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The Database and the Fields of Law: Are There New Divisions of Labor?

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Beyond their efficiency gains, there are deeper, perhaps unanticipated effects of electronic legal databases on the process of legal research, on the work process within organizations, and on the organization of the practice of law itself. Professor Trosow examines several aspects of the relationship between information technology, particularly databases, and the occupational structures and practices in the field of law.

¶1 What is the relationship between advances in information technology and occupational structures? In particular, how has the rise of databases affected the occupational structure and practices in the field of law?

¶2 The law provides a particularly good setting for studying this relationship because of its inherent “information-intensive” nature. Ethan Katsh describes information as the “fundamental building block” that is present and the focus of attention at almost every stage of the legal process.¹ He finds new information technologies are particularly relevant to law because law is itself oriented around information and communication. “Whatever definition one gives to the law—whether it is considered a profession, or a method of resolving disputes, or a process to bring about justice, or a facade to protect the status quo, or a means to secure rights and regulate behavior—it is always concerned with information.”²

¶3 Much of the literature concerned with information technology and the law is based on claims of enhanced efficiency, stressing how particular processes are conducted with greater speed and less effort while achieving better results. Such efficiency-based claims are analogous to what Lee Sproull and Sara Kiesler call first-level effects. “Most inventors and early adopters of technology think primarily about efficiency effects, or first-level effects, of that technology. We argue that

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1. ETHAN M. KATSH, *LAW IN A DIGITAL WORLD* 7 (1995).
2. *Id.* at 6–7.

second-level system effects are often likely to be more important to organizations. Changes we make to improve efficiency often have other offsetting consequences.”³

¶4 Robert Berring argues that the impact of electronic legal databases is much deeper than what Sproull and Kiesler would characterize as a first-level effect, in that it involves a change in the very structure of the legal literature.⁴ He makes the further point that “the structure of the literature implies the structure of the enterprise itself”⁵ and that this is particularly true in the law. The similar point is made by Richard Haigh who rejects the argument that computer searching is just a “tool” that simply adds value to the preparation of arguments. He argues that “the process is also conditioned by the context—in the same way that the invention of automobiles altered more than just the method of getting from point A to point B, computers and their databases are bound to change the form and substance of the product being researched.”⁶

¶5 This article looks at several aspects of this relationship between information technology⁷ and the occupational structures and practices in the field of law in an attempt to identify and analyze some second-level effects on the “enterprise of law.” The investigation involves several different levels of analysis. The first is concerned with how changes in information technology affect the jurisdictional boundaries of the legal profession itself, and its relationship to other occupations or professions. The broader literature on the sociology of the professions is a useful starting point for investigating this question, as similar concerns have arisen in other fields.⁸ While some have predicted that the advances in information technology will lead to an erosion of the legal profession’s ability to protect its monopoly

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3. LEE SPROULL & SARA KIESLER, CONNECTIONS: NEW WAYS OF WORKING IN THE NETWORKED ORGANIZATION 1 (1991).
 4. See Robert Berring, *Full-Text Databases and Legal Research: Backing into the Future*, 1 HIGH TECH. LAW J. 27, 29 (1986).
 5. *Id.*
 6. Richard Haigh, *What Shall I Wear to the Computer Revolution? Some Thoughts on Electronic Researching in Law*, 89 LAW LIBR. J. 245, 257 (1997).
 7. While particular attention will be paid to the database, the inquiry will not be so limited and will often consider broader developments in information technology. As a form of information technology, the database cannot be neatly separated from other technological developments and their resulting artifacts. Wherever possible, the context of the discussion will specify whether the focus of concern is the legal database or the broader usage of information technology.
 8. See ANDREW ABBOTT, THE SYSTEM OF PROFESSIONS: AN ESSAY ON THE DIVISION OF EXPERT LABOR (1988); Andrew Abbott, *The New Occupational Structure: What Are the Questions?* 16 WORK & OCCUPATIONS 273, 274 (1989) (identifying “four fundamental aspects to the modern social organization of work: the division of labor, the structure of occupations, the structure of work organizations, and the pattern of staffing”). See generally MICHAEL F. WINTER, THE CULTURE AND CONTROL OF EXPERTISE: TOWARDS A SOCIOLOGICAL UNDERSTANDING OF LIBRARIANSHIP (1988). For an application of Abbott’s theory of the professions to the field of law, see Samuel E. Trosow, *Jurisdictional Disputes and the Unauthorized Practice of Law: New Challenges for Law Librarianship*, LEGAL REFERENCE SERVICES Q., 2001 no. 4, at 1 (discussing the unauthorized practice of law as an instance of the renegotiation of jurisdictional boundaries within the field of law).

of knowledge,⁹ others argue that such advances will simply lead to greater efficiency within existing structures.¹⁰

¶6 At the second, or middle level of analysis, the issue is how changes in information technology will affect the vertical hierarchy of lawyers within the legal profession. Will these changes exacerbate the divisions already present in the profession,¹¹ or will information technology “level the playing field” and act as an equalizer as predicted by Diana McCabe?¹²

¶7 In the third, or intraorganizational, level of analysis, the question concerns how occupational roles, tasks, and structures change within particular organizations. This issue may be situated within the broader “deskilling/reskilling” debate as framed by Daniel Bell¹³ and Harry Braverman¹⁴ and is informed by the broader literature in the “sociology of work” or “labor process theory.”¹⁵

¶8 Before discussing these three levels of analysis, the next section will present an historical overview of the development of the legal database to provide a context for the subsequent analysis. The conclusion will summarize the various themes running throughout the article, emphasizing the strong interrelationship between the commodification of legal information resources and the commodification of legal practice itself.

Computer-Assisted Legal Research: The Rise of the Database

¶9 Calhoun and Copp classify five basic ways in which lawyers use computers: (1) word processing, (2) management and accounting, (3) client relations and marketing, (4) legal research, and (5) litigation support.¹⁶ Though fifteen years old, this classification remains timely, although many of these activities now take place in

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9. See, e.g., Marie Haug, *Computer Technology and the Obsolescence of the Concept of Profession*, in *WORK AND TECHNOLOGY* 215 (Marie R. Haug & Jacques Dofny eds., 1977); Michael Hartmann, *Legal Data Banks, the Glut of Lawyers, and the German Legal Profession*, 27 *LAW & SOC'Y REV.* 421 (1993).
 10. See, e.g., William G. Harrington, *Computers and Legal Research*, 56 *A.B.A. J.* 1145 (1970); William G. Harrington, *What's Happening in Computer-Assisted Legal Research?* 60 *A.B.A. J.* 924 (1974); William G. Harrington, *A Brief History of Computer-Assisted Legal Research*, 77 *LAW LIBR. J.* 543 (1985).
 11. See generally Craig Calhoun & Martha Copp, *Computerization in Legal Work: How Much Does New Technology Change Professional Practice?* 4 *RES. SOC. WORK* 233 (1988); Douglas E. Litowitz, *Young Lawyers and Alienation: A Look at the Legal Proletariat*, 84 *ILL. B.J.* 144 (1996).
 12. See generally Diana Fitch McCabe, *Automated Legal Research*, 54 *JUDICATURE* 283 (1971).
 13. See DANIEL BELL, *THE COMING OF POST-INDUSTRIAL SOCIETY: A VENTURE IN SOCIAL FORECASTING* (1973) [hereinafter BELL, *THE COMING OF POST-INDUSTRIAL SOCIETY*]; Daniel Bell, *The Social Framework of the Information Society*, in *THE MICROELECTRONICS REVOLUTION: THE COMPLETE GUIDE TO THE NEW TECHNOLOGY AND ITS IMPACT ON SOCIETY* 500 (Tom Forester ed., 1980).
 14. See HARRY BRAVERMAN, *LABOR AND MONOPOLY CAPITAL: THE DEGRADATION OF WORK IN THE TWENTIETH CENTURY* (1974).
 15. See PAUL THOMPSON, *THE NATURE OF WORK: AN INTRODUCTION TO DEBATES ON THE LABOUR PROCESS* (2d ed. 1989); RICHARD EDWARDS, *CONTESTED TERRAIN: THE TRANSFORMATION OF THE WORKPLACE IN THE TWENTIETH CENTURY* (1979).
 16. Calhoun & Copp, *supra* note 11, at 237.

a networked environment. While activities in four of the five areas have been delegated, in various degrees, to different types of support staff, legal research has remained at the core of the work of the attorney. As Calhoun and Copp note, "Legal research is simultaneously one of the most onerous and exacting and one of the most important tasks facing practicing attorneys."¹⁷ In comparison to the other clerical and supporting activities, legal research has traditionally involved a degree of skill that it is less likely to be delegated. How this division of labor may change in an increasingly networked and information technology-intensive environment is a central concern of this article.

¶10 In the introduction to their classic textbook, *How to Find the Law*, Cohen, Berring, and Olson illustrate the centrality of legal research to the enterprise of law:

Legal education fosters the disciplined, pragmatic and critical intellectual process known as "thinking like a lawyer," but it could not possibly teach the whole body of legal doctrine or even one specialized area. Thus the law student must also learn the techniques of legal research, in order to use the library's resources to find the law as it has been defined by courts, legislatures and other governmental agencies.¹⁸

¶11 Much of the literature on legal databases is based on claims of enhanced efficiency, stressing that existing processes are simplified and expedited.¹⁹ However, as noted earlier, Berring argues that the impact of databases like LexisNexis and Westlaw is much deeper in that it involves a change in the structure of the legal literature.²⁰

¶12 In reviewing these changes in the structure of legal literature in the United States, Berring begins with the assertion that before the advent of the legal database, "American legal publishing was a highly integrated and well-developed system of comprehensive publication and retrieval in hard copy."²¹ At the center of this system was West's National Reporter System and its American Digest System. The former provided the full text of all published state court decisions; and the latter was a classification system that divided the law into categories, topics, and a key numbering system within the topics, thereby serving as a universal subject thesaurus. Berring argues that the most important feature of the West system was that it provided a "national fixed point in the spinning universe of state common law judges and lawyers," which was able to "normalize" divergent or anomalous usages.²²

¶13 By the early 1960s, the proliferation of legal materials was becoming an important issue and the subject of growing concern. As Bernard Hibbits observes,

17. *Id.* at 239.

