

# Reducing the People Problems of Law Office Computerization

By Daniel L. Kegan, Ph.D.

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**LAW OFFICE ECONOMICS  
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**Paul S. Hoffman**  
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# Reducing the People Problems of Law Office Computerization

*Daniel L. Kegan, Ph.D. \**

## **Computerization Creates Predictable Problems**

Business has encountered the need for modernization and improved productivity since the beginnings of the twentieth century. Frederick W. Taylor's Scientific Management could increase productivity, but it also created enough problems to spawn a congressional investigation. The introduction a few decades ago of computerized data processing into business corporations transformed their clerical functions. It also created consequential problems for the organizations.

Today, even "the most enthusiastic proponents of office technology need to ask if we must relieve the truly awful history of data processing."<sup>1</sup> A chapter of that "truly awful history" is composed of the failed implementations of promising new systems. These failures were rarely technical.

The basic characteristic of failure was not inappropriate technology—the hardware and software—but rather the lack of full utilization and sometimes rejection of those systems by workforce and management. Analysis of successes and failures revealed that the new systems required change in work

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\* Daniel L. Kegan, Ph.D., J.D., worked as a management consultant before studying law. He now works with Kegan, Kegan & Berkman, Chicago, focusing on intellectual property and computer law.

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<sup>1</sup> Keen, Office: Technology and People 3 (1982) (Center for Information Systems Research, Sloan School of Management, Mass Inst Tech [hereinafter cited as CISR/MIT]).

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behavior, managerial control and organization structure which in the unsuccessful cases were unanticipated or ill-managed.<sup>2</sup>

In a 1981 survey of new computer applications, a system was considered successful if it "achieved business results—either in terms of cost benefit or an intangible like improved decision making—and if all technical or developmental problems were resolved."<sup>3</sup> Of the 18 systems studied, only 3 were considered unqualified successes. "The remaining 15 failed in meeting the business purpose for which they were developed."<sup>4</sup>

The survey found technological successes but business failures. The systems have done everything they were programmed to do, but they are not meeting the needs of the organization and, in the worst cases, they are creating business problems. Morale drops, turnover rises, productivity decreases, and in union environments, grievances, protests, and slow-downs can, and have, and will occur.<sup>5</sup>

Four reasons explained why problems developed in these computer systems.<sup>6</sup> First, the wrong people were designing the systems and changing the organizations. Systems analysts were designing systems that they would like to use; they were assuming that system users would be like them. This is a false assumption. Systems analysts differed significantly from system users. For example, the designers had less need for social interaction than most managers, and unusually high need for challenge.<sup>7</sup> Nor, generally, do systems professionals have any training or skill in work design or organization design. "This lack of training often results in jobs that provide no direct feedback, no sense of client responsibility and that are assembly-line like."<sup>8</sup>

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<sup>2</sup> Eisen & Schnidman, *Managing the Computer Transition 2* (1983) (NTL Institute, P.O. Box 9155, Rosslyn Station, Arlington, Va 22209) (reprinted in *Behavioral Science and the Manager's Role*). (2d ed.)

<sup>3</sup> Schnidman & Colantuono, *Introducing Automated Technologies—What's Gone Wrong, What OD Can Do About It 2* (1983) (NTL Institute). The focus of the survey was on large systems using the latest technology; the results may be instructive even for the small law firm.

<sup>4</sup> *Id.* at 2.

<sup>5</sup> *Id.* at 5.

<sup>6</sup> *Id.* at 5-9.

<sup>7</sup> *Id.* at 5.

<sup>8</sup> *Id.* at 6.

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Second, the computer projects' focus was on the technical system, not "on the steps necessary to change the organization to a new way of working."<sup>9</sup> Moreover, the implementing department often had little input in defining the desired work process and end-users had little say in hardware and implementation.<sup>10</sup> There was in many organizations, a tendency to treat the "system as separate from the organization."<sup>11</sup>

Third, there was a mismatch between the mechanistic paradigm of system designers, and the newer organic paradigm of many managers and workers.<sup>12</sup> Under this newer paradigm, bureaucracy is a less appropriate form of organization.<sup>13</sup> Most systems are machine-driven and most systems' professionals were trained under mechanistic paradigms. The systems thus tend to "undermine the management patterns and culture" of the organizations.<sup>14</sup>

Fourth, the organizational environment was often not considered when the systems were designed. Whether a system should be centralized or decentralized is more an issue of organizational design than a pure computer question. A centralized system may operate well for a firm in a stable and simple environment, such as probate or bankruptcy. The same centralizing system may hamper and impair a firm in a more complex and dynamic environment, such as international business, finance, or high technology.

