Yet the computer also exerted its own peculiar logic; the presence of a more accessible record-keeping technology led to the generation of more records, and a necessary expansion in the definition of what constitutes a record in the first place. There was a growing disjunction between the record-keeping capacities of the computer, and the existing protocols governing the status and disposition of data generated by government employees. The rough drafts and inter-agency memos that might have previously wound up in the wastebasket were now saved on hard-drives and mainframes. The proliferation of personal computers led to the expansion of a new terrain of federal record-keeping, at the micro-level of the individual government worker’s computerized notes, appointment records, on-line logs, etc. At the same time an increasing proportion of the communication and analysis that constitutes the bureaucratic work of the government was never generated in the form of a paper document, existing only in the form of magnetic impulses on a tape or disk.

No longer is information merely stored and retrieved by computer. Now, information is routinely collected on computer tapes, used within an agency in computer form, exchanged with and disclosed to regional offices or other agencies in computer form, manipulated and analyzed with sophisticated computer software, and archived on computer tapes.³⁷

As computer technology and record-keeping systems were more widely used within the government they led to a greater and greater level of documentation, which in turn promised (or threatened) to provide a heretofore unknown level of detail about how the government interacts and operates. During the early 1980s the Reagan administration, recognizing this threat, launched a successful counterattack against the FOIA, employing a “panoramic” definition of national security. The attack was based on several points, including the expense of the implementation of FOIA requests³⁸; Drug Enforcement Administration claims that a large number of FOIA users were actually criminals, and had a fear that their political opponents would use the FOIA to embarrass or attack them. As one official from the Office of Management and Budget noted:

There is a concurrence in the belief of the bad effect of too much disclosure.... The administration feared that, by providing information about what they were doing, they would also provide critics with an opportunity to shoot at

them.... There has been an educational process, explaining to agencies how to restrict information.³⁹

The Reagan administration instituted a FOIA “user fee” requirement for the first time in 1983—ostensibly in order to pay for FOIA expenses, and also engaged in a rampant reclassification of previously de-classified documents, effectively placing them beyond the reach of the FOIA. It also developed the theory of an “information mosaic,” “the idea that hostile elements can use sophisticated search techniques to assemble bits of seemingly harmless information into insights that threaten national security.” An often-cited example of this danger was the 1979 publication by the *Progressive* magazine of a blueprint for manufacturing an H-bomb that was compiled from information contained in various available government documents. As John Shattuck and Muriel Morisey Spence note in their study of government information policy, “Proponents of the mosaic theory ... used it to fashion a broad expansion of the classification system.”⁴⁰

With the growing use of computer networks the government is faced with the problem of an information blizzard—a lascivious and potentially threatening intermingling in which memos, affidavits, invoices, receipts, bank statements, and other documents combine and recombine themselves to produce dangerous new constellations of meaning. In this scenario the threat doesn’t lie with a single piece of damaging information that “leaks out” and exposes government malfeasance, but with the possible interconnections that might be made among dozens of different bits of information; bits that might mean little or nothing by themselves, but that, when assembled by the researcher into a particular narrative form, could prove extremely damaging.

It is precisely this narrative logic, and the associated procedures of indexing and information retrieval, that have been taken up as strategic tools within the access community of researchers and journalists who make use of the FOIA. The network systems used to store and process government records possess an unprecedented capacity to literally map the processes of the state, as embodied in the flow of data through its bureaucratic systems. Researchers at the National Security Archives (NSA, a non-profit research institute and library facility in Washington, D.C.) place multiple FOIA requests for the same document from various agencies, knowing that each agency will choose to delete different material, and then combine these sets to produce a single, more or less complete, version of the document. The NSA indexes vast date sets with key search terms, allowing researchers to unravel the complex interconnections of government agencies and operations. This technique can provide a kind of “mapping” of the covert government apparatus—allowing researchers to ascertain the larger topology of political and economic power and privilege as it is deployed throughout the information systems of the state.