18. MORRIS L. COHEN, ROBERT C. BERRING, & KENT C. OLSON, *HOW TO FIND THE LAW* 2 (9th ed. 1989).

19. *See* sources cited *supra* notes 10, 12, and *infra* notes 25, 31, 33.

20. *See supra* notes 4-5 and accompanying text.

21. *Id.*

22. *Id.* at 33 (footnote omitted).

“[A]n eclectic variety of lawyers, legal academics, and law librarians looked to emerging computer technology to facilitate the storage, accessing, and distribution of legal information.”²³ Many observers were beginning to question the ability of the traditional print-based systems to keep up with the increased output of the courts, legislatures, administrative agencies, and commentators,²⁴ and emerging computer technology was increasingly seen as the answer to the problem. As Louis O. Kelso observed, “The mechanization of medical practice has enabled modern medicine to perform up to the level expected of it by the public, but science has pretty much left the lawyer where it found him before the industrial revolution.”²⁵

¶14 The American Bar Association (ABA) established an Electronic Data Retrieval Committee in May 1959, and it published its first newsletter in September of that year.²⁶ Many of the early commentators pointed to analogies between the rapid growth of legal literature and the proliferation of scientific publications. For example, Allen Kent argued that the legal and scientific literatures were similar in size, character, and complexity, and suggested that the same automation tools that had been used in the sciences be applied to the law.²⁷ Recognizing the problem of funding, Kent also argued that the ABA should take the lead in developing a coordinated system on the national level.

23. Bernard Hibbits, *Last Writes? Reassessing The Law Review in the Age of Cyberspace*, 71 N.Y.U. L. REV. 615, 655 (1996) (citations omitted).
24. See LAYMAN E. ALLEN ET AL., AUTOMATIC RETRIEVAL OF LEGAL LITERATURE: WHY AND HOW (1962). In this early report on the feasibility of applying automatic document retrieval methods to tasks in legal research, the authors asked what comprises “legal literature,” what is the rate of production of that literature, and what is the volume of that literature. In addition to primary authority (statutes and court cases), the authors included legal periodicals, defined as those indexed in the *Index to Legal Periodicals*. While there were fewer than two hundred legal periodicals identified in 1958, the authors compared law with medicine and biology to graphically demonstrate a discernible pattern of growth. The curve for medicine advanced by twenty years closely approximated the biology curve and the biology curve advanced by twenty years approximates the law curve. *Id.* at 21.
25. Louis O. Kelso, *Does the Law Need a Technological Revolution*, 18 ROCKY MTN. L. REV. 378, 383 (1946) (describing a futuristic device he calls Lawdex, an adaptation of Vannevar Bush’s Memex). See also Note, *Science—Computers—The Use of Data Processing in Legal Research*, 65 MICH. L. REV. 987 (1967) (describing some early prototypes of computer-assisted programs, including computer-assisted searching of abstracts of Pennsylvania Supreme Court decisions at the University of Pittsburgh, a Wisconsin citator service for Wisconsin appellate decisions offered by Data Retrieval Corp. of America, and a project by Western Union and Law Research Services, Inc. offering comprehensive files of legal citations in selected subject areas in New York); Roy N. Freed, *Prepare Now for Machine-Assisted Legal Research*, 47 A.B.A. J. 764, 764 (1961) (Although pointing to the benefits of machine-assisted research, Freed also sounds some cautionary notes, noting that “[i]n the headlong rush to harness information technology for use in legal research, there is a real danger that the interests of the Bench and Bar in the development of the most efficient systems will be sacrificed to achieve short-term accomplishments.”).
26. The newsletter was called *M.U.L.L.: Modern Uses of Logic in Law* and was produced in collaboration with Yale Law School. It was the forerunner of *Jurimetrics*, a journal currently published by the ABA’s Section of Science and Technology.
27. Panel: *Progress and Problems in Application of Electronic Data Processing Systems to Legal Research*, 1960 M.U.L.L.: MOD. USES LOGIC L. 174, 182 (comments of Allen Kent). See also Note, *Science—Computers—The Use of Data Processing in Legal Research*, *supra* note 25, at 994 (arguing that “for too long, the legal profession has been lethargic in this field and science and business have passed it by.”).

¶15 At a conference on law and electronics held in 1960,²⁸ Felix Stumpf outlined the possibilities for electronic legal research and the conditions for the computer to be useful for legal research:

Electronic legal research can be an invaluable aid in the informed quest for mature and deliberate judgment rather than as ascertained through the present methods of incomplete and haphazard research. If used in this way and not simply misused as a commercial profit-making gadget, electronic legal research can have invaluable import and constructively contribute to the improvement of the legal profession; and all the time and energy now being spent on the development will not be wasted. It can be one of the most worthwhile tools in the legal workshop for preserving and nourishing the legal profession and maintaining its rightful place in the human community.²⁹

¶16 While generally supportive of the idea of electronic research, Stumpf emphasized the need to keep the matter in perspective, emphasizing that the broad experience and judgment of the attorney is central and that the computer is only a tool. Similarly, Robert Hayes presented a note of caution and warned that computers should not be regarded as a panacea.³⁰ Other commentators were less cautious, and presented more of an unconditional and optimistic vision of the technological future. As David Moody saw it:

The lawyer of tomorrow may notice a significant reduction in his research time, thus increasing his ability to provide services to his clients. With the removal of the human element from the actual researching and considering the thoroughness of computers, the quality of the lawyer's services, as well as the quantity, may increase.³¹

¶17 Moody was also optimistic that burdensome library expenses could be avoided:

In the future, law firms may subscribe to legal information centers located in major cities for these services. Thus, each member of the firm could receive all legal materials pertinent to his problem within a short period of time. With such quick access to legal materials, a law firm may find it no longer necessary to incur the expenses of purchasing and maintaining them in a private library. Thus, computer science may have a tremendous impact in the very near future.³²

28. The conference was sponsored by the UCLA Interdisciplinary Committee to Study Applications of Scientific Processes to the Administration of Justice, and held at Lake Arrowhead, California, October 21–23, 1960. For the full proceedings of the conference, see EDGAR A. JONES, *LAW AND ELECTRONICS: THE CHALLENGE OF A NEW ERA: A PIONEER ANALYSIS OF THE IMPLICATIONS OF THE NEW COMPUTER TECHNOLOGY FOR THE IMPROVEMENT OF THE ADMINISTRATION OF JUSTICE* (1962). For a summary of the conference, see Irwin Chasalow, *The UCLA National Law and Electronics Conference, 1960 M.U.L.L.: MOD. USES LOGIC L.* 102.

29. JONES, *supra* note 28, at 67 (remarks of Felix Stumpf). Stumpf is well recognized in legal circles as an important pioneering figure in the area of continuing legal education. He helped found the California Continuing Education of the Bar and served as its first director.

30. *Id.* at 43 (remarks of Robert Hayes).

31. David Thomas Moody, Note, *Legal Research: Computer Retrieval of Statutory Law and Decisional Law*, 19 VAND. L. REV. 905, 917–18 (1966).

32. *Id.* at 918.

¶18 In a similarly optimistic tone, Lawrence Harper observed:

If technologists can perform near miracles for the scientists, we may reasonably suppose that they can help the struggling attorney. An analysis of the attorney's research problems shows that they are comparatively simple. The active practitioner wants to be able to find quickly precedents which are on point and which he can be assured have not yet been overruled.³³

¶19 It is important to note that during this period, the West Publishing Company was not playing a leading role in the development of computer-based legal services. A policy statement issued by West took the position that electronic data processing did not yet "offer a practical medium for legal research."³⁴ According to the statement, West had responded to inquiries on the subject from several bar associations that "there would be no justification in our offering to the legal professional a plan of mechanical storage and automatic research of the law that employs any present electronic computers, tape recorders, or other mechanical devices."³⁵

¶20 Of the various bar association organizations, the strongest impetus for computerized legal research came from the Ohio State Bar Association (OSBA). By the mid-1960s it had concluded that the effectiveness of traditional methods of legal research was impeded by the rapid increase in the volume of legal materials, and it became actively engaged in the subject.³⁶ Harrington, research counsel to the OSBA and responsible for the association's computer project, stressed the view that indexes and digests were incapable of keeping up with the increased output of courts, legislatures, administrative agencies, and commentators, and were becoming increasingly ineffective, subjective, and inadequate. The solution to the problem was seen in the computer, which OSBA thought could perform the "mechanical functions of locating research materials . . . on an economically feasible basis while meeting professional standards of thoroughness and objectivity."³⁷

¶21 However, OSBA also felt that such a computerized system "would more likely be of service to the profession if at least a substantial degree of control were exercised by the organized Bar."³⁸ This degree of control was needed for several

33. Lawrence A. Harper, *Legal Research, Technology and the Future*, 24 CAL. ST. B.J. 104, 104-05 (1949).

34. *Policy Statement of West Publishing Company on Automatic Retrieval of Legal Information*, 1960 M.U.L.L.: MOD. USES LOGIC L. 89, 89 (1960) (quoting statement of policy enclosed with letter from William W. Marvin, Vice President, West Publishing Company, to editor of M.U.L.L.).

35. *Id.* at 89. On the initial reluctance of West Publishing to adopt to computerized research, see Robert Berring, *Chaos, Cyberspace and Tradition: Legal Information Transmogrified*, 12 BERKELEY TECH. LAW J. 189, 195 (1997) ("When LEXIS began to take hold in the mid-1970s, West was in a quandary. Should they defend the fortress of books, or should they take a plunge into the world of computers? Hindsight is always comforting, but recall at the time, no one knew if online research would do anything other than make a large sucking sound near piles of cash.").

36. *See generally* Harrington, *Computers and Legal Research*, *supra* note 10.

37. *Id.* at 1145.