Even if a law firm is considering computerization of only simple clerical functions such as word processing, the lessons of the above study should be heeded. Secretaries should not be undervalued. Good secretarial work is essential for good attorney work. Good secretaries seem to be increasingly difficult to find, as changing demographics shrink the traditional labor pool.

Computer-mediated work affects people.<sup>15</sup> In unionized organizations, computer-mediated work is likely to increase the territo-

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<sup>9</sup> *Id.* at 7.

<sup>10</sup> *Id.*

<sup>11</sup> *Id.*

<sup>12</sup> Hawken, *The Next Economy* (1983); Naisbitt, *Megatrends: Ten Directions Transforming Our Lives* (1982).

<sup>13</sup> Bennis, *The Coming Death of Bureaucracy*, *Think* 30-35 (Nov.-Dec. 1966) (reprinted in *Concepts and Controversy in Organizational Behavior* 423 (2d ed, Nord ed. 1976) [hereinafter cited as *Concepts and Controversy*]).

<sup>14</sup> Schnidman & Colantuono, *supra* note 3, at 5.

<sup>15</sup> Zuboff, *Psychological and Organizational Implications of Computer-Mediated Work* (1981) (CISR/MIT).

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ry in which formal legally binding agreements become necessary, shrinking the area where informal understanding once sufficed.<sup>16</sup>

Where workers are not organized, their responses to the built-in pressure of computer surveillance and increased time pressures have fewer constructive outlets. If they cannot register their protest as a grievance, they will tend instead to withdraw their concern from the quality of their work or seek covert ways in which to sabotage work activities. Their discontent and feelings of powerlessness could hasten the unionization of the white collar labor force.<sup>17</sup>

A secretary does more than type. Traditional stereotypes place artificial bounds on secretarial work. These stereotypes seem to be oversimplifications; secretaries can accomplish "non-clerical" results when provided with appropriate tools to facilitate their work. Indeed, advanced technology can have a "leveling" effect in that professional and managerial staff may find it cost effective (in terms of elapsed time and quality of the result) to do some "clerical" tasks if they are given efficient tools to support those activities.<sup>18</sup>

The "secretary may have to use the manager's system to accomplish some result in the manager's absence, and the manager must be able to access clerical functions in an off-hour emergency."<sup>19</sup> In law offices, it is even more likely an attorney may need to use a computerized system when its usual secretarial operator is absent. This can be especially true for small firms during the peak workloads of litigation.

Law firm computerization affects attorneys. Words are the stock in trade of attorneys. Attorneys create and manage words. How a word-processing system processes words directly affects the attorney. The better systems enable an attorney to hone his prose with little effort. Some attorneys are now finding that they are more productive drafting directly on computers, rather than

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<sup>16</sup> Id. at 22.

<sup>17</sup> Id. at 23.

<sup>18</sup> Bullen & Bennett, Office Workstation Use by Administrative Managers and Professionals I (1983) (CISR/MIT).

<sup>19</sup> Id. at 32.

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dictating to a secretary and then revising a paper copy which must be resubmitted to a typist.<sup>20</sup>

The focus of office technology is on secretarial and clerical efficiency.<sup>21</sup> "The models of jobs, processes and structure are on the whole restricted and simplistic."<sup>22</sup> "The office technology bandwagon is rolling fast, but it is still early enough for good research to push it off the track of technobabble and to stimulate an understanding of the key fact that the technology cannot be separated from the people."<sup>23</sup>

### Law Firms Can Effectively Manage Computerization

"Office technology is less a technical innovation than a social one. The risks involved are not technical but social."<sup>24</sup>

Computerization alters the information systems of a law office. Computerization alters how information is generated, how it is stored, how it is retrieved, how it is displayed. Computerization alters how information is valued. Computerization alters how information is defined.

"Information systems increasingly alter relationships, patterns of communication and perceived influence, authority and control."<sup>25</sup> Information is a "political resource whose redistribution through new information systems affects the interests of particular groups."<sup>26</sup> "Because loss of power results in resistance and resistance can change the design and outcome of a system, designers must diagnose the power dynamics. To do so they must look at users, designers and affected others."<sup>27</sup>

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<sup>20</sup> Computers a Boon to Lawyers, N.Y. Times 29 (Oct. 20, 1983); Ranii, For This Firm, the Future Is Now, 6 Nat'l LJ 1, 26, 27 (Oct. 24, 1983).

