

JURIMETRICS AND THE ASSOCIATION OF AMERICAN LAW SCHOOLS

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- Item: "Electronic Brains and the Legal Mind: Computing the Data Computer's Collision with the Law."
—article by Honorable John R. Brown, United States Circuit Judge, Fifth Circuit, 71 YALE L.J. 239 (1961).
- Item: "Simpler Language Necessity for Electronics to Aid Law."
—headline from Los Angeles Times, Oct. 31, 1960, pt. III, p. 1.
- Item: "Programming Shows Promise for Training Lawyers: A Report on an Experiment."
—article by Professor Charles D. Kelso, 14 J.LEGAL ED. 243 (1961).
- Item: "The Electronic Searching of Law."
—article by Professor F. Reed Dickerson, 47 A.B.A.J. 902 (1961).
- Item: The Program, American Bar Association Convention, St. Louis, Aug. 7-11, 1961:
"Tuesday, August 8, 2:00 P.M.
"Speaker: Richard F. C. Hayden, Judge, Los Angeles Municipal Court and Past Chairman, Electronic Data Retrieval Committee, 'How Electronic Computers Work: A Lawyer Looks Inside the New Machines'
"Speaker: Lee Loevinger, Assistant U. S. Attorney General, Antitrust Division, Washington, D. C., 'Jurimetrics and the Science of Prediction in the Field of Law'
"Speaker: Layman E. Allen, Professor of Law, Yale Law School and editor of M.U.L.L.—Modern Uses of Logic in Law, 'Uses of Symbolic Logic in Law Practice'."
- Item: "Justice Department Enlists Computers in War on Price-Rigging"
—headline from Wall Street Journal, Oct. 10, 1961, p. 1.
- Item: "Every Taxpayer to Have Number."
—headline from New York Times, Oct. 1, 1961, p. 49.

Such diverse items represent the mounting evidence that the legal profession, as every other segment of our society, is responding to today's technological and scientific advances. There is nothing startling in this observation, but when it is made by the Association of American Law Schools, it deserves comment.

On October 10, 1960, Dean Page Keeton, then Association president-elect, wrote ten law professors, "On the basis of suggestions and recommendations made by many of you and others, I have concluded to appoint you gentlemen as a Special Committee on Jurimetrics or the Scientific Investigation of

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Legal Problems." Seven of the ten committee members held an informal meeting less than two weeks later at the University of California's mountain retreat conference center on Lake Arrowhead. They were attending the U.C.L.A.-sponsored "National Law and Electronics Conference" directed by committee member Ted Jones, a gigantic and successful interdisciplinary attempt to relate electronic computer science and techniques of legal research. Dean Frank Strong, then Association president, met there with the committee members, and much of the initial planning was accomplished at that time.

"Jurimetrics," although an original name for a committee, actually is a thirteen-year-old creation of one of the committee's more distinguished members, Assistant Attorney General Lee Loevinger. He used the word as the title of a 1949 *Minnesota Law Review* article in which he argued, "The next step forward in the long path of man's progress must be from jurisprudence (which is mere speculation about law) to *jurimetrics*—which is the scientific investigation of legal problems. . . . [W]e must at least begin to use the same approach and the same methods that have enabled us to progress toward greater knowledge and control in every other field."¹ It seemed a natural label for a group with the ambitions of the Jurimetrics Committee.

The committee members immediately drafted a statement of committee jurisdiction, and soon found they necessarily had assumed an area even larger than that suggested by Lee Loevinger's early article. In addition to the catch-all "implications of other developments in science for law," the committee specifically included "application of modern methods of information retrieval to legal research," "application of tools of modern logic to legal problems," "use of quantitative methods for the analysis of decision making in law," and "general semantics and law." What follows is a sketchy and illustrative introductory description of these categories, and a statement of what the committee plans to do about them. Future articles in this *Journal* and elsewhere by the committee members and others will explore each of these in greater detail.

1. *Information retrieval*

The American Bar Association's Special Committee on Electronic Data Retrieval, chaired by Reed Lawlor of Los Angeles, is the counterpart to the Association's Jurimetrics Committee, and is evidence of the American Bar Association's serious concern with the implications of new technology for legal research. The American Bar Association committee began publishing the quarterly journal *M.U.L.L.* and found it was soon enjoying the enviable circulation, for a new and specialized journal, of 500 copies. Although the interests of the American Bar Association committee are nearly as broad as those of the Jurimetrics Committee, electronic data retrieval has occupied much of the attention of both. The American Bar Association has evidenced even further interest with the January 1962 announcement of its American

¹ Loevinger, *Jurimetrics—The Next Step Forward*, 33 *MINN.L.REV.* 455, 483 (1949).