38. *Id.* *See also* Freed, *supra* note 25, at 764 (calling for the establishment of a bar-supervised body to establish goals and standards for computerized legal research systems).

reasons, the first being that many lawyers had become “properly skeptical of computers because they knew for years the sponsors of some systems had been promising much more than they could perform.”³⁹ In addition to gaining the confidence of its members, it was also felt that such control by the bar would assure that “professional standards of thoroughness, accuracy, confidentiality and objectivity were maintained.”⁴⁰

¶22 After reviewing all of the existing and prospective computerized legal research systems, OSBA concluded that none of them met its standards and that a new system would need to be developed.⁴¹ OSBA eventually identified Data Corporation of Dayton, Ohio, a company already involved with text retrieval systems, as the partner it needed to develop this system. OSBA formed Ohio Bar Automated Research (OBAR) as a nonprofit subsidiary corporation to enter into a contract with Data Corporation for the development of the system.⁴²

¶23 The OBAR-Data Corporation contract provided that Data Corporation would modify its software to make it more suitable for legal research, that OBAR would pay a fee for the modification and thereby own the exclusive rights in the software for legal research, that OBAR would pay for the conversion of Ohio case law and statutes and own the resulting database, that Data Corporation would run the operating system, that OBAR would market the service, and that operating revenues would be split between OBAR and Data Corporation.⁴³

¶24 The Mead Corporation purchased Data Corporation in 1969, but as Harrington emphasized, the purchase was not motivated by the OBAR contract:

[Mead Corporation] did not acquire Data Corporation to become a partner in the OBAR experiment, but to acquire other Data Corporation technology more closely related to Mead’s traditional lines of business in forest products, paper, and printing. Indeed, it has been said that Mead was not even aware that Data Corporation was committed by contract to an effort to build a computer-assisted legal research service.⁴⁴

¶25 A recent article on the LexisNexis Web site celebrating the thirtieth anniversary of LexisNexis is consistent with Harrington’s account:

The team was rewriting the primitive code, named OBAR, which had been developed for a contract with the Ohio Bar Association. That contract eventually would grow into today’s Lexis. But at the time it was just a tiny piece of the sprawling Mead Corporation.

Mead was a prime example of the conglomerate strategy that then gripped Corporate America. The idea was to acquire so many different—and often utterly unrelated—operations that, no matter where the economy was in the business cycle, some would be positioned to make money. . . . In this acquisitive spirit Mead, initially a pulp and paper

39. Harrington, *Computers and Legal Research*, *supra* note 10, at 1145.

40. *Id.*

41. *Id.* Unfortunately, Harrington did not provide details regarding how the existing systems were evaluated in reaching this conclusion.

42. Harrington, *A Brief History of Computer-Assisted Legal Research*, *supra* note 10, at 547–48.

43. *Id.* at 548.

44. *Id.* at 550.

concern, had added a foundry, a coal mining venture, a furniture maker and cement company. In 1968 it purchased Data Corporation, a suburban Dayton business whose arcane specialty was laser scanning of maps and photographs.

....

Data Corp.'s \$7,000 contract with the Ohio Bar was so small that Mead didn't even notice it at the time of purchase.⁴⁵

¶26 In describing the system that was created by OBAR and Mead Data Central (MDC),⁴⁶ Harrington pointed to three features that distinguished it from other electronic legal research systems.⁴⁷ First, the system was capable of searching the full text of the document unmediated by any index, digest, or other editing. Second, it was a full time-share system, which allowed direct communication from a remote site without any operator intervention. Third, the program allowed interaction between the user and the database through a continuing dialogue.

¶27 Full-text searching and the absence of any indexing language was an important point to Harrington, since these features would avoid the need for any intervention or mediation between the user and the system. The time-sharing feature also obviated such intervention so that multiple offices could simultaneously access the databases. The dialogue feature was considered important as it allowed the immediate reformulation of a query without having to start a new search from scratch or utilize the services of a mediator. Addressing the issue of training, Harrington noted that users at Ohio firms had been trained to use the system in one to two days.⁴⁸

¶28 Harrington envisioned that the system would expand to other states, noting MDC's interest in expanding the service on a national basis. However, he felt that state bar associations were the appropriate sponsoring agencies, and he urged other associations to begin the preliminary planning.⁴⁹ Harrington closed on an upbeat note:

Those of us who have worked for a long time with computerized legal research and who are aware of its limitations [and] its promise are enthusiastic and confident about it. We believe that by enabling lawyers to do their research more efficiently and economically, the computer can be a significantly useful tool in the practice of the law and a benefit not only to the lawyer but also to his clients and ultimately to our society.⁵⁰

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45. Dennis Farney, *Those Who Wrote the Original Lexis® Code Were a Curious Team*, at http://www.lexisnexis.com/anniversary/features_1.asp (last visited Aug. 18, 2003). In a subsequent article in the same series, Farney reports that Mead sold LexisNexis to Reed Elsevier in 1994 for \$1.5 billion. Dennis Farney, *LexisNexis' 1st Competitor Was the Great Unknown*, at http://www.lexisnexis.com/anniversary/features_2.asp (last visited Aug. 18, 2003).
46. After the Mead Corporation acquired Data Corporation, the data retrieval unit became known as Mead Data Central.
47. Harrington, *Computers and Legal Research*, *supra* note 10, at 1146.
48. *Id.* at 1147.
49. *Id.* at 1148.
50. *Id.*

¶29 In a subsequent article, Harrington again emphasized that Lexis (as the system was by then called) remained the only full-text, interactive system, and that these features were absolutely essential for maximum effectiveness.⁵¹ However, the notion of maximum effectiveness was not defined, and Harrington pointed to no research or other means of evaluation to support his basic claim.

¶30 While admitting that the early experience was not yet definitive, Harrington offered several comments about the impact of computer-assisted research on the practice of law. First, he acknowledged that the difference in speed between manual and computer-assisted research could not be accurately measured, since legal research is a subjective process. Nonetheless, Harrington asserted that “a large body of experience clearly demonstrates that a lawyer working at a computer terminal can accomplish thorough and accurate research *much faster than* he can without computer assistance.”⁵²

¶31 Further speed-related efficiency gains were also claimed:

The time saved in locating . . . [materials] *more than offsets* the time the lawyer necessarily spends in the mechanical manipulation of the computer terminal. *Even more time is saved* after the desired materials have been located by the computer, because browsing in those materials by having them selectively displayed on a screen is *many times faster* than pulling the books down from the shelves and reading from the printed page.⁵³

¶32 While the emphasized text demonstrates that there was a quantitative aspect to Harrington’s claims, no empirical evidence was cited in support of these contentions. Harrington also downplayed the impact of cost on the ability of the system to be utilized effectively by a broad range of practitioners. While he acknowledged that the system was expensive, he argued that “cost can be judged accurately only in the context of what it can do for the price paid.”⁵⁴ But while maintaining that the cost of engaging an individual research problem was not high, Harrington also acknowledged that MDC’s marketing efforts and pricing structures were geared to the larger firms. This contradiction obfuscated the importance of the initial cost factor that prevented those in small firms or solo practice, much less the public, from effectively using the system.

¶33 While conceding that the system had little impact in terms of improving the overall administration of justice, Harrington again claimed that “[a]nything that efficiently improves the quantity and quality of the information available to judges and lawyers is bound to improve the administration of justice.”⁵⁵

¶34 Harrington also predicted that “[i]f the computer can help lawyers to use their time more productively, it may help them to lower the cost of some kinds of legal

51. Harrington, *What’s Happening in Computer-Assisted Legal Research?* *supra* note 10, at 924.

52. *Id.* at 927 (emphasis added).

53. *Id.* (emphasis added).

54. *Id.* at 928.

55. *Id.*

services,”⁵⁶ and “turn out to be something of an equalizer.”⁵⁷ Yet no evidence was supplied showing how the Ohio firms using the service were able to pass savings on to their clients, much less make their services affordable to a broader range of clients.

¶35 In a similar manner, Diana McCabe, OBAR’s director of administrative services, provided an optimistic analysis, claiming that “computerized legal research is an equalizer and . . . that . . . can remove economic inequality, professional inequality and social inequality.”⁵⁸ These broad, egalitarian-based claims are characteristic of the bubbly enthusiasm promoted by the early proponents of electronic research systems.⁵⁹ McCabe reiterated her position quite explicitly:

[T]he computer equalizes the resources at the command of each attorney. It takes away, substantially, the advantage the large firm lawyer, with his vast and comprehensive library, has over the struggling practitioner who feels extravagant owning a set of West Reporters. *It represents the most important single step yet taken towards making the practice of law, and the success thereof, a question of professional skill.*⁶⁰

¶36 McCabe’s last sentence adds another important claim, which presciently foreshadows the deskilling/reskilling debate that would soon begin to crystallize. Her position would have been more tenable if the electronic systems were being distributed as public goods. But like Harrington, she failed to reckon with the cost of using the system and its consequent inaccessibility outside of large institutional settings.

¶37 McCabe also pointed to the weakness of the print-based system in terms of its inability to keep up with increasing rates of new material.

The effectiveness of traditional methods of locating this information diminishes rapidly as its amount and variety increases. All indexes and digests are subject to serious inherent limitations, including the fact that all of them are to one degree or another subjective, and that even the best conceived and maintained of them have become conspicuously inadequate.⁶¹

¶38 McCabe’s essay stands as an important and useful exemplar of the early literature promoting the role of databases in the future of computerized legal research. This observation is based not only on the breadth of the claims she made, but also because of her inclusion of cautionary material. She warned her readers that the computer’s “aura of mystique” can bestow an “assumption of infallibility about them which is a product of technological euphoria.”⁶² She also recognized that some may use the computer “as a means of evading responsibility,” allowing

56. *Id.* at 928–30.

57. *Id.* at 930.

58. McCabe, *supra* note 12, at 283.

59. *See, e.g.*, Kelso, *supra* note 25, at 392 (“The American bar will do well to think seriously of mechanizing the drudgery of the practice of law, in order that the really irreplaceable human contributions of lawyers may be liberated for the benefit of mankind.”).

60. McCabe, *supra* note 12, at 285 (emphasis added).

61. *Id.* at 284.

62. *Id.* at 287.

it to become a “lazy way of getting a job done.”⁶³ But her third hazard was most significant:

[T]he computer, since it deals with measured, finite, concrete, and structured things, tends to compel the legal profession to reduce its concepts to absolutes. Consequently, as we become ever more dependent to it, it will create a back pressure to cause us to structure our laws, and the profession itself, to fit it.⁶⁴

In raising these caveats, McCabe echoed the earlier concerns raised by Stumpf, Hayes, and other more cautious observers of the computerization phenomena.