<sup>21</sup> Keen, *supra* note 1, at 10.

<sup>22</sup> Id. "With the exception of one case, all models appear to be modified (if not exact) versions of IBM's representations of business communication activities." Id.

<sup>23</sup> Id. at 3.

<sup>24</sup> Id. at 4.

<sup>25</sup> Keen, *Information Systems and Organizational Change* (1980) (CISR/MIT).

<sup>26</sup> Colantuono, *Effective Design and Implementation of Automated Systems: A Review of the Systems Literature 50* (1982) (NTL Institute). See also Kanter, *Men and Women of the Corporation 164-205* (1977); McClelland, *Power: The Inner Experience* (19—); Nord, *Developments in the Study of Power (Concepts and Controversy 437)*; Rogers, *On Personal Power* (1977); Siu, *The Craft of Power* (1979); Siu, *Transcending the Power Game: The Way to Executive Serenity* (1980).

<sup>27</sup> Colantuono, *supra* note 26, at 50.

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Reed distinguishes two types of organizational change.<sup>28</sup> One type of change is caused by external forces beyond the person's control. The other is a change one decides to make. People generally resist changes imposed upon them, but not changes they themselves initiate or adopt. A change which a manager initiates and imposes on subordinates may not cause manager resistance. However, for the subordinate associates and secretaries, this manager-initiated change is an externally imposed one, and is liable to generate their resistance.<sup>29</sup>

Resistance to change thus is an expected reaction by normal people to organizational change.

### *Involving Those Affected by Change Reduces Resistance*

This is the consistent finding of the large literature on implementation of computer systems.<sup>30</sup> Although there are several theories of resistance to change, involving the people affected by change in the decision-making process is consistently the most desirable tactic, because it is consistent with various theories, albeit for different reasons.<sup>31</sup> Moreover, as the degree of change to the organization increases, so does the need for user participation in the decision-making process.<sup>32</sup>

Involving associates and secretaries in some aspects of firm management is not that unusual for law firms. Attorneys already depend on their staff. While managing partners may make policy decisions, they are dependent upon everyone in the firm for accurate information upon which to base and evaluate policy. Moreover, many operational and detailed decisions are delegated by necessity.

Although user involvement is a universal recommendation for most computerizations, it is not the recommendation for all situations. User participation in the design process is "clearly counter-indicated in cases where powerful authorities have decided that a specific change, unpopular with users, *will take place.*"<sup>33</sup>

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<sup>28</sup> Reed, *Adjusting to and Implementing Changes* (People in the Law Office 245, 246 (1978) (8th Nat'l Conf on L Off Econ & Mgmt, ABA).

<sup>29</sup> *Id.* at 247.

<sup>30</sup> Eisen & Schnidman, *supra* note 2, at 3.

<sup>31</sup> Markus, Power, Politics, and MIS Implementation 34 (1980) (CISR/MIT).

<sup>32</sup> Colantuono, *supra* note 26, at 49.

<sup>33</sup> Markus, *supra* note 31, at 34 (*italics in original*).

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This is not to recommend that forcing an unpopular decision upon a firm will improve effectiveness, but that if such a decision has been made, the false illusion of participation will only further hinder implementation and overall productivity.

All people and all cultures do not equally desire involvement.<sup>34</sup> However, in democratic America, most people prefer to be involved in changes that affect them. This is especially true of attorneys.

Attorneys desire inclusion, status, and self-actualization. This is the conclusion of a study of the motivation of attorneys.<sup>35</sup> Both the needs for inclusion and for status are addressed by involving attorneys in decisions which affect them. The authors of the study conclude that the "direction and leadership of the law firm will be more effective if management policies and practices provide means to meet the dominant needs of the individual members of the firm."<sup>36</sup> They recommend integrating the goals of the individual firm members with the firm's goals.<sup>37</sup> Known characteristics of attorneys should be used in managing law office computerization. However, although attorneys share some characteristics, they also are likely to evidence individual differences. To harness individual motivation for firm goals, some attention must be paid to the differences among firm members.