Bar Foundation that the latter is starting a research project on electronic data retrieval.

The first thing to understand about electronic data retrieval is that although optimism varies as to its ultimate form and desirability, it is possible today. It is no longer science fiction. The patent office and the American Chemical Society have already put machines to work on their great bodies of literature. The only remaining questions for lawyers are whether we want to use this technology, how we should go about doing so, and how much we are willing to pay. If we want technological improvements or refinements, they too are possible—and within a matter of months, not years.

Cases, statutes, and other legal material can be “fed into” an electronic computer and then reproduced by the machine when called for. This service alone would save much expensive library space. Obviously, if cases can be put on machine, so can digests, citators, and other aids to research. “Questions” can be asked the machine and either citations or documents produced in response. This much has already been done by John Horty, Director, Health Law Center, University of Pittsburgh, was the basis of the American Bar Association committee’s demonstration of this pilot project at the past two American Bar Association conventions, and is described in more detail in an article by Professor Dickerson.² Of course, this may require an initial indexing and input job that is both big and expensive. But there are still more wonders to behold.

“Optical scanners” are being improved and can now “read” printed text to a limited extent. If scanners cannot be refined sufficiently for our purposes, presumably an adaptation of tapes now used to operate linotype machines could be fed directly into computers. Properly instructed, a computer given printed legal documents, or tapes, could also index them. Moreover, it could re-index the entire body of material in a relatively short time whenever the need arose for concepts or categories different from those now used—for example, in the West “key number” system.

The first step to computer research is a thorough study of the language of the law. Why do given fact situations make lawyers think about “due process,” “negligence,” “false imprisonment,” or any one of hundreds of other legal concepts? We must know the answer ourselves before we can tell a machine. But progress is apace here as well. Several research centers are now perfecting machines for translating texts from one language into another. You may have seen some of the crude results already obtained that have been widely reported. Many of the technical, linguistic, and semantic problems in machine-translating English prose into legal concepts are similar to those in machine-translating from Russian into English.

One of the tasks of the Jurimetrics Committee is to keep the Association informed of developments in this fast-moving area and to serve as a clearing

² Dickerson, *The Electronic Searching of Law*, 47 A.B.A.J. 902 (1961).

house for the law schools, computer scientists, and others who seek information or personnel to assist with such projects.

2. *Modern logic*

The journal of the American Bar Association committee gets its name, *M.U.L.L.*, from the phrase "Modern Uses of Logic in Law." Layman Allen, its editor, and the first chairman of the Jurimetrics Committee, has written about the contribution of logic to more effective drafting, interpretation of legal documents, and other matters. Such studies also have great relevance, of course, for anyone designing a legal language for computers. Work is being done on simplifying methods of teaching logic that soon may be useful in law school instruction. So "jurimetrics" was defined to include the new studies in logic, too.

3. *Quantitative analysis*

About the same time the Jurimetrics Committee was born, another committee appeared on the Association's roster: Statistical Evaluation of Judicial Processes. The Jurimetrics Committee immediately ceded the necessary jurisdiction to the Committee on the Statistical Evaluation of Judicial Processes, chaired by Professor Alfred F. Conard, and the two committees are pledged to cooperation.

Many law school projects already involve collection and evaluation of statistical data. The very thorough annual report of the Administrative Office of the United States Courts has been helpful in administering the federal court system and initiating legislative reform. The Columbia Law School project has analyzed much personal injury litigation data previously unavailable. The *Harvard Law Review's* annual notes on the Supreme Court include statistical analysis of the Court's work. Professor Fred Kort, of the University of Connecticut's Political Science Department, has written about statistical analysis of the content of judicial opinions. Criminal statistics are improving and play an increasing role in our understanding of the administration of criminal justice. The ninety per cent or more of court cases that never appear in reported opinions are attracting more attention. More statistical data would often help in understanding our legal system, diagnosing needed legislative or judicial reform, and investigating the effectiveness of new legislation. Keeping up with new possibilities for applying statistical techniques is another task of the Jurimetrics Committee.