¶39 While these early proponents of computerized legal research may have been overly optimistic about its promise, they seem to have had an altruistic vision of the legal profession that was strongly connected to client service and the public interest. Harrington, McCabe, and the other members of OBAR recognized the importance of having the legal profession maintain control over the database systems. And continuing legal education pioneer Felix Stumpf explicitly spoke about the need to keep these systems from being misused as “profit-making gadgets.”⁶⁵ In this sense, the potential of the legal database was conceived to be in the nature of a public good, with the legal profession playing an important role as steward.

¶40 Despite this early recognition of the need for the nonprofit sector to maintain some measure of control over the legal database, the commercial and proprietary hold on these systems became solidified by the early 1970s. Unfortunately, Harrington remained relatively silent on the eventual disassociation of OSBA from participation in the ownership and management of the research system that was to become LexisNexis. However, in his 1985 article in *Law Library Journal*, he noted that after 1970:

OBAR as an organization gradually faded from the picture. It sold its proprietary interest in the legal research applications of (Data) Central, plus the Ohio database to MDC. In return, it was entitled to receive certain royalties for ten years. Since the system was not yet earning revenues on which royalties could be paid, OBAR took advances against future royalties to enable it to pay its staff salaries and other expenses. It played an active role in the test marketing of the second-generation OBAR system in Ohio, and it assisted the MDC marketing staff in obtaining Ohio subscribers.⁶⁶

¶41 Harrington was retained as a consultant to Mead Data Central well into the 1980s, but the Ohio Bar Association had no further participation in the development or control of the system. Harrington resigned as executive vice president of OBAR in 1971, and its staff was dismissed or reassigned.⁶⁷ Most significantly, the

63. *Id.*

64. *Id.*

65. See *supra* text accompanying note 29.

66. Harrington, *A Brief History of Computer-Assisted Legal Research*, *supra* note 10, at 551–52.

67. Harrington also says that he returned to private practice and continued his consulting work with Mead Data Central until 1984. *Id.* at 552. Unfortunately, he does not tell us the circumstances under which he severed this relationship with Mead Data Central. He does indicate, however, that there was a major management shake-up in 1981.

association had relinquished its rights under the 1967 contract with Data Corporation,⁶⁸ rights that would have proven very valuable had they been retained.

¶42 Harrington goes on to recount the rapid growth in the system during the post-OBAR period.⁶⁹ By 1974, Mead Data Central renamed its system LEXIS and expanded the range of its database offerings, including among them a New York library, a federal tax library, a general federal library, as well as the original Ohio library. Libraries for federal securities, Texas, and Missouri materials were nearing completion as well. In 1980, it added the NEXIS databases consisting of news and business information, and it subsequently continued to expand the selection of databases, improve the operating software, and open regional sales offices throughout the United States.⁷⁰

¶43 But LEXIS did not retain sole possession of its monopoly status in the legal database industry for very long. Despite its earlier ambivalence for the prospects of electronic legal research, the West Publishing Company eventually entered the online world by introducing its WESTLAW system, first in 1975 with just the headnotes of case decisions and later with their full text. It is widely agreed that the attempt to computerize retrieval of only the headnotes was a disaster. As Robert Berring observed:

West had failed to grasp the nature of the new research tool, and the real significance of the new form of legal literature. Why would a lawyer bother to learn the mechanics of computer research to access the Digest System which had been designed and perfected as a manual, hard copy research tool? West soon caught on and began including the full-text of decisions in addition to the headnotes.⁷¹

¶44 Berring often makes the point that West's print-based system of case reports, enhanced by a comprehensive classification and indexing system, constituted powerful tools that set the law apart from other disciplines. This is a significantly different assessment from that of Harrington, who maintained that such indexing and classification systems were fundamentally flawed. While the superiority of unmediated full-text searching is the central assertion that characterizes Harrington's writings, he fails to refer to any research findings to support this viewpoint. In challenging the superiority of full-text searching, Berring fared somewhat better in that he relied on a strong body of research literature.⁷²

¶45 Regarding the economics of law practice, Berring notes how the ability to

68. See *supra* ¶ 23 for a description of the Ohio Bar Association's rights under its contract with Data Corporation.

69. See *id.* at 552–53.

70. For further information about the growth and development of LexisNexis, see THE LEXISNEXIS TIMELINE, available at http://www.lexisnexis.com/anniversary/30th_timeline_fulltxt.pdf (last visited Oct. 23, 2003).

71. Berring, *supra* note 4, at 38 (footnote omitted).

72. First, in questioning the efficacy and accuracy of free-text searching in large databases, Berring relied on a recognized body of research (including Daniel Dabney, *The Curse of Thamus: An Analysis of Full-Text Legal Document Retrieval*, 78 *LAW LIBR. J.* 5 (1986), and David Blair & M. E. Maron, *An Evaluation of Retrieval Effectiveness for a Full-Text Document Retrieval System*, 28 *COMM. ACM* 85

charge clients for particular research services was an important impetus to the growth of computerized systems in law firms:

LEXIS and WESTLAW also marketed their services to law firms as dispersible (i.e., chargeable to the client). This was a brilliant stroke for encouraging lawyers to utilize the systems. If one used a database, one paid by the unit of time, or the library used. LEXIS and WESTLAW costs could be allocated and passed directly to the client. In certain situations the cost might even be surcharged. Thus, use of the databases could actually generate profit. . . . No longer was legal information a simple overhead cost; now it was a cost item. It had to justify its existence by paying its way. To put it baldly, a firm would never charge a client for a portion of its annual subscription to the National Reporter System, but the firm might very well bill its client for its share of the cost of online information.⁷³

¶46 Berring also utilizes the metaphor of the “planned economy” and the “marketplace” to illustrate the structural differences between the print-based and computerized systems. On the one hand, Berring argues that the digest system was like a centrally planned economy:

The West Digest System was like a centrally planned economy. The practitioner could not obtain information directly from the cases, but was forced to go through the regulating mechanism of the Digest. This system was “efficient” because there were no alternatives; the buyer (practitioner) could not *find* the seller (sources of information) in the absence of the Digest. Also, the system was relatively leveling and egalitarian; it held fewer rewards for pure searching skills than does free-text searching. Reasonably competent searchers were able to find most relevant information, and only somewhat less relevant information than a very good searcher.⁷⁴

¶47 On the other hand, Berring likens the West and LEXIS computerized systems to a “marketplace” because the “practitioner can obtain information directly from the cases by means of Boolean search techniques without reference to a central authority.”⁷⁵

¶48 In summary, the legal database was neither technologically inevitable, nor directly related to user needs as understood by the retrieval research. And while there seemed to be a developing consensus among the early commentators in favor of a nonproprietary approach, the effective control of the system had quietly passed from the organized bar to a private company. As historian Mark

(1985)). Second, he looked at limitations of individual users and problems of training. Berring, *supra* note 4, at 50–54. Relying on various studies in the area of information retrieval, Berring pointed out that well-trained computer search experts are more effective full-text searchers than are subject-matter experts. *Id.* at 50. As a third issue, Berring asked “what kind of legal practice will cohere with a form of legal literature that makes judicial opinions available according to practical search skills and that interposes no mediating and integrating editorial judgment between the raw legal materials and the practitioner?” *Id.* at 43. Asking this question complements his contention that “the structure of the literature implies the structure of the enterprise.” *Id.* at 29.

73. Berring, *supra* note 35, at 197 (citations omitted).

74. Berring, *supra* note 4, at 55.

75. *Id.*

Poster observes:

The database may be the condition for the possibility of a truly educated populace, but technological determinists are alone in believing it will happen. New gadgets are developed in the context of existing needs, shaped by perceptions of situated individuals; they are restricted in their production and dissemination by ruling powers, and resisted by hegemonic cultural patterns and individual fears. The fact that it is technically possible for information to be available to everyone at little cost in no way ensures that it will be. In fact, under the aegis of private property all efforts are made to insure that it is not available.⁷⁶

¶49 The implications of the proprietary legal database for occupational structures, stratification, and work processes (issues that will be discussed in the following sections) must be considered in light of these factors.

Erosion of the Jurisdictional Boundaries of the Legal Profession

¶50 The traditional sociology of the professions was based on a narrow attention to the traits exhibited by occupational groups. Various referred to as “trait-theory” or the “ideal-typical model” of the professions, professional status was conferred on those occupations that met certain criteria.⁷⁷ Harris and Hannah list as among the traits a prolonged period of specialized training, a body of theoretical knowledge, a strong cohesive professional association, a strong service orientation, and an enforceable code of professional ethics.⁷⁸

¶51 This formulation has not been useful for studying issues of professionalization in the law. Trait theory takes the established professions such as law and medicine as starting points, looks at their surface features, and evaluates other would-be professions on this basis. Accordingly, there has been little critical inquiry regarding the status of legal work and its relationship to professional status. But professionalism should not be viewed as a simple binary proposition, professional or not. Nor should the concept be reduced to compliance with a checklist of criteria. Instead it should be recognized that an occupation’s status as

76. MARK POSTER, *THE MODE OF INFORMATION: POSTSTRUCTURALISM AND SOCIAL CONTEXT* 72 (1990).

77. See William J. Goode, *Community within a Community*, 22 AM. SOC. REV. 194, 194 (1957) (arguing that a characteristic of the established professions, and a goal of the aspiring occupations, is a “community of profession” with enumerated traits such as a sense of identity, common values, continuing status, agreed upon role definitions *vis a vis* both other members and outsiders, internal power over its members, a common language understood only partially by outsiders, and the ability to reproduce the community through the training and socialization of new members); William J. Goode, *Encroachment, Charlatanism and the Emerging Profession: Psychology, Sociology and Medicine*, 25 AM. SOC. REV. 902, 903 (1960) (reformulating the various characteristics as two core traits that are sociologically causal—a “prolonged specialized training in a body of abstract knowledge, and a collectivity or service orientation”—with the other traits being derivative).

78. MICHAEL HARRIS & STAN HANNAH, *INTO THE FUTURE: THE FOUNDATIONS OF LIBRARY AND INFORMATION SERVICES IN THE POST-INDUSTRIAL ERA* 93 (1993).

profession is multifaceted and subject to shifts.