The cognitive styles of managing partners, of associates, and of secretaries are likely to differ. Cognitive style refers to "the distinctive habits and strategies individuals rely on in complex analysis and decision making."<sup>38</sup>

Cognitive-style theory predicts that choice of occupation and effectiveness of performance in a job are correlated with the match between its implicit information-processing demands and the individual's style. Similarly, problems in coordination

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<sup>34</sup> Nord, *Culture and Organizational Behavior (Concepts and Controversy 197)*; Whyte, *Worker Participation: International and Historical Perspectives*, 19 *J Applied Behav Sci* 395 (1983).

<sup>35</sup> Stubbs & Parker, *The Motivation of Lawyers (People in the Law Office 208, 213)*. See also Herzberg, *One More Time: How Do You Motivate Employees?*, 46 *Harv Bus Rev* 53-62 (1968); Levinson, *The Great Jackass Fallacy* (1973).

<sup>36</sup> Stubbs & Parker, *supra* note 35, at 210.

<sup>37</sup> Accord, Culbert & McDonough, *The Invisible War: Pursuing Self-Interest at Work* (1980); Schein, *Career Dynamics: Matching Individual and Organizational Needs* (1978).

<sup>38</sup> Keen, *The Cognitive Style of Lawyers and Scientists (in Law and Science in Collaboration 213, 213 (1983))*; see *infra* note 42.



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and communication . . . partly reflect . . . differences in cognitive style. *What is relevant, obvious, or fact to one may not be to the other. One person's logical analysis may be unacceptable or incomprehensible to the other.*<sup>39</sup>

This difference in cognitive style was dramatically illustrated when a management professor taught a two-day course on behavioral decision theory at the National Judicial College.<sup>40</sup> Behavioral decision theory is a widely accepted method for handling problems involving uncertainty; it is taught as a preferred method in the nation's leading management schools.

The course was not the orderly process of brilliant exposition and enthusiastic acceptance the teachers expected. The judges by and large entirely rejected every aspect of the material: concepts, techniques, and recommendations. The assumptions and methods of analysis that business decision makers take for granted struck them as absurd. . . . For several classroom examples used [e.g., a contested will], their analysis reached entirely different conclusions from the teachers; both sides insisted theirs was correct.<sup>41</sup>

There are regularities in the ways people abstract information from the world, and in the ways people make judgments based on that abstracted information. Cognitive style theory helps explain and describe those regularities.<sup>42</sup> But without an awareness of the extent to which people perceive and judge the world differently, communication and cooperation is liable to be impaired. People of one type become "frustrated by the inability of the other to understand the obvious. They end up talking down, irritated and treating the other like a child."<sup>43</sup> "Intelligent, highly qualified specialists implicitly view problems of communication as due to

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<sup>39</sup> Keen, *supra* note 38, at 215 (italics added).

<sup>40</sup> *Id.* at 216.

<sup>41</sup> *Id.*

<sup>42</sup> Keirse & Bates, *Please Understand Me: An Essay on Temperament Styles* (1978); Myers & Myers, *Gifts Differing* (1980). There are other cognitive style theories, but the Myers Briggs Type Indicator is the most appropriate for understanding and managing computerization. Keen & Bronsema, *Cognitive Style Research* (1981) (CISR/MIT).

<sup>43</sup> Keen, *supra* note 38, at 236; accord, Gibb, *Defensive Communication*, 11 *J Com* 141-148 (1961).

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stupidity, not legitimate differences in mode of explanation and understanding."<sup>44</sup>

These problems of individual cognitive style differences become more difficult when computerized systems are designed and introduced into a law firm. "[S]ystems have the potential to either match or oppose the cognitive style of their users. . . . [A] system could be designed to provide exciting, motivating jobs, but if the built-in assumptions about how the user thinks don't match the way the user actually thinks, then the system will not work."<sup>45</sup> And no amount of "selling" a system will make an attorney or secretary feel supported by a system that doesn't recognize and support his or her ways of thinking.

The people affected by computerization should be involved early in the design and decision process. They should be involved because resistance to change will be reduced. They should be involved because they can provide the detailed operational information that will permit a workable system to be designed and purchased. They should be involved to avoid the firm purchasing the wrong computer system and confronting both an expensive error and decreased productivity. And they should be explicitly involved so that the managing partners can continue to exercise their leadership of the firm.

### *Strong Leadership Reduces Resistance To Change*

The literature on computerization recommends that users be involved in the process. "A closer analysis showed that it was the appropriate kind of involvement by senior management that was [also] a key to success. This appropriate involvement is one which acknowledges the complex interaction of forces among the technical, managerial, and social subsystems of the organization."<sup>46</sup> Moreover, as the degree of organizational change increases, so does the need for both user participation and for strong management.<sup>47</sup>

There are several reasons why strong leadership is needed for successful computerization of a law firm. Many new systems implicitly require new organizational structures.<sup>48</sup> If management

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<sup>44</sup> Keen, *supra* note 38, at 236.