The questions raised by the epistemological status of computer records were at the center of a recent federal court case regarding the disposition of data transmitted through federal e-mail systems. The case began with a suit that was filed in U.S. District Court in Washington D.C. in the waning days of the Reagan administration by a consortium of groups that included the NSA, Ralph Nader’s Public Citizen Action Group, and the American Civil Liberties Union (ACLU). The suit charged the Executive Office of the President (EOP) with violating the Federal Records Act by destroying data contained in their computerized e-mail systems.⁴¹ The plaintiffs in the case argued that messages and documents that were transmitted through the e-mail systems (PROFS, Oasis, and A-1) connecting the EOP, the White House, and the National Security Council (NSC), constituted federal records because they were used in the governing process. At that time this material was stored temporarily on back-up tapes held in mainframe computers, and the tapes, rather than being saved, were eventually recorded over and re-used. The defendants in the case, including the White House, NSC, EOP, and subsequently the National Archives, argued that the information on these tapes did not constitute a federal record because it was never printed out in the form of a paper copy.

The case is indirectly connected to the ongoing Iran-contra investigation since many of the back-up tapes in question were used as evidence in the case. As NSA researcher and co-plaintiff Eddie Becker has noted, it was the flexibility of the computer network system that allowed Lieutenant Colonel Oliver L. North to coordinate all the government agencies necessary to “run a covert war on three continents” without leaving a paper trail.⁴² The case also charged the National Archives with abrogating its responsibility in determining which government agency documents constitute federal records.⁴³

After almost four years of appeals and motions, Federal Judge Charles R. Richey reached a decision in the case in early January of this year. Richey’s ruling stated that the existing record-keeping protocols of the NSC, the EOP, and the National Archives, were “capricious and arbitrary,” and he ordered the Bush administration to immediately save all existing back-up tapes and computerized records, including hard drives and floppy disks. He further argued that the e-mail logs or directories, which contained information on who sent what message to whom and when, were themselves record material, even though this information was never printed out in paper form. Richey’s ruling was premised on two earlier pieces of legislation: the FOIA and the 1943 Federal Records Act (FRA). The FRA defines a Federal Record as:

... all books, paper, maps, photographs, machine readable materials, or other documentary materials, regardless of physical form or characteristics, made or received by an agency of the United States under Federal law or in connection with the transaction of public business and preserved or appropriate for

preservation by that agency as evidence of the organization, functions, policies, decisions, procedures, operations, or other activities of the Government or because of the informational value of the data in them.⁴⁴

It was specifically the clause stating “...regardless of physical form or characteristics” that Richey cited to support his contention that computer tapes constitute federal records and fall under the jurisdiction of the National Archives.

Richey’s decision will make it more difficult for future Oliver Norths to use e-mail systems in covert operations. However, it was only a partial victory. While it rearranged the parameters of existing information policy to account for electronic data, it left intact the entire mechanism of executive privilege. The government successfully defended its right to retain control over certain materials that were determined to be “presidential records” (i.e. *records that are kept by the president and presidential advisors* such as the President’s Chief of Staff, the Vice President, and certain agencies of the Executive office), as opposed to “federal records” that are accessible under the FOIA. While the plaintiffs effectively argued that the government didn’t have a consistent system for determining which of its records were “presidential” this clearly does nothing to prevent the ongoing coordination of covert operations within the Executive Office of the President, so long as the government is careful to limit the storage and exchange of the data involved. It is here, at the point at which the FOIA and computer technology verge on providing a systematic picture of the “totality” of government operations, that the discourse of liberalism asserts itself by constructing specific areas of government procedure and information—demarcated by the infinitely elastic categories of “national security” and “executive privilege”—that are beyond the system of democratic accountability, and beyond the reach of the FOIA.