¶52 Over the years there has been a wide range of criticisms of the traditional trait theory model of the professions on other grounds as well. For example, Magali Larson argues that “the ideal-typical approach seldom takes account of the concrete historical conditions in which groups of specialists have attempted to establish a monopoly over specific areas of the division of labor.”⁷⁹ She sees professionalization as “the process by which producers of special services sought to constitute *and control* a market for their expertise.”⁸⁰ In rejecting trait theory as an ideology that masks the political nature of professionalism and that renders questions of power as unproblematic, Larson argues:

While the attributes of special status and prestige imply that the professions are linked to the system of social stratification, the emphasis on the cognitive and normative dimensions of profession tends to separate these special categories of the social division of labor from the class structure in which they also are inserted.⁸¹

¶53 But Larson does not abandon consideration of the cognitive aspect of professional practice. In place of the ideal-typical model, she advances an alternative theory that stresses two critical components: the potential market for a professional service, and the cognitive basis to which the service is or can be tied.⁸²

¶54 A central aspect of the first component is the negotiation of the jurisdictional boundaries for the service. Andrew Abbott emphasizes that “jurisdictional boundaries are perpetually in dispute, both in local practice and in national claims,”⁸³ and he employs an ecological metaphor to illustrate the interacting system in which the allocation and reallocation of tasks among competitors takes place. Nancy Van House and Stuart Sutton suggest that Abbott’s ecological metaphor can be strengthened by adopting Bourdieu’s analysis of “fields” as a theoretical basis for understanding competition among professions.⁸⁴ In this sense, fields are thought of as a type of social space that contains networks of relations among people and institutions.

¶55 In surveying the broad landscape in which the enterprise of law is situated, Van House and Sutton’s suggestion is well taken, and the concept of “fields” helps to situate the numerous individuals, groups, organizations, and institutions who interact and, in Abbott’s terms, compete for jurisdiction. This usage is preferable to speaking of “the practice of law” which may be confused simply with lawyers,

79. MAGALI SARFATTI LARSON, *THE RISE OF PROFESSIONALISM: A SOCIOLOGICAL ANALYSIS*, at xiii (1977).

80. *Id.* at xvi.

81. *Id.* at xiii.

82. *Id.* at 18.

83. ANDREW ABBOTT, *THE SYSTEM OF PROFESSIONS: AN ESSAY ON THE DIVISION OF EXPERT LABOR 2* (1988).

84. See Nancy Van House & Stuart Sutton, *The Panda Syndrome: An Ecology of LIS Education*, 37 *J. EDUC. FOR LIBR. & INFO. SCI.* 131, 139–40 (1996) (citing PIERRE BOURDIEU, *IN OTHER WORDS: ESSAYS TOWARD A REFLEXIVE SOCIETY* (Matthew Adamson trans., 1990)); PIERRE BOURDIEU & LOIC J. D. WACQUANT, *AN INVITATION TO REFLEXIVE SOCIOLOGY* (1992)).

law firms, and the traditional legal institutions. The broader notion of “fields” directs attention to the totality of relevant participants, not simply those who hold higher positions in the hierarchy of the institutions within these fields. In this framework, the binary nature of “professional/not professional” resulting from a rigid application of trait theory appears oversimplified.

¶56 The importance of jurisdictional boundaries and the potential for emerging disputes is best appreciated by considering all of the strata and substrata of stakeholders in the legal field in a broad sense. There are lawyers, clients, support staff, and vendors. But these categories are too simplistic and need further elaboration. There are large, medium, and small law firms; corporate and governmental legal departments; members of the judiciary as well as individual lawyers engaged in solo or small group private practice. The clientele for legal services is similarly heterogeneous. There are large organizations spanning the private, public, and voluntary sectors, as well as small businesses and associations. Individual clients have a wide range of legal needs ranging from complex estate planning for the wealthy to public benefit problems for the poor. Many of these issues call for complex problem solving; others just involve the completion of simple forms. Paralegals, law librarians, and a whole range of support staff including legal secretaries, court reporters, records managers, and litigation support personnel perform a variety of roles and tasks. In addition, publishers and other vendors must be added into the field, especially insofar as they increasingly attempt to market goods and services directly to the ultimate consumers of legal services. There is now an increasing array of “do-it-yourself” or “self-help” materials offered in digital as well as print formats. Database vendors are also increasingly targeting the end user for their services. Finally, other occupations, such as real estate agents and tax accountants, claim jurisdiction over the services they provide, many of which overlap with legal services. It follows that any attempt to generalize about the changing divisions of labor within the legal field would be a gross oversimplification.

¶57 For Abbott, a major source of uncertainty, and a crucial impetus that triggers the renegotiating of existing jurisdictional boundaries, is technological change in the environment. In the field of law, this issue of how computer usage might intensify this competition and throw jurisdictional boundaries open to renegotiation is not new. In 1977, Marie Haug argued that computers were already encroaching on the professional domain of the legal profession, and that “among duties formerly performed by lawyers, computers in the United States now are employed in drafting and amending state legislation and recodifying municipal ordinances, screening prospective jurors as a step in jury selection, and research for legal precedents in case preparation.”⁸⁵

¶58 Haug predicted that the trend would continue and that professional autonomy would not survive the erosion of the knowledge monopoly that is facilitated when people can obtain such knowledge from a computer. She noted that

85. Haug, *supra* note 9, at 221.

“[I]awyers have already protested about the proliferation of do-it-yourself law books, covering such legal matters as writing a will or preparing a contract. When these and other services are available to the public by way of computer terminals, the need for using an attorney’s services will be further diminished.”⁸⁶

¶59 Haug’s prediction about the erosion of jurisdictional boundaries is supported by Michael Hartmann’s study of the German insurance industry, which yielded two basic findings. First, well-trained lay clerks were able to utilize the legal databases that were in widespread use in the industry.⁸⁷ While legal questions arise in the processing of every claim, the types of issues tend to become standardized and little legal clarification is needed. In this situation, the nonlawyer has a good chance of being able to successfully solve the problem because of experience with similar problems. But Hartmann also found that there was a tendency for the insurance companies to hire lawyers to fill the position of clerks:

Notwithstanding the limited advantages of using lawyers to process most claims, . . . [insurance companies] have increasingly hired lawyers to fill caseworker positions. . . . The rise in lawyer recruitment should not be seen as a result of work requirements. Rather, the reason lies mainly in companies’ attempt to acquire reserves of qualified employees at a time when the supply of lawyers is so large that they can be recruited at relatively low cost. The result is that in those rare, highly complex cases, the companies will have available a higher level of legal expertise.⁸⁸

¶60 Hartmann’s conclusion that the need for professional expertise is reduced when nonlawyers have access to legal databases is not diminished by the fact that it is increasingly lawyers themselves who are filling these nonprofessional clerical positions. Hartmann’s findings are consistent with Harold Wilensky’s viewpoint that the rationalization of knowledge leads to “the professionalization of everyone,”⁸⁹ and the second aspect of his findings only supports the deskilling and proletarianization theories discussed later in this article.⁹⁰

The Bipolar Structure

86. *Id.* at 222.

87. Hartmann, *supra* note 9, at 432–36.

88. *Id.* at 431.

89. Harold L. Wilensky, *The Professionalization of Everyone*, 70 AM. J. SOC. 137 (1964). *See also* Herbert M. Kritzer, *The Professions Are Dead, Long Live the Professions: Legal Practice in a Postprofessional World*, 33 LAW & SOC’Y REV. 713, 748–49 (1999) (“To the degree that current changes result from the combination of increased rationalization in knowledge and the growing power of information technology, the shape of the world with which today’s formal professionals will have to cope will depend on yet unseen developments in that rationalization process and the information technologies that have exploded recently.”). Kritzer uses the term “postprofessional world” to describe the new environment.

90. *See infra* ¶¶ 69–84.

of the Legal Profession

¶61 The polarization of the legal profession is nothing new. Jerold Auerbach's historical overview of stratification in the profession links polarization to the broader inequalities in society, and he argues that "[s]tratification enabled relatively few lawyers, concentrated in professional associations, to legislate for the entire profession and to speak for the bar on issues of professional and public consequence."⁹¹ Michael Powell's institutional analysis of the New York Bar Association underlines the important role of professional associations and the ability of upper-class elite institutions to exercise influence under pluralist structures.⁹² The differentiation between an urban elite of advisors to corporate and financial interests from general practitioners who handle a broad range of matters primarily for individuals has been emphasized by numerous commentators.⁹³ In their study of the Chicago bar, Heinz and Lauman describe an increasingly stratified system with a growing separation between the corporate sector and the personal services/small business sector.⁹⁴ This emphasis on differentiation is continued by Robert Nelson,⁹⁵ who shows how corporate law firms and corporate legal departments have grown faster than the profession as a whole, resulting in firms that are more competitive, entrepreneurial, and oriented toward efficiency:

Firms added new specialties, employed more associates and paralegals, and sought expansion into new geographical and specialty markets by opening branch offices in other cities and countries. They implemented earlier and more intensive specialization. They raised expectations about hours billed. Many cut back on the proportion of associates promoted to partner and many removed or demoted unproductive partners. These strategic moves have been devised and supervised by a new stratum of firm leaders who self-consciously work as a management team, and who deploy far more sophisticated systems for accounting and information retrieval than did their predecessors.⁹⁶

¶62 Wayne Hobson argued that large law firms became essential only when the main clients of business lawyers became large corporations who needed legal supervision on a continuous basis.⁹⁷ Consequently, New York City, as the center of financial and corporate activity, had the greatest concentration of large law firms.⁹⁸

91. JEROLD S. AUERBACH, *UNEQUAL JUSTICE* 4 (1976).

92. See generally MICHAEL J. POWELL, *FROM PATRICIAN TO PROFESSIONAL ELITE: THE TRANSFORMATION OF THE NEW YORK CITY BAR ASSOCIATION* (1988).

93. See, e.g., JOEL F. HANDLER, *THE LAWYER AND HIS COMMUNITY: THE PRACTICING BAR IN A MIDDLE-SIZED CITY* (1967).

94. See generally JOHN P. HEINZ & EDWARD O. LAUMAN, *CHICAGO LAWYERS: THE SOCIAL STRUCTURE OF THE BAR* (1982).

95. See ROBERT L. NELSON, *PARTNERS WITH POWER: THE SOCIAL TRANSFORMATION OF THE LARGE LAW FIRM* (1988); Robert L. Nelson, *The Futures of American Lawyers: A Demographic Profile of a Changing Profession in a Changing Society*, 44 *CASE W. RES. L. REV.* 345 (1994) [hereinafter Nelson, *Futures of American Lawyers*].