<sup>45</sup> Colantuono, *supra* note 26, at 54.

<sup>46</sup> Eisen & Schnidman, *supra* note 2, at 3.

<sup>47</sup> Colantuono, *supra* note 26, at 49.

<sup>48</sup> Eisen & Schnidman, *supra* note 2, at 4.

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realizes this, attention is paid to anticipating necessary organizational changes and carrying them out to be synchronous with the implementation of the system.<sup>49</sup> "In many cases, this has either not been recognized or has been avoided. Traditional systems developers do not have the power to implement this kind of change, even when they see it coming, and line management [and law firm associates] may not want to tackle the tough political issues involved."<sup>50</sup>

After analyzing the development of information systems in modern corporations, Peter Keen concluded that the "strategy for managing social change is based on acceptance of the political nature of information systems development and the need for suitable authority."<sup>51</sup> Moreover, Keen recommends that information systems development "must be spearheaded by a general, not coordinated by aides-de-camp. . . . Large scale change is a process of coalition-building; this cannot be done by staff analysts, who are too easily caught in the middle, at the center of conflict with no formal powers."<sup>52</sup>

Strong leadership is not authoritarian control.<sup>53</sup> As Douglas McGregor recognized, "We can improve our ability to control only if we recognize that control consists in selective adaptation to human nature rather than in attempting to make human nature conform to our wishes."<sup>54</sup> Strong leadership recognizes that it has theories and assumptions of human nature and how people should behave to promote firm effectiveness. And strong leadership tests those assumptions when necessary to ensure valid decisions.<sup>55</sup>

Computer systems also contain assumptions about people.<sup>56</sup> Technological designers have assumptions and values about people

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<sup>49</sup> Id.

<sup>50</sup> Id.

<sup>51</sup> Keen, *supra* note 25, at 27.

<sup>52</sup> Id. at 26.

<sup>53</sup> Meyer, *Whither Leadership and Supervision?*, 13 *Prof Psychology* 930 (1982); Nord, *Leadership: Some Important Developments (Concepts and Controversy* 620).

<sup>54</sup> McGregor, *The Human Side of Enterprise* 11 (1960).

<sup>55</sup> For surfacing and understanding assumptions of personal and organizational behavior see Coudert, *Advice from a Failure* (1965); Glidewell, *Choice Points: Essays on the Emotional Problems of Living with People* (1970); Keirsey & Bates, *supra* note 42; Levinson, *Organizational Diagnosis* (1972); Weisbord, *Organizational Diagnosis* (1978).

<sup>56</sup> Colantuono, *supra* note 26, at 52.

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and social systems, and these assumptions are designed into computer systems. A computer system can be designed to be "more human-like or more machine-like."<sup>57</sup> It is "unreasonable" to expect computer systems professionals to also be competent in organizational design.<sup>58</sup>

When introducing a new computer system into a law firm, strong leadership is needed to "anticipate, monitor, and adjust to the reaction of people affected."<sup>59</sup> Much of this work of surfacing and challenging assumptions about people and work can be done within the routine management processes of the firm. For many firms, it would be wise to supplement this perspective the firm has grown accustomed to and to have an organizational process consultant help the firm design and monitor its computerization.<sup>60</sup> "The need is not for research but for teaching—for transmittal of what we already know about how to manage individual and organizational change."<sup>61</sup>

### **Computerization Increases Potential Liabilities and Confidentiality Problems**

Mismanagement is already a leading cause of attorney disciplinary actions. Missed deadlines and poor accounting for client funds can become less likely with a properly designed and utilized computer system. Moreover, it is likely that in time, an attorney may be found guilty of malpractice for not using a computer system. The legal standards of negligence may lag the leading edge of technology, but legal standards do progress. Admiralty provides the case on point.

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<sup>57</sup> Id.

<sup>58</sup> Schnidman & Colantuono, *supra* note 3, at 9.

<sup>59</sup> Reed, *supra* note 28, at 245.

