nications and electronic funds transfer systems. Finally, Part IV, Computer Abuse and the Courts, considers various problems in civil and criminal law which now plague the courts and legislatures. Advancements in computer technology enable individuals to commit injuries for which the law now provides no remedy.

The following introduction by Robert Bigelow highlights several issues which have developed during the first quarter-century of the computer age, and which are discussed more fully in the remaining pages.

## INTRODUCTION\*

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Is there a duty to use and liability for use of the computer? Although no case has explicitly held so, writers have hypothesized such a duty in high risk situations such as the space program or commercial aviation. They have referred to the T. J. Hooper case<sup>1</sup> in which a tug without a radio failed to hear of an approaching storm and lost its barges during the storm. Learned Hand, writing for the Court, held that the tug owner had an affirmative duty to provide a radio even though radios were not customary on tugs at that time. More recently, the court in American Machinery & Motor, Inc. v. United Parcel Service,<sup>2</sup> held that the payee had a positive duty to use modern technology to verify the validity of a patently stale and altered check before accepting it in payment of a C.O.D. shipment.

A duty to use the computer may also be imposed under corporate law. For example, if all a company's competitors use computers and are current in their accounting, but the company in question does not

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<sup>1. 60</sup> F.2d 737 (2d Cir. 1932).

<sup>2. 87</sup> Misc. 2d 42, 383 N.Y.S.2d 1010 (Civ. Ct. N.Y. 1976).

use computers and its books are several years behind, the directors could be liable for failure to use this modern tool. On the other hand, liability may result from blind reliance on a computer. In Palmer v. Columbia Gas Co.,<sup>3</sup> the defendant maintained its records on a computer. When those records indicated that an individual had not paid the gas bill within a specified period, the computer issued an order to turn off the gas. The court held that failure to provide a human review of the computer notice before the gas service was terminated violated the due process clause.<sup>4</sup> The use of a computer may also, upon occasion, be mandated by government authority. Thus, the Federal Power Commission requires that certain reports be submitted in machine readable form<sup>5</sup> and the Federal Communications Commission has taken a similar position for large companies.<sup>6</sup>

There is currently a debate regarding the effectiveness of clauses limiting liability in form contracts when a manufacturer-supplied computer system does not function properly. In Farris Engineering Corp. v. Service Bureau Corp.<sup>7</sup> the defendant persuaded the court that both its choice of law clause and the limitation of liability clause were effective.<sup>8</sup>

The computer is a marvelous device that can perform countless tasks at high speed and low cost, but it must be used with care. This is because it can also make 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.

Id. at 680.

<sup>3. 342</sup> F. Supp. 241, affd, 479 F.2d 153 (6th Cir. 1973).

<sup>4.</sup> Id. at 244.

<sup>5.</sup> A similar holding is implied in Neal v. United States, 402 F. Supp. 678 (D.N.J. 1975). Here the IRS in New Jersey applied 1973 refunds to 1971 tax liabilities and advised the taxpayers of this by computer-generated notice. However, in many cases there had been no 1971 liability, and on inquiry to the IRS, the taxpayers received a further computer generated notice saying that the refund had been applied. The plaintiff finally sued the IRS and asked for the exact facts. The court held for the plaintiff, noting:

<sup>6. 47</sup> C.F.R. § 43.31 (1976).

<sup>7. 406</sup> F.2d 519 (3d Cir. 1969).

<sup>8.</sup> See Clements Auto Co. v. Service Bureau Corp., 298 F. Supp. 115 (D. Minn. 1969), modified 444 F.2d 169 (8th Cir. 1971) (defendant misrepresentation rendered limitation of liability inapplicable); IBM v. Catamore Enterprises, Inc., 548 F.2d 1065 (1st Cir. 1976), cert. denied, 97 S. Ct. 2687 (1977).

A major conceptual problem in computer law concerns whether computer software is tangible or intangible. Can a program be a patentable machine or is it an intangible expression that can be copyrighted? The nature of software is important in determining whether the sale of a package program is a sale of goods or merely a permanent license to use. If programs are tangible, the Uniform Commercial Code's warranties apply. Support for tangibility can be found in F. & M. Shaefer Corp. v. Electronic Data Systems, in which Judge Motley granted the software developer's replevin motion, despite a claim that the taped programs and associated documentation were intangible. 10

In the area of copyright and trade secrets there has been a continuing disagreement between publishers and educators on the one hand, and librarians on the other, regarding the fair use of copyrighted material when the user wishes to make photocopies. This disagreement was a major cause of delay in the enactment of the revised copyright law. An analogous question arises when there are machine readable data bases, and educational organizations claim a right to use portions of the data, either at a lower price or without charge.

In the data communications area, there has been a continuing battle between the large common carriers—i.e., A T & T, G T & E, and Western Union—and a number of entrepreneurs to determine whether monopoly services are appropriate. In two areas—Specialized Common Carriers (companies designed specifically to transmit data communications) and the interconnection of customer zoned terminal equipment to the telephone network—the Federal Communications Commission has ruled in favor of expanded competition.<sup>11</sup> The major telephone companies, having failed at the administrative and judicial levels, are now working at the congressional level to extend their monopoly into this area.

Although most of the decisions in the data communications area concern how much of the monopoly one can have, the Computer Inquiries, Dockets 16979 and 20828, attempt to determine where the line should be drawn between the regulation of data communications and the non-regulation of computer production and use.<sup>12</sup> In the first inquiry,

<sup>9. 430</sup> F. Supp. 988, (S.D.N.Y. 1977).

<sup>10.</sup> Id. at 992-93.

<sup>11.</sup> See Cutler, The Relationship Between Government Regulation and Competition, 1977 WASH. U.L.Q. 493.

<sup>12.</sup> See Marks & Bell, Computer Communications: Government Regulation 1977 WASH. U.L.Q. 479.

after a number of years, the Commission established what it thought would be satisfactory procedures and promulgated regulations. In 1976, the Commission determined that these rules were insufficient and commenced a new inquiry.

Perhaps the greatest conflict in the computer, and especially in the computer-communications industry, concerns the division between state and federal regulation.<sup>13</sup> The dispute over federal or state control of the computer industry extends to electronic funds transfer systems (EFT). Not only has there been a tremendous amount of litigation in this area, but three agencies, the Federal Reserve Board, the Comptroller of the Currency, and the Federal Home Loan Bank Board, have each issued regulations authorizing the installation of Customer-Bank Communications Terminals.<sup>14</sup> Frequently these rules conflict with state statutes, regulations, and policies. A national commission is considering EFT problems.<sup>15</sup>

The increasing use of computers in sensitive areas of activity in the public and private sectors has led to increasing abuses, because the security systems which would make technology impervious to misuse have not kept up with technological advances in computers. Unfortunately, criminality, as defined by legislatures, is not sufficiently flexible to cope with such clear abuses as theft of computer time, malicious damage to remote terminals, or negligent disclosure of personal information from data banks. State legislatures and Congress are considering new legislation to define as criminal these and other computer abuses.<sup>16</sup>

<sup>13.</sup> See Cutler, supra note 11, at 493.

<sup>14.</sup> See Peterson, Electronic Funds Transfer and the Small Bank, 1977 WASH. U.L.O. 513; Electronic Funds Transfer and National Banks, 1977 WASH. U.L.O. 519.

<sup>15.</sup> Winkler, The National Commission on Electronic Fund Transfers; Problems and Prospects, 1977 WASH. U.L.Q. 507.

<sup>16.</sup> Nycum, Legal Problems of Computer Abuse, 1977 WASH. U.L.Q. 527.