Because of the limitations placed on FOIA requests by “national security,” researchers can never really hope to build a complete picture of government operations, despite the fact that computer technology makes this a possibility. Thus, one of the most visible products of the FOIA (and of liberal information policy) has been the spectacle of public “scandal”—usually in a highly publicized legal or judicial context—in which politicians are forced to release records or data of some kind. These scandals (e.g. the Pentagon Papers, Watergate, and the “PROFS” case) tend to focus on the personal misconduct of public officials and bureaucrats, whose behavior is viewed as a pathological violation of an otherwise healthy system of democratic government. One effect of these cases is precisely to reinforce the perception that the system of checks and balances designed to maintain the accountability of public officials to the public will is in fact working, and to thereby insulate the larger “metaphysical” system described by Schmitt from critical scrutiny. This is not meant as a criticism of the access community itself—there is

clearly a significant stake in holding the government accountable to the existing terms of the FOIA—but rather is an attempt to acknowledge the institutional and ideological boundaries that function to limit the potential of the FOIA, and computer technology, to disrupt existing forms of political power.

Internet and the Marketplace of Ideas

In the PROFS case we can observe the actual performance of computer network technology within an institutional context. In this instance the ostensibly inherent “liberatory” capacity of network technology was itself “transcended” by the boundaries of liberal information policy. One might contend that the PROFS network is simply too constricted by the strategic demands of the state and that a more accurate indication of the potential of networks would be found in an institutional environment in which a network system was able to function with more autonomy and was accessible to users outside the government. I will conclude by discussing the case of just such a network—Internet.

Internet has been the site of some of the most optimistic rhetoric regarding the potential of network systems. It is a global network system that was established by the U.S. military in the late 1960s “...to transmit packets of military data securely and efficiently around the world.”⁴⁵ Although it has been used primarily by the military and the universities engaged in military research, during the last decade a growing percentage of its user base has been composed of individuals with no direct relationship to military research (although they may well be employed by universities or corporations that engage in military research). These users, who include computer scientists, researchers, journalists, academics, and others whose jobs provide them with subsidized access to mainframe and e-mail technology, have formed themselves into Internet Bulletin Board Systems (BBS) and interest groups of varying sizes on topics ranging from Cyberpunk to health care policy to Zen. Taken together these users are said to constitute the germinal form of a new global community of the mind.

Millions of us have already built communities where our identities commingle and interact electronically, independent of local time or location. The way a few of us live now might be the way a larger population will live, decades hence.⁴⁶

The “informational sublime” sketched at the beginning of this essay is fully in place: Internet is a global salon of interconnected free-thinkers who are living in the brave new world of cyber-democracy. Network systems based on the internet model will revitalize political debate, decentralize political decision-making, and empower vast segments of the population through unhindered access to the most current information.

Life in cyberspace ... is a life that, at its best, is more equalitarian than elitist, and more decentralized than hierarchical. It serves individuals and communities, not mass audiences, and it is extraordinarily multi-faceted in the purposes to which it is put.

In fact, life in cyberspace seems to be shaping up exactly like Thomas Jefferson would have wanted: founded on the primacy of individual liberty and a commitment to pluralism, diversity, and community.⁴⁷

In the rhetoric surrounding Internet we discover a set of ideas about the public sphere and an "information democracy" that are quite similar in form to those found in liberal information policy. The "free flow" model assumes that society is composed of autonomous and equal individuals who need merely be given access to the proper technology in order to actualize their role as citizens. Located at the center of this discourse is the monadic, bourgeois individual who floats free of institutional and social constraints (class membership, professional subculture, or function within larger economic and social processes) seeking only exchange and communication with other free floating, self-identical agents. Rheingold and Lanier, to name two of the more prolific lyricists of the cyber-opera, have pointed out the power of network systems to "erase" social distinctions of all kinds, rendering out of the dross of the race, gender, and class-specific individual a new universal subject; the cyber-citizen.

Because we cannot see one another, we are unable to form prejudices about others before we read what they have to say: race, gender, age, national origin, and physical appearance are not apparent unless a person wants to make such characteristics public....⁴⁸

Virtual Reality is the ultimate lack of class or race distinctions or any other form of pretense, since all form is variable.⁴⁹

The political horizons of the cyber-citizen are defined by the core values of bourgeois liberalism—freedom of expression, access to communications networks and technologies, and the power to move at will through the world of the data stream. Thus we find Michael Synergy, one of the "most explicitly political ... of the young hackers," describing his life-style and motivations in terms that are reminiscent of an MTV-generation adolescent:

I am an information addict, a sensory junkie. I want stimulus, and I want it now! So what do I do? I read a book a day. I listen to music, compose music, watch movies. I write screenplays, read magazines, give interviews ... And when I crack into computers, I browse and read peoples' mail, papers, notes, programs, etc. I'm an inquiring mind and I want to know. This is a *real* issue. I want to learn and they want to impose "need to know" on everything.⁵⁰

If this constitutes a "political" perspective it is a singularly privileged one, coming from someone who is insulated from the rigors of daily life by the possession of highly marketable technological skills; someone who has the leisure

time to spend their days "writing screenplays, reading magazines, and giving interviews." Political oppression in this context is only understood in relation to access or denial of access to information. The "real" political struggle is waged against the dark forces that impose restrictions on the grazing habits of the cyber cow.

In the debates surrounding Internet the rhetoric of the public sphere and the rhetoric of the market merge effortlessly together. "Let the marketplace of ideas rule!" proclaims Mitch Kapor of EFF, one of the most influential computer network lobbying organizations. Kapor warns of the danger of excessive government "regulation" in the development of network systems. It seems obvious that if the development of network systems is left to the tender mercies of the market they will only be available to the affluent. However, Kapor is confident that the sheer, vitality of the market economy will naturally broaden access and that the telecommunications industry will, with some gentle persuasion on the part of the government and organizations like EFF, come to see that networks which permit the greatest diversity of content and services ... will create the largest sustainable business opportunities.⁵¹

Kapor and the "new democrats" of cyberspace are able to negotiate the contradictory terrain between their embrace of capitalism and their professed concern with democracy through a symbolic transaction in which the characteristics of "capital" and "information" are combined. Thus Kapor describes his vision of the network in terms of a "Jeffersonian" re-distribution of information/wealth: "If you give people a suitably rich information environment, whatever their discipline or profession, you're empowering them economically." And, as Robert Wright comments in an article on Kapor in *The New Republic*, "information is potentially infinite." Therefore, unlike conventional forms of capital "everyone can cultivate it, and everyone can share in the harvest."⁵² This same theme is taken up by educational theorist Lewis J. Perelman in the premiere issue of *Wired*. Perelman discusses the power of "information technologies" to bypass the limitations of conventional economic production. He claims that "information, unlike energy and materials ... is practically boundless. So in theory, the software-based knowledge sector need never run into 'limits to growth.'" Perelman, who goes on to warn that this "extreme profitability" will need to be safeguarded by increasingly stringent intellectual property legislation, is convinced that "information," in the form of software, is an infinitely elastic commodity, capable of producing boundless wealth, and solving the "dilemma" of falling rates of profit and declining standards of living in the U.S. Perelman effectively fuses "information" and "capital" into a new hybrid that combines the characteristics of each. Computer technology undermines the hierarchies and limitations of the traditional industrial economy in a libidinally-charged "flow" or "stream" of information-as-capital. Capital is no longer merely a measure of profit, rather, it now has the magical

ability to literally reproduce itself. Like information it “can be taken without being lost.” And information in its turn becomes a form of exchange-based “practical currency.”⁵³

Central to this exchange is the belief that, as information takes on the characteristics of capital, so too does capitalism, understood in terms of property relations and corporate control over economic resources and means of production, cease to play a central role in shaping social or economic conditions. In this scenario concepts such as “property” and “class” are quaint nineteenth century anachronisms that are jarringly out of date in the cyberflux of the late twentieth century. As Synergy insists, in the article cited earlier: “the debate over ownership is over...”⁵⁴ Here the Silicon Valley anarcho-liberalism of publications such as *Mondo 2000* meets Daniel Bell’s vision of a post-industrial society in which the industrial working class is entirely supplanted by cadres of highly-trained “knowledge workers.” The traditional limitations of industrial capitalism, oppressive working conditions, chronic unemployment, poverty, pollution, class conflict, etc., will disappear in the clean, post-industrial information economy. As for those who seem to be left out of this utopia (the poor, displaced industrial workers, service workers, and the global labor force), we need only provide them with the proper “information environment” to ensure their economic “empowerment.”