96. Nelson, *Futures of American Lawyers*, *supra* note 95, at 355.

97. See generally Wayne K. Hobson, *Symbol of the New Profession: Emergence of the Large Law Firm, in THE NEW HIGH PRIESTS: LAWYERS IN POST-CIVIL WAR AMERICA* 8 (Gerald W. Gawalt ed., 1984).

Carole Silver's recent study on the internationalization of the large law firms⁹⁹ places these issues within the context of the recent trend toward globalization.

¶63 While there is a rich body of literature on the nature of the differentiation and polarization within the legal profession,¹⁰⁰ little work has been done connecting this issue with the rapid infusion of information technology into legal practice. But Calhoun and Copp suggest that the capacity of large systems, such as LexisNexis and Westlaw, to research the legal literature reduces the advantages of those most versed in retained learning of the law.¹⁰¹ However, in the context of a large firm, which has the ability to employ a broader division of labor, the productivity of the principal lawyers is apt to increase.¹⁰² They predict an increased division of labor, which should induce a growth in the size of law firms, exacerbating the polarization of the profession by increasing the earning power of some lawyers, while further marginalizing others. "The legal profession is likely to experience further polarization, in which the best qualified and luckiest members move into even more attractive positions with the aid of computers, while the less successful find computers devaluing their training or skills and allowing competition from various sorts of paraprofessionals."¹⁰³

¶64 Calhoun and Copp argue this polarization will occur for the very reason that computers increase efficiency and productivity. These efficiency increases allow fewer people to do the work previously done by many and will lead to an increased bureaucratization across the profession. Accordingly, they predict that lawyers are more likely to work for salaries inside large organizations rather than as independent professionals with direct relationships to clients, and that within these large organizations, they will become more susceptible to performance monitoring and evaluation in terms of efficiency criteria.¹⁰⁴

¶65 The question of how information technology in general, and databases in particular, affect the existing hierarchies within the profession is difficult to answer in a precise quantitative sense for several reasons. First, there is the problem of operationalization of concepts. How are various locations within the stratified hier-

98. *Id.* at 11.

99. Carole Silver, *Globalization and the U.S. Market in Legal Services—Shifting Identities*, 31 *LAW & POL'Y INT'L BUS.* 1093 (2000).

100. *See, e.g.*, MARC GALANTER & THOMAS M. PALAY, *TOURNAMENT OF LAWYERS: THE TRANSFORMATION OF THE BIG LAW FIRM* (1991) (pointing out that while in the early 1960s there were only 38 firms with 50 or more lawyers and an estimated total number of 2850, the figure had grown tenfold by 1981, and to more than 100,000 by 1991); John P. Heinz et al., *The Changing Character of Lawyers' Work: Chicago in 1975 and 1995*, 32 *LAW & SOC'Y REV.* 751, 765 tbl. 3 (1998) (estimating that in 1975, 53% of legal services was consumed by the corporate client sector compared to 40% for the personal/small business sector, and that by 1995, the corporate sector's share grew to 64%, compared to 29% for the personal/small business sector).

101. Calhoun & Copp, *supra* note 11, at 240.

102. *Id.* at 240–41.

103. *Id.* at 251.

104. *Id.* at 252. The contrary viewpoint was articulated by Diana McCabe, who argued that computerized databases would equalize the existing hierarchies in the profession. *See supra* ¶ 35.

archy identified and measured?¹⁰⁵ Second, the gathering of reliable data regarding revenue or profits is difficult, since law firms are private entities. The *American Lawyer* has ameliorated this problem by gathering data and developing a methodology to measure various attributes of the largest one hundred law firms. Its measures include aggregate revenue, revenue generated per associate, and profits per equity partner, and are published annually in the magazine's "Am Law 100" report. Statistical compilations derived from this data could help form a baseline from which some working hypothesis could be developed. But this compilation is limited to the largest hundred firms. While changing concentration levels within these largest firms could be tracked with this data, it remains limited in scope and is unable to address stratification issues within the broader profession. While the American Bar Association's *Lawyers' Statistical Report*¹⁰⁶ includes aggregate information across the entire professional spectrum, it lacks the fine grain of the "Am Law 100" and is not as current.

¶66 A third problem is presented in terms of how levels of computerization, technological adaptation, or database usage should be operationalized. The internal budgets of law firms are not readily available, much less their LexisNexis or Westlaw account information. This gap demonstrates the marked advantage that the database vendors have in generating useful knowledge. They *do* have access to this information and are no doubt utilizing it to its fullest potential for purposes of marketing, product development, and general planning. But a further review of the literature on law office management could possibly identify budgeting models or other "rules of thumbs" that are utilized in practice. It is also possible that survey data could be used to construct a reasonable model for analysis. Finally, there is the general limitation that even a strong showing of correlation does not imply any type of causation.

¶67 But other methods could be utilized that are less quantitative. For example, one could study attributes of lawyers who have attained influential positions in bar associations, judicial selection committees, various boards and commissions, or other appointments. To what degree are persons who have attained these positions associated with the larger law firms? This information would be readily available through a variety of sources. On the other side of the occupational divide, what is the relationship between lawyers who have been subject to public discipline and their location in the professional hierarchy? A reasonable hypothesis is that while bar officials and holders of elite positions are predominantly from the largest firms, those receiving sanctions from ethics committees are more likely

105. Ideally, a Gini Coefficient, a measure of concentration widely used in stratification studies, could be constructed which would measure the concentration levels in the legal profession along a variety of attributes including revenue and profit measures. A study utilizing this methodology would provide a useful addition to the research literature on the legal profession.

106. BARBARA A. CURRAN ET AL., *THE LAWYER STATISTICAL REPORT: A STATISTICAL PROFILE OF THE U.S. LEGAL PROFESSION IN THE 1980s* (1985).

engaged in a small private practice.¹⁰⁷

¶68 Despite some of these methodological problems, interactions between information technologies and stratification in the profession are important “second-level effects” and should be given additional attention by researchers.

Information Technology and the Labor Process

¶69 By the early 1960s, several commentators were pointing to the rise of the “white collar” sector as evidence of a de-proletarianization of the work force.¹⁰⁸ Daniel Bell’s postindustrial thesis continued and expanded on these arguments.¹⁰⁹ In positing knowledge as the crucial strategic resource of postindustrial society, Bell argued that knowledge and its applications replace labor as the source of added value in the national product. In substituting this “knowledge theory of value” for the “labor theory of value,” the crucial variables for Bell become information and knowledge, not labor and capital.¹¹⁰ Associated with this transformation was a decidedly optimistic view of the labor processes that promised more rewarding work, higher skill levels, and more leisure time.

¶70 Harry Braverman’s *Labor and Monopoly Capital: The Degradation of Work in the Twentieth Century*¹¹¹ was an important milestone in both demonstrating problems with the de-proletarianization thesis and countering Bell’s optimistic vision of the future of work. Arguing that technical advances would tend to deskill rather than reskill the work force, Braverman anticipated a continuation of the logic of capital, which is primarily aimed at the containment of costs. In this view, the informatisation of society is only the latest stage in capitalist development, and continuity with the past practices and relationships were emphasized.

¶71 Michael Harris and Stan Hannah frame the debate between Bell and Braverman as a direct confrontation:

The stage was set for a major confrontation between Braverman and Bell, for Braverman’s

107. This is not to imply that lawyers in large firm practice are more ethical. It is to suggest that many of the disciplinary problems lawyers encounter stem from lax law office management practices or overwhelming personal problems. In the larger firms, practitioners are insulated from these concerns due to the broader division of labor and availability of specialty staff who manage client trust accounts, calendar control, and client relations. They are also relatively interchangeable with other members of the firm, a luxury that the sole practitioner cannot afford, so that personal problems are less likely to result in conduct that reaches the attention of the ethics examiners.

108. See, e.g., Kurt Mayer, *The Changing Shape of the American Class Structure*, 30 SOC. RES. 458, 460 (1963) (arguing that the middle class was losing its class character altogether and that a condition of differentiation without stratification was beginning to emerge). See generally Clark Kerr et al., *INDUSTRIALISM AND INDUSTRIAL MAN* (1960) (arguing that while new technology created a highly mobile society, forcing the worker to shift location and occupation, this forced old paternalistic relations to break down resulting in a greater sense of professionalism for the worker).

109. See generally BELL, *THE COMING OF POST-INDUSTRIAL SOCIETY*, *supra* note 13.

110. Bell, *The Social Framework of the Information Society*, *supra* note 13, at 506.

111. HARRY BRAVERMAN, *LABOR AND MONOPOLY CAPITAL: THE DEGRADATION OF WORK IN THE TWENTIETH CENTURY* (1974).

work directly contradicted Bell's scenario in almost every particular. That is, where Bell forecast a significant reorganization of the workplace in the new "game between persons," Braverman saw only further centralization and management authoritarianism. Where Bell projected a workforce that would be considerably "upskilled," Braverman insisted that the workers would be further "deskilled." Where Bell glimpsed only more regarding and fulfilling work, Braverman noticed intensifying worker alienation and the steady "degradation" of "work."¹¹²

¶72 The issue of deskilling versus reskilling has continued to frame issues about the nature of work in contemporary society. But there is increasing agreement that both positions are probably true in different circumstances and in different contexts. The deskilling versus reskilling issue needs to be approached in the context of particular locations in the occupational hierarchy; it is deeply interwoven into questions of race and gender, and it is constantly shifting.

¶73 To utilize this shifting approach is not to say that the truth lies somewhere in between the accounts of Braverman and Bell. As Manuel Castells points out, there is an increasing polarity between a core work force of elite information managers and "a *disposable labor force* that can be automated and/or hired/fired/offshored, depending upon market demand and labor costs."¹¹³ Are these phenomena applicable to work processes inside organizations involved in the field of law or is there something exceptional about the nature of legal work that provides insulation from these pressures?

¶74 Shoshanna Zuboff asks what effect information technology will have upon the "grounds of knowledge" as it is applied to the production process.¹¹⁴ Instead of following either the deskilling or reskilling scenario, she proposes a third approach:

By redefining the grounds of knowledge from which competent behavior is derived, new information technology lifts skill from its historical dependence upon a laboring sentient body. While it is true that computer-based automation continues to displace the human body and its know-how (a process that has come to be known as *deskilling*), the informatizing power of the technology simultaneously creates pressure for a profound *reskilling*.¹¹⁵

¶75 Zuboff argues that "information technology is characterized by a fundamental duality that has not yet been fully appreciated,"¹¹⁶ and she makes a careful distinction between "automating" and "informating."