4. *General semantics*

Lawyers, as professional word merchants, have a legitimate and profound interest in the role of language in human behavior. As potential computer operators, lawyers have an even greater need for knowing more about their own language. It is natural that the Jurimetrics Committee included the language disciplines within its "scientific investigation of legal problems," particularly "general semantics," the scientific investigation of man as a language-creating and language-using animal.

There are many areas of language study. Phonetics is the study of the sounds of human speech and their production and variations. Etymology is the study of the origins of words. Structural linguistics and grammar are concerned with the use of words in sentences. Logic may be thought of as the study of the relations between sentences or concepts. "General semantics," by contrast, is a study of man, with special emphasis upon the distinctively human symbolization process—the science of human language behavior.

There are men in virtually every profession and academic discipline who consider themselves students of "general semantics" and who have found their study rewarded with new and helpful insights and techniques. General semantics gained wide attention prior to and during World War II, generated in part from concern for wartime propaganda. *Science and Sanity*, written by the Polish Count Alfred Korzybski in 1933, is the intellectual genesis for many of today's general semanticists, and the Institute of General Semantics, which he founded, is still operating. Dr. S. I. Hayakawa's book, *Language in Action*, was first published in 1941, was offered as a Book-of-the-Month Club selection, and has remained a best-seller to this day, now in a 1949 edition entitled *Language in Thought and Action*. The journal of the International Society for General Semantics, *ETC.*, which Dr. Hayakawa edits, is one of the more widely read quarterlies in America. Many colleges and universities offer courses in general semantics, and there are local chapters of the International Society throughout the country. Of course, many other authors have contributed to the origins and applications of general semantics theory.

Although lawyers have not given general semantics the attention one would expect, they have scarcely ignored it. The March 1960 issue of *M.U.L.L.* contains a bibliography of some forty-seven items about general semantics and law, and the list is not exhaustive. Glanville Williams wrote a five-part series entitled "Language and the Law" for the *Law Quarterly Review* in 1945 and 1946.³ The March 1958 issue of the *Western Reserve Law Review*, edited by Jurimetrics Committee member Walter Probert, was a symposium on "The Language of the Law," and included articles by Justice Walter Schaefer, Dr. S. I. Hayakawa, Lee Loevinger, and Professor Harold Lasswell.⁴ Some legal articles have been reprinted or appeared originally in *ETC.*, such as Felix Cohen's "Transcendental Nonsense and the Functional Approach," from the 1935 *Columbia Law Review*,⁵ reprinted in an early issue of *ETC.* and in the first *ETC.* anthology, entitled *Language, Meaning and Maturity* (1954). More studies of this nature may be expected. Most of what we do as lawyers and law professors is a limited application of the general semanticists' area of specialization. We use the word "facts" to refer to many things, but usually we are talking about language,

³ 61 L.Q.REV. 71, 179, 293, 384 (1945); 62 L.Q.REV. 387 (1946).

⁴ 9 W.RES.L.REV. 115-98 (1958).

⁵ 35 COLUM.L.REV. 809 (1935).

verbal representations of some sort, rather than nonverbal space-time events. "The law" with which we deal is entirely language—or, rather, it is language plus the reactions of other lawyers and judges (and clients) to that language. The "scientific investigation of legal problems," the subtitle of the Jurimetrics Committee, necessarily includes the "scientific investigation of man's language problems," or general semantics. As mentioned earlier, it may also include other disciplines concerned with language study.

5. *Other developments*

There may be developments in virtually any area of science, or social science, of relevance to the law. Anthropologists' studies of legal systems of other cultures are helpful in setting the perspective for our own. We are all familiar with the contributions of sociologists, criminologists, psychologists, and psychiatrists to the law of marriage and divorce, standards of insanity, juvenile delinquency, and race relations. Layman Allen wrote a comment in the *Yale Law Journal* on "Games Bargaining: A Proposed Application of the Theory of Games to Collective Bargaining."⁶ A thesis was written at M.I.T. this past year on the use of computers to plan stock portfolios for estates.