There remains some question, however, of how successfully post-industrial society has overcome the limitations of capitalism and the extent to which conventional forms of industrial production and manufacturing have been replaced by the clean “high-tech” information economy. Kapor believes that “[access to data lets people] strike out and have an independent economic existence.” No doubt it did in the case of individuals like Kapor—the founder and former CEO of Lotus Development Corporation who attended Yale and MIT’s Sloan School of Management—well-educated and privileged white, middle-class men who were in the right place at the right time in the early development of the computer industry. But simply having access to information is clearly not enough. There is no reason to assume that computer networks will do any more to help people “strike out and have an independent economic existence” than public libraries or long-distance party lines. Kapor’s statement assumes the existence of an ever-expanding pool of jobs that these “empowered” network users would be able to fill. But current economic trends, and the increasing use of automation, suggests that there will be fewer jobs in the future. Those jobs that do remain will be clearly divided between highly-skilled technical and managerial positions and low-paying service and assembly labor.

Alex Callinicos, in *Against Postmodernism: A Marxist Critique* (1990) points out that what appears to be a steady decline in employment in the manufacturing sectors is in fact the result of several related factors, chief among

which is the transfer of manufacturing labor to the “newly industrializing countries of the Third World” where wages are drastically lower, and working conditions aren’t subject to stultifying government regulation. He cites economist Paul Kellog, who notes that “On a world scale there are more industrial workers [now] than at any time in history.... The industrial working class in the 36 leading industrial countries ... between 1977 and 1982, increased its numbers from 173 to 183 million.”⁵⁵ The most extreme increases in employment in the U.S. have been overwhelmingly in the service sector: “22 per cent of the 17.1 million nongovernment service jobs created in the U.S. between 1972 and 1984 was accounted for by restaurants and retail trade, a sector where hourly earnings were 38% below those in manufacturing.”⁵⁶

What is more clearly happening, behind the rosy predictions of the computer avant-garde, is a growing division of labor between low-paid insecure, and often unsafe jobs in the service sector, assembly and manufacturing, and a minority of highly privileged managerial, technical, and professional positions. This is a division that is reiterated on both the local and the global level, with the expansion of “informal economies” in major American cities, fueled by immigrant labor; what Callinicos describes as “the revival of nineteenth century sweated trades in the richest cities on the earth.” This entire system is organized around the needs of global conglomerates in sectors such as telecommunications, computer manufacturing, and garment production, as well as the more traditional manufacturing sectors. This division provides substantial evidence that “class” is considerably more than an anachronism.

While an assembly worker in Indonesia may well be “empowered” by the global redistribution of information, she might feel even more empowered by the possibility of a global redistribution of wealth. Liberalism, with its obsessive focus on the individual, can’t thematize systematic forms of oppression—class or gender-based, ethnic, or otherwise—which pre-exist and to an extent predetermine the individual’s capacity to participate in a free and open exchange. The “democracy” postulated by liberalism is premised on the goal of a consensus achieved through debate and discussion among equally-positioned social actors: the universal “citizen” of bourgeois ideology. However, we simply don’t come to the communication process as equal participants—an entire set of social and economic processes intervene to position each individual and social group in different relations of privilege and oppression.⁵⁷ As Carl Schmitt points out, the “citizen” is an abstraction that does not reflect the real conditions of people’s social experience. Rather, it is extrapolated out of the specific position that certain privileged groups and classes occupy in relation to technical and communications skills, modes, and media of expression, etc.

