

## BOOK REVIEW

**The Rise of the Computer State**, *David Burnham*, Random House, New York, 1983.

The first computer was built in 1948.<sup>1</sup> From 1948 until 1978, computer applications in government, banks, insurance companies, universities, and other large institutions expanded exponentially, but were of interest primarily to those directly involved in operating large main-frame computers. During those years, staggering strides were taken with the aid of these behemoths. Whole languages, with vocabulary and grammar akin to English but machine-readable (COBOL, BASIC, LISP),<sup>2</sup> were rapidly developed. The notion of artificial intelligence and the concomitant reexamination of human intelligence forced scholars to rethink man's role in the Universe to a degree unmatched since Darwin popularized the theory of evolution over a century ago.<sup>3</sup> Automated control systems and massive recordkeeping functions became the province of machine rather than man. While all this was going on the average citizen, and particularly most of the legal profession, dismissed computers with a shrug and perhaps a passing reference to "number crunching" or "overgrown adding machines."

In the late 1970's, two simultaneous and related developments fundamentally changed society's view of computers. First, computers became as adept at word processing as at number processing.<sup>4</sup> Second, with the advent of the desk-size microcomputer, computers became widely accessible. The microcomputer was pioneered in the mass

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<sup>1</sup> An excellent brief history of computing is M. ZIENTARA, *THE HISTORY OF COMPUTING* (1981). Historians usually mark the beginning of the computer age by the completion of ENIAC, generally attributed to John Von Neumann at Princeton's Institute of Advanced Study in 1946. For a competing claim, see *id.* at 45-46. ENIAC, a vacuum-tube monster, was a prototype for the electronic computers of today, which have been made vastly more efficient through the use of transistors and micron-scale integrated circuits.

<sup>2</sup> This is actually an oversimplification. High level languages such as these require an interpreter or a compiler program for execution. See Toong & Gupta, *Personal Computers*, *SCI. AM.*, Dec. 1982, at 86, 96.

<sup>3</sup> See Bernstein, *Profiles (Marvin Minsky): A[r]tificial. I[n]telligence.*, *THE NEW YORKER*, Dec. 14, 1981, at 50-126. A provocative collection of essays and stories, with commentary, may be found in *THE MIND'S I: FANTASIES AND REFLECTIONS ON SELF AND SOUL* (D. Hofstadter & D. Dennett eds. 1981).

<sup>4</sup> Quite naturally, the initial computer applications focused on mathematics, engineering, and the sciences. However, with the development of dedicated micro-processors for word processing (VYDEC, Lanier, and Wang, to mention only a few) and applications programs for general purpose computers, words became as respectable for computer input-output as numbers had been. This development was exemplified in a television commercial for Xerox which featured an engineer giving the computer a "10" and someone else giving it an "A + ."

market by Tandy-Radio Shack,<sup>5</sup> which was thereafter joined by dozens of large and small firms, including finally IBM, the industry's main-frame colossus, in 1982.<sup>6</sup> During the heady years between 1979 and 1983, public awareness of the computer became universal, raising the nation's hopes for a new Utopian era, the High Tech Information Age.<sup>7</sup> Whether these developments are measured by sales of micro-computers, educational efforts toward computer literacy, books and magazines devoted to computers, or the number of computer-related news stories, the result is the same: The genie is in the bottle and the cork is starting to pop. When it does, something is going to happen, and it is going to be big—maybe good, maybe bad, but definitely BIG.

The final ingredient of this Orwellian stew<sup>8</sup> is now just around the corner: Universal Computer Network Communications. Although up to the present the computer era has been marked by fierce competition and separate development,<sup>9</sup> it is clear to all observers that a major reason for having computerized information systems is to permit data to be easily and inexpensively shared over a universal network utilizing telephone, radio, and satellite communications systems. That is, of course, why AT&T struck a deal with the Justice Department. And that, in a nutshell, is why David Burnham wrote *The Rise of the Computer State*.

Burnham's thesis is straightforward: The collection and control of information is a significant source of power, as well as an incentive toward the abuse of power.<sup>10</sup> Since computers greatly facilitate the

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<sup>5</sup> The TRS-80 Model I was put on the consumer market in 1979 by a discount radio retail chain. It featured a low price tag and a lot of hope by its manufacturer. The response was so enormous that today Tandy still maintains a respectable share (about 12%) in a market that has made fortunes for several old-fashioned, rags-to-riches millionaires, the best known of whom is the head of Apple Computers, Steve Wozniak.

<sup>6</sup> IBM has already commanded a significant market share, and will probably make 40% or more of all sales in the near future. Even in the face of insanely optimistic market research, IBM still finds itself with a substantial backlog of unfilled orders, with waiting times of up to 6 months for its personal computer. In addition, we should mention here the major role of video games (based on dedicated micro-processors, *i.e.* computers), which are greatly responsible for awakening the nation's youth to the enormous potential of the computer.