<sup>60</sup> Schnidman & Colantuono, *supra* note 3, at 10; Schein, *Process Consultation* (1969); French, *Organization Development—Objectives, Assumptions and Strategies*, 12 *Cal Mgmt Rev* 23-34 (1969); Kegan, *Inclusive Clout: OD's Professional Task*, 1 *Organization Dev J* 19 (1983). Certified Consultants International (P.O. Box 573, Brentwood, TN 37027, 615-377-1306), NTL Institute (*supra* note 2, 703-527-1500), and the Organization Development Institute (6501 Wilson Mills Road, Suite K, Cleveland, OH 44143, 216-461-4333) can provide additional information on process consultation.

<sup>61</sup> Keen, *supra* note 1, at 7.

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"[I]n 1932, despite the absence of statutes, regulations or even custom as to radio receiving sets, Judge Learned Hand found a vessel unseaworthy [roughly akin to negligent] for lack of one."<sup>62</sup> In 1960, Judge Medina extended the T.J. Hooper holding and found a vessel negligent for not using its available radar.<sup>63</sup> Judge Medina thought it clear "which way the wind blows" and had "little doubt that a rule requiring radar, subject to some limitations and qualifications, will sooner or later be formulated."<sup>64</sup> The leading admiralty treatise reports that subsequent case law confirms Judge Medina's prediction.<sup>65</sup>

The Final Report of the American Bar Association Task Force on Professional Competence has found that "effective practice management" is one of the key elements of professional competence.<sup>66</sup> As computers become helpful and then essential to effective management, their use is likely to be mandated both by the bar and by malpractice insurance carriers.

As more law firms utilize computers more extensively, they also increase their dependence on computers. Many organizations have not sufficiently planned for temporary computer failure.<sup>67</sup> Law firms can learn from the computer experience of businesses, and avoid many problems. Law firms should plan for computer failure and for computer security as an integral part of planning for computerization.

New technologies bring new health and safety problems. There has been some controversy about the health dangers of computer video display terminals.<sup>68</sup> As firm personnel spend longer periods at computer terminals, the health dangers of ergonomically improper office furniture increase. Health dangers harm employees

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<sup>62</sup> *Afran Transp. Co. v. The Bergechief*, 274 F2d 469 (CA2, 1960), referring to *T.J. Hooper*, 60 F2d 737 (CA2, 1932), cert den sub nom. *Eastern Transp. Co. v. Northern Barge Corp.*, 287 US 662 (1932).

<sup>63</sup> *Id.*

<sup>64</sup> *Id.*

<sup>65</sup> *Gilmore & Black, The Law of Admiralty* 513 (2d ed 1975).

<sup>66</sup> At 5 (July 1983).

<sup>67</sup> *Pollack, Trust in Computers Raising Risk of Errors and Sabotage*, N.Y. Times 1 (Aug. 22, 1983); *Pollack, Computer Disaster: Business Seeks Antidote*, N.Y. Times 1 (Aug. 24, 1983).

<sup>68</sup> *Chin, VDT Users Negatively Eye Study's Findings*, 5 *InfoWorld* 1 (Aug. 1, 1983); *Shea, VDT Shield Protects Users From Low-Level Radiation*, 5 *InfoWorld* 1 (Aug. 15, 1983); *Quade, VDT Safety*, 69 *ABAJ* 1216 (1983).

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and increase firm liabilities, whether directly through litigation or indirectly through insurance premiums and sick days.

Computerization also increases confidentiality problems for the law firm.<sup>69</sup> An attorney is responsible for safeguarding the confidences and secrets of clients.<sup>70</sup> Computerized systems concentrate information, permit complex search strategies for minute elements of data, and permit multiple access to the same information "file." These characteristics render traditional security procedures, adequate with paper files, insufficient for computers. Moreover, the ethics of searching through computer data bases are still amorphous, and legal privacy norms are still developing.<sup>71</sup> Law firms will need to review and revise their confidentiality policies and procedures before a new computer system is installed.

### Law Firms Are Not Immune from Computer Crime

This year, the mass media have given prominent attention to computer crime. Under this broad rubric is included unauthorized access to computer systems, authorized users gaining access to restricted segments of data, destruction of computer data, theft of computer time, conversion of money using a padded payroll, and a host of other acts.<sup>72</sup> Many of these acts are not yet recognized as torts nor as crimes, or if recognized are not treated seriously.<sup>73</sup>

The popular image of a computer criminal may be that of the teenage hero of the movie *War Games* or the Milwaukee 414 "hackers."<sup>74</sup> In both the fiction and the fact, young computer

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<sup>69</sup> Levary & Duke, Some Aspects of Potential Disclosure of Confidential Computerized Legal Materials, 4 *Computer LJ* 159 (1983).