In the domain of the political people do not face each other as abstractions, but as politically interested and politically determined persons, as citizens,

governors or governed, politically allied or opponents—in any case, therefore, in political categories. In the sphere of the political one cannot abstract out what is political, leaving only universal human equality; the same applies in the realm of economics, where people are not conceived as such, but as producers, consumers, and so forth, that is, in specifically economic categories.⁵⁸

Schmitt argues that the “equality” presumed by the bourgeois public sphere is only possible due to the maintenance of a corollary “inequality” elsewhere; by the strategic suppression of difference and the denial of access to the mechanisms of liberal government and communications to entire classes. The only way to form a liberal consensus is precisely by insuring the homogeneity of the public sphere within which debate and discussion occur. Thus the “consensus” achieved in this public sphere will “naturally” coincide with the specific interests of the privileged class who inhabit it. Schmitt’s theoretical analysis of liberalism can be illustrated by turning to the historical configuration of a classic “public sphere” among the eighteenth century European bourgeoisie. The emergent “civil society” of printing presses and polemical tracts is celebrated by figures such as Habermas as the ur-form of the public sphere; an ideal world of exchange, debate, and political will-formation. However, a number of researchers have pointed out that this utopia of coffee houses and salons was far from inclusive. Nancy Fraser, citing the work of historian Geoff Ely, points out that “exclusionary operations were essential to liberal public spheres not only in France, but in England and Germany.”

... This network of clubs and associations—philanthropic, civic, professional, and cultural—was anything but accessible to everyone. On the contrary, it was the arena, the training ground, and eventually the power base of a stratum of bourgeois men who were coming to see themselves as a “universal class” and preparing to assert their fitness to govern.⁵⁹

The unanimity of the public sphere is only possible because of its homogeneity. Thus, inequality is “shifted,” in Schmitt’s words, from the political sphere to the economic sphere.

Substantive inequalities would in no way disappear from the world and the state; they would shift into another sphere, perhaps separated from the political and concentrated in the economic, leaving this area to take on a new, disproportionately decisive importance.⁶⁰

That is, a largely symbolic or “empty” equality and democracy is performed within the existing institutions of government and public life even as a systematic inequality persists in the economic sphere. We can witness this same division in the schism between the vaunted claims of “cyber-democracy” and the actual economic basis of the high-tech global economy. The technological form of the computer network becomes an autonomous force capable of promoting profound social change. This tendency to perceive computer technology as

entirely detached from any institutional or social foundation is evident in the description of Internet in *The New Republic*:

Internet involves no dominant corporate players, no central source of information, no central source of anything. It is with evident satisfaction that Kapor calls it “one of the world’s largest functioning anarchies.”⁶¹

This “anarchy” was established by the U.S. military and is operated primarily by government-funded universities and businesses, and used by an overwhelmingly white, male cadre of professionals and intellectuals who are the beneficiaries of a highly developed system of technical education, and of an information economy whose global impact has been profoundly divisive. The utopian “community” of Internet is able to proclaim its openness and democracy precisely because of its homogeneity and its privilege. I will conclude with Rheingold’s description of his participation on the Whole Earth ‘Lectronic Link (WELL), which is considered by many to be among the most open and progressive network systems in the country.

Most of the people I meet [on the WELL] seem to be white or Asian; African Americans aren’t missing, but they aren’t conspicuous or even visible. If you can fake it, gender and age are invisible too. I’d guess the WELL consists of about 80 percent men and 20 percent women. I don’t know whether format demographics would be the kind of thing that most WELL users would want to contribute to. It’s certainly something we’d discuss, argue, debate, and joke about.⁶²

Rheingold’s comment that most of the people who have access to the WELL “seem to be” white is telling. How rewarding it is to know that the predominantly white, well-educated men who “seem to” dominate the computer subculture would be willing to “discuss, argue, debate, and joke about” the exclusionary nature of cyberspace. It would be even more rewarding to discover that they were able to be critical of their own position within it.

NOTES

1. John Scully, Chairman of Apple Computer, cited by Herbert I. Schiller, “The Information Highway: Public Way or Private Road,” *The Nation* (July 12, 1993), p. 64.
2. Roy Ascott, “Is There Love in the Telematic Embrace?” *Art Journal*, Computer an Art: Issues of Content, vol. 49, no. 3., Fall 1990, p. 243.
3. See Leo Marx, *The Machine in the Garden: Technology and the Pastoral Ideal in America* (New York: Oxford University Press, 1967).
4. James W. Carey, *Communication as Culture: Essays on Media and Society* (New York: Routledge, 1992), p. 120.
5. *Ibid.*, p. 130.
6. *Ibid.*, p. 123.
7. *Ibid.*, p. 122.