On the one hand, the technology can be applied to automating operations according to a logic that hardly differs from the 19th century machine system—replace the human body with a technology that enables the same processes to be performed with more continuity and control. On the other, the same technology simultaneously generates information about the underlying productive and administrative process through which an organization

112. MICHAEL HARRIS & STAN HANNAH, INTO THE FUTURE: THE FOUNDATIONS OF LIBRARY AND INFORMATION SERVICES IN THE POST-INDUSTRIAL ERA 113 (1993).

113. MANUEL CASTELLS, THE RISE OF THE NETWORK SOCIETY 272 (1996).

114. SHOSHANA ZUBOFF, IN THE AGE OF THE SMART MACHINE: THE FUTURE OF WORK AND POWER 57 (1988).

115. *Id.*

116. *Id.* at 9.

accomplishes its work.¹¹⁷

¶76 These two capacities are not opposites, but are hierarchically integrated. According to Zuboff, “Informating derives from and builds upon automation. Automation is a necessary, but not sufficient condition for informating.”¹¹⁸ Building on Zuboff’s recognition of the contingent nature of deskilling and reskilling, Manuel Castells places the debate in an historical context. He identifies three stages of office work and suggests that a fourth may be emerging. In the first stage, present in the 1960s and 1970s, mainframes were used for the batch processing of data. Specialists in centralized computing centers were the hubs of a rigid and hierarchical system of control. In this period, the work became standardized and routine.¹¹⁹ In the second stage, microcomputers made their appearance in the early 1980s. While they were still supported by centralized data banks and support staffs, employees took more control of the work process through direct interaction with the computer.¹²⁰ By the mid-1980s, advances in telecommunications and microcomputers led to networks of workstations. In this third phase, multiple microcomputers were able to interact with each other as well as mainframes.¹²¹ While Castells concurs with Braverman’s assessment of deskilling in the first phase, he argues that the second and third stages were very different environments and that further investigation is needed.¹²²

¶77 Castells also envisions an emerging fourth stage, that of the mobile office. Various tasks may now be performed in alternative locations via networking and powerful transmitting devices, and Castells argues these developments will enhance the logic of development he is proposing and will deepen the transformation of work as he describes.¹²³ While information technology may be defining work processes and occupational structures, many of these jobs are being upgraded in skill, wages, and working conditions. At the same time, other jobs are being phased out by automation. Castells identifies a “bifurcation of work patterns and polarization of labor,” the source of which is “socially determined and man-

117. *Id.*

118. *Id.* at 11. On the issue of office automation, see also Abbe Mowshowitz, *The Social Dimension of Office Automation*, 25 *ADVANCES COMPUTERS* 335, 378–79 (1986):

Our principal point is that the lessons of the factory are the guiding principles of office automation. In large offices, clerical work has already been transformed into factory-like production systems. The latest technology—office automation—is simply being used to consolidate and further a well-established trend. For most clerical workers, this spells an intensification of factory discipline. For many professionals and managers, it signals a gradual loss of autonomy, task fragmentation and closer supervision—courtesy of computerized monitoring. Communication and interaction will increasingly be mediated by computer. . . . Work activities will become more abstract as individuals interact with computer terminals and opportunities for direct social interaction will diminish.

119. CASTELLS, *supra* note 113, at 246.

120. *Id.* at 247.

121. *Id.*

122. *Id.* at 246.

123. *Id.* at 247.

agerially designed in the process of the capitalist restructuring.”¹²⁴

¶78 This pattern of bifurcation and polarization of professional labor is further analyzed by Douglas Litowitz in a far-reaching analysis of the proletarianization of legal work in which he likens young associates in large law firms to factory workers who perform alienated labor.¹²⁵ He points out that Marx predicted that professions would eventually be turned into business enterprises, just as the system of crafts did after the decline of the guild system.¹²⁶ The argument follows that as law becomes more like a business, it loses its former guild-like qualities such as collegiality, mentoring, and loyalty to the profession. It also follows that the profession is increasingly divided into two classes—partners with equity stakes in the firms who own and control the legal work, and those other lawyers who work for the firm, the associates. Litowitz points out that this division is not visible in the profession’s outward appearance to the public, and that the label “associate” obscures the attorney’s true status as a wage-worker and carries the false impression that the attorney is “associated” with the owners of the firm, when in fact the vast majority of young lawyers are employed at will and can be fired for any reason.¹²⁷ More disturbing is Litowitz’s contention that merit as an attorney is losing ground as the criterion for advancement into partnership status:

Typically, young attorneys are made “associates” at law firms, where job stability is a function of two variables: the number of billable hours that one generates, and the number of clients that one can attract. Nowadays, mere competence as a attorney is not sufficient for advancement, because in addition one must be able to attract clients to the firm. That is, one must be more than a mere professional; one must also be a source of business—one must sell oneself and one’s firm.¹²⁸

¶79 Litowitz continues by showing that the “four types of alienation which

124. *Id.* at 251. In MANUEL CASTELLS, *THE INFORMATIONAL CITY: INFORMATION TECHNOLOGY, ECONOMIC RESTRUCTURING AND THE URBAN-REGIONAL PROCESS* 23–35 (1989), he describes the restructuring of capitalism in the 1970s that resulted from a recurring series of crises, identifying a new model, which he says has come to characterize most of the international system by the late 1980s, as having three essential elements. First, the social pact, which formed the basis of the previous restructuring, was negated. This was accomplished via “the appropriation by capital of a significantly higher share of surplus from the production process,” and is manifest through higher productivity derived from technological innovation, lower wages, reduced social benefits, decentralization of production, the weakening of unions and the restructuring of labor markets. The second element in the new transformation was the trend toward deregulation accompanied by privatization of the public sector, regressive tax policy changes and the stimulation of a high-technology defense sector. This is characterized as a shifting emphasis “from political legitimation and social redistribution to political domination and capital accumulation.” *Id.* at 25. The third element is “the accelerated internationalization of all economic processes to increase profitability.” *Id.* at 26.

125. Litowitz, *supra* note 11, at 144.

126. *Id.*

127. *Id.* at 145. This homogeneity of the legal profession is promoted both by media representations of successful high profile lawyers as well as by proponents of “lawyer-bashing.” This is usually directed at trial lawyers, personal injury specialists, criminal defense counsel, security fraud counsel, and others who are not directly working to advance the interests of large corporations.

128. *Id.* at 146.

manifest themselves under a capitalist system where the means of production are privately held”¹²⁹

are present in the law firm. First, associates are alienated from the product of their labor, where they are given a small part of a larger project to work on. Litowitz analogizes the many forms of routine legal work to an assembly-line worker who repeatedly performs a small operation but has no relationship to the final product or its ultimate consumer.¹³⁰

¶80 While Litowitz does not directly discuss the role of information technology in the firm, it should be noted that it is exactly these areas of alienation-inducing routine legal work that are most likely to be carried out in the computerized environment. The legal database is most efficient when carrying out tasks such as cite-checking, reviewing the current status of a case or statute, doing a multistate review of similar statutory provisions, checking property records, or searching for cases decided by a particular judge or about a particular party.

¶81 The second type of alienation is the separation from one’s own productive power, a phenomenon associated with the selling of one’s productive power in return for wages. Litowitz argues this notion is “hammered home by the requirement that [the lawyer] keep track of every movement so that billable time is maximized.”¹³¹ This monitoring is extended by the increased use of electronic billing systems that allow firms to keep track of every lawyer and allow comparison with the others in terms of profitability.

¶82 The electronic database heightens this facet of alienation as fine-grained time keeping, along with maintaining trails to a particular task, become functions increasingly available in today’s database systems. While this capability is represented as a useful feature for allocating costs to different projects, it also increases the amount of information that is captured about the work patterns and habits of individual operators. But the new technology does more than conduct surveillance,¹³² it reorganizes the work itself along the logic of the demands of the technical system.¹³³ Andrew Clement describes the process in which “those who work with information in large organizations are . . . being subjected to

129. *Id.* (citing KARL MARX, *THE ECONOMIC AND PHILOSOPHIC MANUSCRIPTS OF 1844* (essay on “Estranged Labor”), reprinted in *THE MARX-ENGELS READER* (Robert Tucker ed., 1978)).

130. *Id.* at 146–47.

131. *Id.* at 148.

132. See LEXISNEXIS VERSION OF TIME MATTERS, at <http://www.lexisnexis.com/timematters/features.shtml> (last visited Oct. 25, 2003); ORGANIZE YOUR LEXISNEXIS CLIENT RESEARCH THROUGH TIME MATTERS, at <http://www.lexisnexis.com/timematters/whitepaper.pdf> (last visited Oct. 25, 2003); Data.Txt Corp., *Time Matters 5.0*, at <http://www.timematters.com/> (last visited Oct. 25, 2003) (containing promotional materials and product descriptions). These promotional materials for “a complete practice management system that is fully integrated with powerful LexisNexis content” describe how information from the following areas may be combined: legal research, case/client management, calendar, e-mail and task management, docketing, document management, document automation, and billing/expense tracking. While the efficiency-enhancing aspects of these capabilities are emphasized, the implications for enhanced managerial control and tracking are obvious.