<sup>70</sup> Model Code of Professional Responsibility Canon 4 (1981); Model Rules of Professional Conduct Rule 1.6 (1983).

<sup>71</sup> Burnham, Laws To Bar Computer Misuse Remain Scarce, *N.Y. Times* 1 (Sept. 8, 1983); Samuels, Privacy vs. Computers, *N.Y. Times* 23 (Sept. 12, 1983); Laws in U.S. Called Inadequate To Block Abuse of Computers, *N.Y. Times* 1 (Sept. 18, 1983); Burnham, Loophole in Law Raises Concern About Privacy in Computer Age, *N.Y. Times* 1 (Dec. 19, 1983); Pollack, Computer Ethics: Questions Arise on Misuse in Business, *N.Y. Times* 1 (Dec. 25, 1983); see Ewing, *Freedom Inside the Organization* (1977); *Individual Rights in the Corporation* (Westin & Salisbury, eds. 1980) on privacy and employee rights.

<sup>72</sup> Gonzalez, Addressing Computer Crime Legislation, 4 *Computer LJ* 195 (1983); e.g., Computer Programmer Accused of "Vandalism," *N.Y. Times* 8 (June 25, 1983).

<sup>73</sup> Cf. Pollack & Smith, *White-Collar v. Street Crime Sentencing Disparity*, 67 *Judicature* 175 (1983).

<sup>74</sup> F.B.I. Is Studying Computer Raids: Milwaukee Youths with Home Equip-

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whizzes used remote computer terminals and telephones to enter and alter distant computer data files. However, few law firms need concentrate on this computer "hacker."<sup>75</sup> Most computer crime is not committed by the remote outsider. Most computer crime is committed by a member of the organization, or sometimes by a former member.

In his comprehensive study of computer fraud and abuse in governmental agencies, the Inspector General found insiders committed most of the crimes.<sup>76</sup> Frauds were generally committed by low level employees in functional areas, while abuses generally involved higher paid, technically sophisticated employees. Both fraud and abuse were usually detected accidentally by insiders.<sup>77</sup>

Security for a computer system is based on the same principles as security for the other aspects of a law firm.<sup>78</sup> Members of an organization are the best and first defense against crime.<sup>79</sup> Satisfied, loyal, productive employees are less likely to commit crimes against their employer. They are more likely to report suspicious activity. They are more likely to create a climate which restrains marginal employees from committing crimes.

The best security for a law firm is enthusiastic, productive, satisfied members. And the best way to ensure having such firm members is to have a well-managed law firm.<sup>80</sup>

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ment Got Access to Nuclear Weapons Lab, N.Y. Times 9 (Aug. 12, 1983); Kleiman, Computer Tampering Reported by Hospital, N.Y. Times 1 (Aug. 19, 1983); Treaster, Trial and Error by Intruders Led to Entry Into Computers, N.Y. Times 1 (Aug. 23, 1983); accord, Treaster, Youths' Homes Raided in Computer Inquiry, N.Y. Times 1 (Oct. 14, 1983); Cummings, Coast Computer Buff Seized in Intrusion Into Military-Civilian Data, N.Y. Times 14 (Nov. 3, 1983).

<sup>75</sup> Biddle, The World of Data Confronts the Joy of Hacking, N.Y. Times 20E (Aug. 28, 1983).

<sup>76</sup> Kusserow, Computer-Related Fraud and Abuse in Government Agencies 16 (June 1983) (U.S. Dept Health & Human Services), summarized by Burham, Computer Fraud in 12 U.S. Agencies Put Far Above 172 Cases, N.Y. Times 15 (Oct. 27, 1983).

<sup>77</sup> Kusserow, *supra* note 76, at 16.

<sup>78</sup> Burham, The Rise of the Computer State (1983); Parker, Fighting Computer Crime (1983); Burnham, Computer Security Raises Questions, N.Y. Times 5 (Aug. 13, 1983); Sanger, Computer Security Weighed, N.Y. Times 32 (Aug. 16, 1983); Broad, Rising Use of Computer Networks Raises Issues of Security and Law, N.Y. Times 9 (Aug. 26, 1983); Sanger, New Breed of Workers: Computer Watchdogs, N.Y. Times 6 (Oct. 16, 1983) (Careers section).

<sup>79</sup> Dobson & Shepherd-Chow, Safe and Alive (1981).