8. One of the classic descriptions of what life will be like in the “information age” is Daniel Bell’s *The Coming of Post-Industrial Society* (New York: Basic Books, 1973), in which he analyzes the growing expansion of the “knowledge class,” and the consequent decline of a manufacturing class. For an alternative view see Alex Callinicos, “The Myths of Postindustrialism,” *Against Postmodernism: A Marxist Critique* (New York: St. Martin’s Press, 1990), pp. 121–127.

9. Artists are among the most lyrical exponents of the utopian potentials of network technology: “Today, network art calls artists to a larger sense of purpose, inter-relatedness, and cooperation. It involves a shift from patriarchal, hierarchical, anthropocentric thinking to a worldview vision; a metanoia. Cross-cultural networking is a radical act of gift sharing, collaborative play, dialogue, interconnection and accessibility.” Chuck Welch, “Art That Networks” in *Interface*, vol. 4, no. 1 (April 1992), p. 16. Also see Roy Ascott (above); from *Leonardo*; “The new connectivity means we can participate in networked interaction with other minds, other sensibilities, other sensing and thinking systems across the planet. It is a global vision—thought circulating in the medium of data, in electronic space, forming virtual communities through a multiplicity of different cultural, social and personal layers.”

10. Harold C. Relyea, “The Presidency and the People’s Right to Know,” in Relyea, et al., *The Presidency and Information Policy* (New York: Center for the Study of the Presidency, 1981), p. 3.

11. *Ibid.*, p. 4.

12. *Ibid.*, p. 5.

13. *Ibid.*, pp. 11–13.

14. In 1989, according to the Information Security Oversight Office, the U.S. government classified almost seven million pieces of information, at a rate of about 13 per minute. “Computers and the FOIA,” *Editor and Publisher*, June 27, 1990, p. 8.

15. For a fascinating study of the history, and current ideology, of the “intelligence business” see Angelo Codevilla, *Informing Statecraft* (New York: The Free Press, 1992).

16. Truman’s phrase is cited in an address by Secretary of State James F. Byrnes in November of 1945. James F. Byrnes, “Policy on Information Control,” in *Federal Information Controls in Peacetime*, compiled by Robert E. Summers (New York: H.W. Wilson Company, 1949), p. 31.

17. John N. Erlenborn, “The Balance of FOIA Experience,” in *Public Administration Review*, vol. 46, no. 6 (November/December 1986), p. 608.

18. William J. Hagens, “The Moss Committee and Freedom of Information,” *Michigan Academician*, vol. 4, no. 2 (Fall 1971), pp. 205–216.

19. Lotte E. Feinberg, “Managing the Freedom of Information Act and Federal Information Policy,” *Public Administration Review*, vol. 46, no. 6 (November/December 1986), p. 615.

20. *Ibid.*, p. 617.

21. Harlan Cleveland, “Government Is Information (But Not Vice Versa),” *Public Administration Review*, vol. 46, no. 6 (November/December 1986), p. 606.

22. Phillip J. Cooper, “The Supreme Court, the First Amendment, and Freedom of Information,” *Public Administration Review*, p. 622.

23. *Ibid.*

24. Harold C. Relyea, “Access to Government Information in the Information Age,” *Public Administration Review*, p. 636.

25. Priscilla M. Regan, “Privacy, Government Information and Technology,” *Public Administration Review*, vol. 46, no. 6 (November/December 1986), p. 630.

26. Carl Schmitt, *The Crisis of Parliamentary Democracy*, trans. by Ellen Kennedy (Cambridge, MA: MIT Press, 1985), p. 35.

27. *Ibid.*, p. 49.

28. *Ibid.*, p. 38.

29. *Ibid.*, p. 39.

30. Cooper, p. 625.

31. Feinberg, p. 617.

32. Graham Murdock and Peter Golding, “Information Poverty and Political Inequality: Citizenship in the Age of Privatized Communications,” *Journal of Communication* (Summer 1989), p. 183.