<sup>7</sup> See generally *Sci. Am.*, Sept. 1982 (excellent symposium issue devoted to the mechanization of work).

<sup>8</sup> In his Foreword to Burnham's book, Walter Cronkite refers to George Orwell's classic novel, *1984*, which was published in 1948. He credits Orwell with predicting a dictatorship based on universal surveillance through two-way television sets, and then faults him for overlooking the computer's role.

<sup>9</sup> For a fascinating account of some of this competition, see Tracy Kidder's Pulitzer Prize winner, *THE SOUL OF A NEW MACHINE* (1981).

<sup>10</sup> At the time of Christ's birth, his parents were required to go to Bethlehem because the government was conducting a census. When Herod learned of Christ's birth, and feared for his

collection and control of information, the threat they present to a society like ours, which is premised upon individual choice and freedom from untoward governmental intrusion and oversight, is substantial. In addition, he implies, we are as a people insufficiently sensitive to the danger posed by these quiet, efficient, smooth-running machines.

Although Burnham's book is not tightly organized, his thesis is systematically developed. The chapter titles outline the line of argument: "The Beginning"; "Surveillance"; "Data Bases"; "Power." After briefly tracing the history of computers from the first conceptualization of programmable machines, generally credited to Charles Babbage in the early nineteenth century,<sup>11</sup> Burnham states his claim: Computers are dangerous instrumentalities which, like firearms, require extraordinary attention and control. As an example, he sets forth the central role of census information tabulated on punch cards in locating Japanese-Americans for internment during World War II.<sup>12</sup> Although this example is subject to the criticism that the electronic computer was not even developed until after the end of the war, Burnham correctly points out that the sorting and selection of Japanese-American names and addresses was accomplished by a mechanical process closely analogous to the computerized database manipulation of today. Even more important, this recounting contains the germ of the entire computer database problem. Information collected for one (benign) purpose, and supposedly restricted in its use to that single purpose,<sup>13</sup> can be instantaneously converted to some completely different purpose by the computer—a purpose to which the provider of the information may never have acceded.

More recent evidence of this kind of conversion (or perhaps perversion) is the announcement by the Internal Revenue Service of its plan to collect information from commercial databases about the income and lifestyle of individuals (information provided, for example, to banks by persons who are seeking to borrow money and are presumably motivated to overstate their financial assets), and to com-

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own reign over Judea, he summoned the astrologers and said: "Go and get detailed information about the child. When you have found him, report it to me so that I may go and offer him homage too." *Matthew* 2:8 (THE NEW AMERICAN BIBLE, 1971).

<sup>11</sup> See M. ZIENTARA, *supra* note 1, at 9-13. "In thousands of detailed drawings made 150 years ago, Babbage projected the fundamentals on which today's computers operate ...." *Id.* at 9.

<sup>12</sup> Some 112,000 individuals were interred under Exec. Order No. 9066, 3 C.F.R. 1092 (1938-1943 Compilation), *repealed by* 62 Stat. 862, 868 (1948), issued by President Roosevelt.

<sup>13</sup> 13 U.S.C. § 8 (1976) says of the census: "In no case shall information furnished under this section be used to the detriment of any ... person to whom such information relates...."

pare that information with tax returns in order to determine appropriate cases for audit and investigation.<sup>14</sup>

In addition to demonstrating the potential for employing accurate information in an inappropriate way, Burnham takes the large centralized databases (both private and public) to task for accumulating significant amounts of inaccurate and damaging information about individuals and permitting such information to be disseminated. He includes TRW and other large commercial information brokers from the private sector (which are increasingly relied upon by institutional lenders and employers), and the FBI's criminal history system, NCIC, from the public sector. Here, the author illustrates the many ways that these records go awry: mere error, malicious reporting of misinformation by enemies of the subject individual, and the need to provide "juicy" information, particularly in the credit-rating arena, to encourage greater use of the service in future cases. Perhaps the most shocking aspect of this problem is the steadfast refusal of the courts and legislatures to acknowledge the severity of the problem and the liability of the database operator for such errors. Sadly, the relatively few judicial decisions in this area have favored the record-keeper, affording it a qualified privilege for reporting incorrect information, even if no effort is made at corroboration.<sup>15</sup>

In a chapter devoted entirely to the National Security Agency, Burnham combines two themes, inappropriate use of information and inaccurate information, to launch a convincing and vitriolic attack on our government's least known cloak and dagger operation. Although much of what he reports goes beyond the scope of computerized recordkeeping and manipulation, the computer aspect alone makes the chapter interesting and more than a bit frightening.

The method of *The Rise of the Computer State* is that of investigative journalism. The author systematically reports facts which support his minor premise that computers hold enormous amounts of information and misinformation concerning just about everyone in the United States. His subjects encompass both the government and the private sector, including public benefits programs, national security agencies, banks, and credit reporting services. In each case, he reports his attempts to ascertain the amount of information collected: numbers of records, numbers of people in the system, and numbers of workers and budgets. He also provides anecdotal<sup>16</sup> accounts of the inaccuracy of information about individuals in computer records, of

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<sup>14</sup> Scott Report, Vol. 2, #12, Sept. 1983, at 17-18.