<sup>80</sup> Harris presents 19 questions to help a law firm evaluate itself. Harris,

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### Stay in Control of the Computerization Process

One essential to reduce the people problems of law office computerization is to stay in control of the implementation process. This implies at least five recommendations.

First, *design* your computer system, don't simply *shop* for it.<sup>81</sup>

Second, don't adopt a specific computer system or organizational pattern just because another firm has it.<sup>82</sup> Each law firm has an unique combination of individuals, abilities, cognitive style mixes, current procedures, firm goals, and clients. There is no more reason to expect another firm's computer system to fit your present and future firm needs than there is to expect that their managing committee's clothes will fit your committee.

Third, assess your firm's readiness for change.<sup>83</sup> An organizational assessment should be made of the amount of change and the effect on the organization of the new computer system. For impact areas of medium to high risk, strategies need to be developed for "managing the change and preparing the organization for the introduction of the system."<sup>84</sup> In instances where the gap assessment suggests major risks in many impact areas, you should strongly consider avoiding the project, undertaking a functionally less ambitious project, or beginning to lay the groundwork for an extended change over time.<sup>85</sup> The better the firm's management, the more adaptable it will be, and the more ready to design and implement necessary change.<sup>86</sup>

Fourth, know your firm's current operations.<sup>87</sup> The need for a new system cannot be adequately assessed without knowing how things are currently being done. A smooth transition to a new system cannot be made without knowing whence that transition

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Finding the Correct Organizational Relationships, *People in the Law Office* 36, 69-72, *supra* note 28. Characteristics of excellent organizations are discussed in Peters & Waterman Jr., *In Search of Excellence* (1982). Trust can be a central factor in determining law firm effectiveness. Kegan & Rubenstein, *Trust, Effectiveness and Organizational Development*, 9 *J Applied Behav Sci* 498 (1973); Zand, *Trust and Managerial Problem Solving*, 17 *Ad Sci Q* 229 (1972).

<sup>81</sup> Eisen & Schnidman, *supra* note 2, at 6.

<sup>82</sup> Harris, *supra* note 80, at 67.

<sup>83</sup> Eisen & Schnidman, *supra* note 2, at 5.

<sup>84</sup> *Id.*

<sup>85</sup> *Id.*

<sup>86</sup> *Supra* note 80; Gibb, *supra* note 43.

<sup>87</sup> Reed, *supra* note 28, at 258; cf. Rice, *Managing a Computer Installation and Conversion*, 24 *Law Off Econ & Mgmt* 35 (1983).



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begins. Also, you will not know when to involve which people in the design and decision process if you do not know how the firm's work is currently being done.

Fifth, take time to design and predesign your new computer system. A new computer system in a law firm can be more effective and introduced more quickly if time is taken to design the computerization and also to predesign the process of monitoring the computerization. The time taken to predesign a process to involve those affected by the changes and to implement an explicit management monitoring procedure for the computerization is more than made up by a shorter implementation period and a greatly reduced time of "selling."<sup>88</sup> Many law firms can benefit from expert assistance for this critical predesign task.<sup>89</sup>

### Conclusion

Whatever the technical sophistication of computer hardware and software, the effective use of computers in a law firm demands that the critical role of people be recognized. People operate the machines, people prepare information to be stored in the machines, and people want to use information from the machines.

Computerization creates predictable problems. These well-known problems affect not only the clerical staff, but also the firm's attorneys. Enough has been learned from the management research on innovation so that today computerization can be effectively managed.

Computerization creates social, as well as technical, change in the law firm. Computerization redistributes information and power; computerization creates its own resistance to change. Involving those affected by computerization reduces resistance to change. When involving others in the decision-making process, law firm management needs to be aware of the differing cognitive styles of the people in the firm. "What is relevant, obvious, or fact to one may not be to the other. One person's logical analysis may be unacceptable or incomprehensible to the other."<sup>90</sup>

Strong leadership reduces resistance to change. Strong leaders work to become aware of their assumptions about human nature, and they test those assumptions when necessary to ensure valid

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<sup>88</sup> Doyle & Straus, Collaboration for 80's Organizations 7 (1980).

<sup>89</sup> Supra note 60.

<sup>90</sup> Supra note 39.

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decisions. By taking the time to predesign the computerization process and by using expert assistance to design the people side of computerization as well as the technical side, a law firm may stay in control of the computer. By attending to the people issues, a firm can achieve the increased technical efficiency promised by today's computer.