33. Jürgen Habermas, *Legitimation Crisis* (Boston: Beacon Press, 1973), p. 124.

34. Jürgen Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society* (Cambridge, MA: MIT Press, 1992), p. 178.

35. *Ibid.*, p. 233.

36. *Ibid.*, p. 227. Habermas’ assumption that the public was, at some previous historical point, composed of people “formally and materially on an equal footing” has been challenged by a number of scholars. See Nancy Fraser, “Rethinking the Public Sphere: A Contribution to the Critique of Actually Existing Democracy,” in *The Phantom Public Sphere*, Bruce Robbins, ed. (Minneapolis: University of Minnesota Press, 1993), pp. 1–32.

37. Priscilla M. Regan, “Privacy, Government Information and Technology,” *Public Administration Review*, vol. 46, no. 6 (November/December 1986), p. 630.

38. The Reagan administration argued that “A free flow of information is not the same as the flow of free information, or the flow of information for free.” Lotte E. Feinberg, “Managing the Freedom of Information Act and Federal Information Policy,” *Public Administration Review*, vol. 46, no. 6 (November/December 1986), p. 619.

39. Lotte E. Feinberg, “Managing the Freedom of Information Act and Federal Information Policy: The Reagan Years,” *Government Information Quarterly*, vol. 6, no. 4 (1989), p. 350.

40. John Shattuck and Muriel Morisey Spence, “The Dangers of Information Control,” in Tom Forester, ed., *Computers in the Human Context: Information, Technology, Productivity, and People* (Cambridge: MIT Press, 1989), p. 454.

41. “The systems are ... used to transmit electronic mail and to generate calendars of appointments and meetings. They are also used for creating and editing of memoranda, and transferring files and documents in electronic format. The creation and transmittal of electronic mail, in the form of ‘notes,’ is the most commonly used function of the system.” From the opinion of Charles R. Richey, U.S. District Judge, Civil Action No. 89–142, filed January 6, 1993, p. 6.

42. See Grant Kester, “All the President’s Memory: Federal Record-Keeping and the Politics of Information Management,” *Afterimage* 20:8 (March 1993), pp. 8–10. Segments of the description of these court cases are taken from the introduction to this interview with Becker.

43. See Louis Fisher, “Congressional Access to Executive Branch Information: Lessons from Iran-Contra,” *Government Information Quarterly*, vol. 6, no. 4 (1989), pp. 383–393.

44. Cited in Opinion of Charles R. Richey, U.S. District Judge, Civil Action No. 89–142, filed January 6, 1993, p. 8.

45. Kevin Cooke and Dan Lehrer, “The Whole World Is Talking,” *The Nation* (July 12, 1993), p. 61.

46. Howard Rheingold, “A Slice of Life in My Virtual Community,” *Global*

Networks: Computers and International Communication," Linda M. Harasim, editor (Cambridge: MIT Press, 1993), pp. 15-34.

47. Mitchell Kapor, "Where Is the Digital Highway Really Heading? The Case for a Jeffersonian Information Policy," *Wired* (July/August 1993), p. 53.

48. Rheingold, p. 66.

49. Jaron Lanier cited in Peggy Orenstein, "Get a Cyberlife," *Mother Jones* (May/June 1991), p. 63.

50. Michael Synergy, "Synergy Speaks," *Mondo 2000* (Winter 1991), p. 51.

51. Kapor, p. 54.

52. Robert Wright, "The New Democrat from Cyberspace," *The New Republic* (May 24, 1993), p. 25.

53. Lewis J. Perelman, "School's Out: Public Education Obstructs the Future," *Wired*, premiere issue, 1993, p. 73.

54. Synergy, p. 51.

55. Callinicos, p. 125.

56. Callinicos, p. 124.

57. See Alyssa Katz's interview with Stacy Horn, the coordinator of a New York-based on-line bulletin board that has a large number of women participants for a discussion of the gender-specificity of on-line communities. Alyssa Katz, "Female E-Mail," *The Village Voice* (May 4, 1993), pp. 45-46.

58. Schmitt, p. 11.

59. Fraser, p. 6.

60. Schmitt, p. 12,13.

61. Wright, p. 25.

62. Rheingold, p. 74.