<sup>15</sup> E.g., *Krumholtz v. TRW, Inc.*, 142 N.J. Super. 80, 360 A.2d 413 (App. Div. 1976); see *infra* text accompanying notes 18-19.

<sup>16</sup> Anecdotal is used in the scientific sense, meaning evidence observed in the course of study, rather than in the more disparaging sense of undocumented rumor.

the sloppy methodology employed in gathering information, and of the suspicious and sometimes nefarious motives behind the gathering of information, particularly when the government is involved. He is particularly concerned about the proliferation of what he terms "transactional information," that is, inferences about travel, acquaintances, and activities drawn from computerized records of airlines, travel agents, telephone companies, and banks. Having himself been the subject of personal embarrassment through the use of such information, he understandably stresses his points in this area quite strongly.

Burnham has discharged his journalistic function ably and engagingly, without overstepping the bounds of fair comment. He has gathered a significant body of information demonstrating that computers have already amassed an enormous wealth of information concerning Americans, both as individuals and as components of groups with profiles of interest to market researchers, volume sellers, and politicians. Moreover, Burnham observes, the data gathering continues at an ever-increasing pace, with few guarantees that the information is either accurate or accurately evaluated.

Does this book have value for the judge, the attorney, or the reader of "law books"? Without question it does. What Burnham terms the rise of the computer state has been characterized by little of the familiar statement and testing of rules and norms. In fact, there have been few computer-related invasion of privacy lawsuits beyond the FOIA<sup>17</sup> actions. Shamefully, courts have curtly dismissed claims brought by individuals seriously damaged by the credit rating agencies. Typical of this inadequate response is the statement in *Krumholtz v. TRW, Inc.*<sup>18</sup> that "[a] credit reporting agency . . . has a qualified . . . privilege to publish false information as to the credit of any person at the request of one of its subscribers . . ." <sup>19</sup> The court in that case held that, absent actual malice, the privilege was effective, provided there was a subjective belief that the information was accurate even if there was reason to know the information was wrong. Further, the court held that there is no liability under the Fair Credit Reporting Act<sup>20</sup> without specific proof of actual damages.<sup>21</sup>

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<sup>17</sup> The Freedom of Information Act, 5 U.S.C. § 552 (1976) was enacted to facilitate access to government records by private individuals.

<sup>18</sup> *Krumholtz v. TRW, Inc.*, 142 N.J. Super. 80, 360 A.2d 413 (App. Div. 1976).

<sup>19</sup> *Id.* at 84, 360 A.2d at 415.

<sup>20</sup> *Id.* at 84-85. Specifically, 15 U.S.C. § 1681e.(b) (1976) states that "[w]hen a consumer reporting agency prepares a consumer report it shall follow reasonable procedures to assure maximum possible accuracy of the information concerning the individual about whom the report relates." *Id.*

<sup>21</sup> *Krumholtz v. TRW, Inc.*, 142 N.J. Super. 80, 85-86, 360 A.2d 413, 416 (App. Div. 1976); see also *Novack v. Cities Service Oil Co.*, 149 N.J. Super. 542, 374 A.2d 89 (Law Div. 1977)

The prescience reflected by the court's decision in *Neal v. United States* was in marked contrast to the *Krumholtz* approach. In that case Judge Biunno observed:

[t]he computer is a marvelous device that can perform countless tasks at high speed and low cost, but . . . also makes errors at high speed. Those who use computers for record and accounting purposes, including the government, are accordingly obliged to operate them with suitable controls to safeguard the reliability and accuracy of the information.<sup>22</sup>

Unfortunately, few courts have recognized the hazards inherent in computer processing as well as the *Neal* court.

*The Rise of the Computer State* presents a classic empirical case of the potential for abuse so profound that it must be met by preventive action in the courts and legislatures before conditions get out of control, if, indeed, they have not already done so. The most effective response would be a comprehensive legislative scheme that would address the problem in several ways. First, databases should be required to notify all individuals about whom they have collected information that a record of such information exists. Second, a free copy of that record should be made available to the individual upon request. Third, any entity obtaining information from an individual should be required to obtain a specific release or waiver before that information can be disclosed to another. Finally, administrative remedies, including liquidated penalties, should be available to any individual who suffers loss or denial of employment, loans, credit rating, or any other injury because of incorrect database information. Judge Biunno's succinct call for a strict liability standard is sensible and just. Nothing less will suffice.

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(defamation complaint for alleged wrongful revocation of credit card failed to state cause of action).

<sup>22</sup> *Neal v. United States*, 402 F. Supp. 679, 680 (D.N.J. 1975).

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