133. See generally Phillip E. Agre, *Surveillance and Capture: Two Models of Privacy*, 10 INFO. SOC. 127 (1994).

greater managerial control through their use of information systems.”¹³⁴ He argues that “[o]ffice automation greatly increases the ability of managers to extend their control over subordinates in ways that were never possible before.”¹³⁵ Using Richard Edwards’ distinction between technical and bureaucratic control, Clement says:

The shift to an electronic infrastructure for office work allows managers to adopt additional control mechanisms that are embedded within the computer systems themselves. Such technical forms of control are well established in some areas of clerical work. . . . As automation is introduced at progressively higher organizational levels, there are already signs that sophisticated versions of the same basic techniques are being applied there as well.¹³⁶

¶83 The third form, alienation from species being, refers to man’s unique ability to perform productive labor even when free from physical needs. Litowitz also finds this aspect of alienation to be present in the law firm due to the contradiction between engaging in legal work in return for wages and seeing legal work in other, more altruistic terms.¹³⁷ Litowitz finds the fourth form, alienation from others, present in the law firm by virtue of the inherent competition that is fostered between associates. In this situation, “lawyers rarely see each other as persons,” but instead in some oppositional capacity. This alienation runs from other associates, to partners, to opposing counsel and is based on a “limited supply of clients held by an elite group of older lawyers.”¹³⁸

¶84 Litowitz concludes with a series of recommendations to change the profession for the better (young lawyers should be better mentored, given more meaningful work, afforded significant client contact, and not pressed for billable hours as much), readily admitting that they are at odds with the underlying profitability of the firm, but concluding that these are costs that the legal profession should be prepared to bear.¹³⁹ While both deskilling and reskilling are taking place in the practice of law, patterns of polarization are emerging in the distribution of these phenomena. For those who are outside of the highest echelons of the legal profession, Braverman’s theory of the degradation and deskilling of work continues to have continuing vitality. And both aspects of Zuboff’s duality of information technology (automating and informing)¹⁴⁰ are increasingly turned against the information worker by the electronic database. While automation has traditionally led to the deskilling of the office worker, the database generalizes this process throughout the organization by expanding the areas of practice that may be routinized, standardized, and rationalized. The process of informing is also turned against the information worker, who comes

134. Andrew Clement, *Office Automation and the Technical Control of Information Workers*, in *THE POLITICAL ECONOMY OF INFORMATION* 217, 218 (Vincent Mosco & Janet Wasko eds., 1988).

135. *Id.* at 223.

136. *Id.* (citing EDWARDS, *supra* note 15).

137. Litowitz, *supra* note 11, at 148–49.

138. *Id.* at 149.

139. *Id.*

140. See *supra* notes 116–18 and accompanying text.

under increasing monitoring and surveillance by the database and its related systems which are designed to capture information about the work process at increasingly fine-grain levels of detail. Databases should no longer be thought of as one-way information systems from which a user may extract data. The systems are developing into two-way monitoring systems where data is captured about the user every time the system is accessed. These shifts are occurring in an environment marked by the enhanced capability of technical systems to both rationalize and monitor routine workplace activities at ever-higher levels of the organizational structure.

Conclusion

¶85 Three areas in which changes in information technology could affect the fields of law have been identified for analysis: the jurisdictional boundaries of the legal profession, the hierarchical structure within the legal profession, and the intraorganizational labor processes. While these “second-level effects”¹⁴¹ have been separately discussed in this article, they are closely intertwined. They are disaggregated for closer inspection at the risk of the oversimplification that might result from viewing them as isolated phenomena.

¶86 But there are common themes that consistently run through all three of these areas. One such unifying principle is Berring’s contention that “the structure of the literature implies the structure of the enterprise.”¹⁴² Berring’s argument—that the forms of legal publishing are more than mere vehicles for the transmission of legal knowledge, they also are direct factors in the development of that knowledge—recurs throughout these discussions.

¶87 The second recurring issue is addressed by Litowitz, who asks whether technology has improved the practice of law.¹⁴³ His response is in the negative; recent advances in technology have made the practice of law much more difficult. To support his position, Litowitz invokes the “Paradox of Technology, which is that the technological apparatuses which are designed to save time actually consume time.”¹⁴⁴ Following references to Veblen’s critique of the typewriter¹⁴⁵ and Freud’s of the railroad,¹⁴⁶ Litowitz points out that “each new device raises our

141. See *supra* text accompanying note 3.

142. See *supra* text accompanying note 5.

143. See Douglas E. Litowitz, *Has Technology Improved the Practice of Law?* 21 J. LEGAL PROF. 51 (1997).

144. *Id.* at 52. Litowitz is using “information technology” in a much broader sense, not limiting himself to the database or practices surrounding legal research. He is also looking at what were identified earlier as “first order effects,” questioning whether even these efficiency assumptions are warranted.

145. THORSTEIN VEBLEN, *THE INSTINCT OF WORKMANSHIP, AND THE STATE OF THE INDUSTRIAL ARTS* 315–16 (new ed., B.W. Heusch 1922):

Any technological advantage gained by a competitor becomes a necessity to all the rest, on pain of defeat. The typewriter is, no doubt, a good and serviceable contrivance for the expedition of a voluminous correspondence, but there is no reasonable doubt but its introduction has appreciably more than doubled the volume of correspondence necessary to carry on a given volume of business, or that it has quadrupled the necessary cost of such correspondence. And the expedition of

expectations, and once raised expectations are rarely lowered.”¹⁴⁷ As technologically enhanced forms of communication come to supplant person-to-person communications, Litowitz argues that law becomes less of a collegial profession. This process has a deep effect on those involved in legal work as cell phones, pagers, and e-mail enhance connectedness and mobility, and blur the line between being “at work” and “out of the office.”

The existence of these connecting devices ensures that the attorney is never totally free, never in a non-space. Because of the new technology, the line between workplace and non-workplace diminishes to the vanishing point, where the lawyer often cannot tell whether he is really at work or not, since he occupies a sort of netherworld between work/non-work and office/home.¹⁴⁸

¶88 The third recurring theme is that these issues present a framework for testing the earlier claims of the proponents of technological change in the field of law. Reviewing literature from the 1960s and 1970s helps to make these claims explicit. While many of these claims were in the nature of first-level efficiency gains, others had more wide-ranging implications. Strong claims were made that the use of electronic databases in legal research would increase the skill levels of attorneys, decrease the hierarchies that divided the legal profession, lower the cost of legal work, and allow the savings to be passed on to clients, thereby improving the overall administration of justice. But Richard Haigh asks: “If law offices are now more efficient because of computers, why are (1) clients less satisfied than ever with their legal services; (2) average accounts per client increasing; and (3) law office costs increasing beyond those expected by inflation?”¹⁴⁹

¶89 The final recurring theme is that of the commodification of legal informa-

correspondence by stenographer and typewriter has at the same time become obligatory on all business firms, on pain of losing caste and so of losing the confidence of the correspondents. Of the telephone much the same is to be said, with the addition that its use involves a very appreciable nervous strain and its ubiquitous presence conduces to an unremitting nervous tension and unrest wherever it goes.

146. SIGMUND FREUD, *CIVILIZATION AND ITS DISCONTENTS* 47–48 (Joan Riviere trans., Hogarth Press 1957) (1930):

If there were no railway to make light of distances my child would never have left home and I should not need the telephone to hear his voice. If there were no vessels crossing the ocean my friend would never have embarked on his voyage and I should not need the telegraph to relieve my anxiety about him.

147. Litowitz, *supra* note 143, at 53.

148. *Id.* at 55. This type of new mobility raises interesting possibilities for the cost-conscious law firm. As Litowitz points out, it is only inevitable that somebody will ask whether each attorney really needs a separate and private office. *Id.* at 56. It is not too difficult to envision the “well connected associate” working in Castells’ fourth stage of office automation. *See supra* ¶ 77. In this world, the private office becomes an expensive luxury reserved for partners in the firm. In the flexible office, portable carrels could accommodate the busy associate who needs temporary workspace, and well-appointed meeting rooms would be available should the need arise to meet with a client. The law library as physical space would also fare poorly in this reconfiguration. The proliferation of the electronic database extends these spatial concerns to the activity of legal research itself.

149. Haigh, *supra* note 6, at 259 n.53 (citations omitted).

tion resources. The provision of legal services is becoming increasingly commodified and subject to the rationalist logics of the private market. This observation is not to imply that legal services were never commodities, nor to deny that legal services have traditionally been fee-based. But there have traditionally been counterpressures within the legal profession itself to slow down and even resist this logic of commodification. These counterpressures are tied in with the public service aspect of the legal work that has always been an important component of lawyers' claims to professional status. But this publicly mediated aspect of professional services, along with the collegial, even craft nature of the legal enterprise, is increasingly on a collision course with law as a valuable service commodity in the networked society. This trend runs in parallel with the commodification of the legal database as well as with the general rationalization of knowledge.

¶90 As the normative basis of professional practice erodes and as the hierarchies within both the practice of law and within individual firms continue to widen, the legal profession may find it more and more difficult to maintain its monopoly on legal knowledge. These trends may be thought of as a "paradox of commodification" in the field of law. Efforts to make the enterprise of law more profitable may be the very factors that are slowly eroding the legitimate foundations of the profession. Faced with competitive pressures to cut costs and enhance efficiency in order to improve their price/cost ratios, the proletarianization of legal work, as most vividly envisioned by Litowitz, will intensify. The logic of work within the firm will be increasingly mediated by ever more sophisticated databases and other devices that increasingly have the ability to track the work process simultaneously with its execution.¹⁵⁰ At the same time, pressures to relax the traditional limitations placed on the expansionist tendencies of the entrepreneurial firm, such as the move toward multidisciplinary practice, will intensify.¹⁵¹ Legal services will become unaffordable for growing sectors of the population, and this situation will erode the normative claims of the profession. Other providers will attempt to fill in the growing "legal-services gap," but will be met with stiff opposition and the threat of legal sanctions from an organized bar intent on preserving its special monopoly of knowledge. The recent attempt by the Texas Unauthorized Practice of Law Committee to stem the distribution of consumer-oriented self-help software foreshadows this danger.¹⁵²

¶91 But like the appearance of the electronic database a quarter-century ago, this scenario is neither inevitable nor technologically determined. While information technology, including the database as well as other implements of office automation, may help facilitate the related processes of commodification, ration-

150. As the example of LexisNexis' use of Time Matters illustrates, the ability to monitor work activities cuts across the clerical/professional divide and presents itself as a fully integrated system that measures research activities as well as more routine clerical tasks. See *supra* note 132.

151. For a selection of articles about multidisciplinary practice, see *The Future of the Profession: A Symposium on Multidisciplinary Practice*, 84 MINN. L. REV. 1083 (2000).

152. See generally Trosow, *supra* note 8.

alization, polarization, and disintegration, the process itself is, as Manuel Castells puts it, “socially determined and managerially designed in the process of the capitalist restructuring.”¹⁵³ Given this important role for human agency, those of us who populate the various legal fields bear the ultimate responsibility for realizing such alternative futures as we may choose to envision.

153. CASTELLS, *supra* note 113, at 251.