Many applications of modern technology to legal problems, somewhat pedestrian compared with legal research by computer, are equally helpful in their own way. Lawyers' use of electric typewriters, dictaphones, postage-meters, photocopiers, and microfilmed documents is commonplace. One device that has not been exploited is the "robo-type" typewriter that prepares duplicate "original" letters automatically. Presumably some large law firms could use such a machine in preparing wills, trusts, and other documents with common clauses. Machine-graded examinations are used in many law schools, but little has been done with television, new developments in "teaching machines," or programmed learning. Many of the statistical analyses that are simple for a computer can save hundreds of hours of a researcher's time. Some such devices are mere useless—if harmless—gadgets, and the sooner found out the better. Others are genuinely helpful.

Other law-related computer problems may be studied. These are unrelated to the use of large machines to assist with legal research. Simple punch card systems may be useful for an individual's research; you may have used such a system. Similar systems have been successfully used in organizing facts for the "big case," and Lee Loevinger is presently using computers to review identical bids for their antitrust significance to the Justice Department. Roy Freed's article in the April 1960 *Practical Lawyer* describes "Machine Data Processing Systems for the Trial Lawyer."⁷ Another area of computers' legal relevance that has been virtually ignored is their potential role in legal liability. It is negligence to use less than the best computer to operate an oil refinery, or an airline, when the machine runs wild

⁶ 65 *YALE L.J.* 660 (1956).

⁷ P. 73.

and someone is damaged? What is a bank's liability if its computer check-sorting machine goes awry? What is the computer manufacturer's liability? How will the rules of evidence adapt to magnetic tapes and punched cards meaningful only to computers? (Do you remember the comments in the September 1960 and January 1961 issues of the *American Bar Association Journal* on the evidentiary value of postage-meter post marks?⁸) Roy Freed has written articles explaining some of these problems to the subscribers of the *Journal of Industrial Engineering* and the *Management Review*,⁹ but lawyers have given them little attention. The Joint Committee on Continuing Legal Education of the American Bar Association and American Law Institute, directed by John Mulder, made an effort in this direction in the fall of 1961 with its three-day forums on "Legal and Practical Problems Involved in the Use of Electronic Data Processing in Business, Industry and Law."

These and other matters are significant for the Association and its members, and the Jurimetrics Committee will endeavor to report on them from time to time, too.

"Just what does the Jurimetrics Committee propose to do about all these dramatic developments?" it may fairly be asked. The goals of any committee of a national association operating without meetings, staff, or funds need clear, and modest, definition. The goals of the Jurimetrics Committee were conceived in that spirit.

One Committee purpose is to find others within the Association interested in the kinds of subjects described above. This probably includes you, since you have read this far, and you are urged to contact one of the Committee members listed below. Roy Freed has pointed out that "the organized Bar must take a hard look right now at where we stand with machine-assisted legal research and particularly at the direction in which we should be moving. It must determine what qualities are essential to an efficient, fully modern system, and it must communicate its requirements to the developers of potential systems."¹⁰ Those of us in the law teaching profession have an obligation to work with the bar in this undertaking, and the Jurimetrics Committee can serve as a base for such planning. It can also serve as a liaison group with the American Bar Association, the American Documentation Institute, the American Association of Law Libraries, and any other organizations, companies, or individuals that desire contact with law professors interested in computer problems. Committee members, and others interested, will be urged to undertake research and writing. Occasionally the committee will sponsor convention round-tables and issue statements in the

⁸ Neilson, *Post-Dated Postmarks, or, How to Mail a Letter Yesterday*, 46 A.B.A.J. 949 (1960); Walsh, *How to Know a Truthful Postmark*, 47 A.B.A.J. 98 (1961).

⁹ Freed, *Some Legal Aspects of Computer Use in Business and Industry*, 12 J. INDUSTRIAL ENGINEERING 289 (1961); *Try Swing a Computer! Legal Tangles in EDP*, *Management Rev.*, Aug. 1961, p. 4.

¹⁰ Freed, *Prepare Now for Machine-Assisted Legal Research*, 47 A.B.A.J. 764 (1961).

¹⁴ *Journal of Legal Ed.* No.3—7

Journal of Legal Education or elsewhere about such research and other developments. The Committee may occasionally suggest teaching material for new or existing law school courses such as Jurisprudence, Legal Profession, and Legal Drafting.

It seems clear the new developments in the study of language, computers, and the other areas mentioned will have an increasingly vital effect upon the law. It is good to know the Association of American Law Schools will be represented through its new Committee on Jurimetrics in the exciting times to come.

Members of the Association of American Law Schools Jurimetrics Committee

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