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ELECTRONIC AIDS TO THE DRAFTING OF LEGAL INSTRUMENTS*

by Reed Dickerson**

I would like to say thank you to the Bar Association for helping me escape, even momentarily, from the turbulent atmosphere of the campus to the relative quiet of mid-town Manhattan. Quite apart from this, it is a high privilege to talk to the members of this distinguished group.

Being a pedagogue, I am excused from saying anything practical, so let me begin with some glittering abstractions. First of all, I commend you for your perceptiveness in seeing the importance of good drafting and modern technology in today's law practice. It is unusual even for a practicing lawyer to see the true depth of the potential contribution that good drafting can make to the substance of legal instruments, and it takes more than a little courage to confront the awesome paraphernalia of today's computer technology. You score high on both counts.

I am particularly heartened by your interest in drafting because, if the bar were to take a strong interest in good draftsmanship, the law schools might find a stronger incentive to do something about it. Ironically, at Indiana University, where we are even experimenting with a far-out course in Jurimetrics, we have no current course in legal drafting, and yet legal drafting is something that most lawyers do, or try to do, every day of their professional careers. Because the process is only imperfectly understood, it has been easy for the law schools to steer around the difficult problems of pedagogy by characterizing legal drafting as a mere "skill," which is the term that legal pedagogues condescendingly use to refer to the more pedestrian routines of law practice that they prefer to entrust to the stewards of continuing legal education.

Having voiced my personal frustrations and prejudices, let me now turn to the matter at hand, which is how to press a few buttons and get, almost instantaneously, a perfectly conceived, drafted, and printed will, lease or contract.

For a long time now, I have been hearing people claim that they are drafting legal instruments by machine. Unless you consider xeroxing an existing will legal drafting, do not believe them. The simple fact is that you cannot draft by computer in any but a peripheral sense. At the same time, there are particular points during the over-all drafting process at which a computer or other device may be a significant help.


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If drafting can be said to begin with research, technological systems are now available for handling the routine aspects of searching both statutes and case law. Although a fairly high level of achievement has been reached in the electronic searching of statutes, only modest success has been achieved so far in the electronic searching of case law. Even so, the electronic searching of law is now solidly operational from a technical standpoint. The same general techniques are available for searching bodies of factual information. I understand, however, that this is not the main thing we are talking about tonight.

The second point at which electronic or mechanical devices can be useful in drafting is that of retrieving boilerplate provisions covering the generally recurring situations involved in the problem at hand.

There have been writers on legal drafting who would have you believe that it is an abdication of professional responsibility to use a form book. Certainly, there are dangers in the use of forms, even the forms that you develop in the course of your own practice. Blind adherence to precedent will certainly get you into trouble, and the danger is not significantly reduced by the use of electronic or mechanical devices for retrieving and reproducing forms. At most, they save time and reduce the chances of typographical error.

There are at least several ways to store and retrieve legal forms. They may be in a book. They may be manually filed by subject matter in conventional folders. They may be filed serially and retrieved by use of an index, which may be created manually or by a computer.

Under the more sophisticated systems now available, office forms can be stored on magnetic or paper tape, from which they can be disgorged at speeds up to 200 words a minute. Clauses can be arranged in any sequence. The machine can be stopped at any point for the insertion of materials custom tailored to the needs of the client. The equipment now available for such operations includes IBM's Magnetic Tape Selectric Typewriter ("MTST"), the DURA 1041, the Edityper 200, and Friden's 2340 Flexowriter.

The best boilerplate is not obtained at the bookseller's but is hammered out by the lawyer himself after a succession of attempts. It is done by preserving drafts that deal with recurrent problems and by improving those drafts, usually on a piecemeal basis, as the occasion suggests. Boilerplate need not and should not remain frozen while significant improvement is possible. A provision may have to go through many generations of change before it matures into a reliable, top-grade module of prefabricated law.

One of the dangers in mechanizing the process of storing and retrieving boilerplate is that the draftsman may be distracted by the alluresments of hardware and scientific system. No computer can compensate for basic inadequacies in the drafting process. I know of at least one non-profit enterprise that is engaged in providing state codes in which a high percentage of the specific provisions have been standardized but whose structure and form violate every known principle of draftsmanship. If these codifiers persist in their current ways, they not only will betray the general principles of codification, which offers a better-than-normal opportunity for sound legal architecture and expression, but will also discredit the legitimate uses of
electronic devices for enhancing the professional operations of lawyers. Boilerplate deserves conscientious attention to accuracy and detail simply because as boilerplate it is marked for a high incidence of use. One of the codifiers' main errors in strategy has been to put off perfecting their composition until they have perfected their computer techniques. It is next to impossible to move from inadequacy to near-perfection in a single step.

The danger in talking of drafting problems in terms of equipment is that the underlying problems are often broader than the broad range of devices, electronic and otherwise, that are available to solve them. For this reason, it may be more fruitful to think in terms of system than to think in terms of equipment, because many useful systems require little or no equipment. The title of tonight's discussion might well have been, "Electronic and Other Aids to the Production of Legal Documents."

A good example of non-mechanized system lies in the very field we have been talking about - the storage and retrieval of legal boilerplate. An alternative approach to the problem is illustrated by an automobile insurance policy that I have here. At least one insurance company issues a combination automobile policy consisting of nine designated coverages and a long list of standardized conditions and exclusions. As printed, the basic policy applies to no named insured and to no specified automobile. Nor is there any place on the policy where these items can be entered. Instead, these are entered on a short strip of paper called an "extension certificate." This contains all the information that is peculiar to that policy: policy number; effective date; expiration date; name and address of insured; year, make and number of automobile; the specific coverages and their respective premiums; and the countersignature of the issuing officer.

The generating legal force is the extension certificate rather than the longer document containing the legal boilerplate. For example, if the extension certificate carries the notations "A 7," "B 1," and "I," it means that the specific coverages so designated in the basic policy are incorporated by reference and made a part of the extension certificate. In this example, it means that the insured has $50,000-$1,000,000 of bodily injury liability coverage, $5,000 of property damage liability coverage, and towing and labor costs coverage on the terms specified in the basic policy. I have been told that some New York banks have used this device in preparing trust instruments, but I have no direct confirmation.

This alternative, which requires no electronic or mechanical support, requires a highly mature and fairly stable instrument. It has the advantage of assuring standardization among specific applications where that is important, and it offers the convenience of making later standardized and simultaneous changes in the family of instruments served by the particular boilerplate instrument.

It also poses special problems. What frequency of use makes it practical to create and include particular boilerplate? Some provisions will be used in every instance. Some will be used in a majority of instances. Some may be used in a substantial number of instances but not a majority. Here, the user must weigh the advantages of standardization and uniformity against the disadvantages of superfluity. It also requires a terminology broad enough to cover all anticipatable variations in applicability ("the product
being priced”). These problems are described in more detail in my book, Legislative Drafting (1954), particularly in Chapter 5, "The Fundamentals of Legal Drafting."

Another point at which the computer might be useful in preparing a legal instrument is in testing its logical structure and measuring its impact on documents that it is intended to supplement, change, or replace. The system that I am about to describe is, so far as I know, a potentiality, not an actuality. For this reason, I will describe it in the sparsest language that I can command. I can do this best in terms of a statute, for which it is more likely to be helpful. Even so, it could be helpful also for highly complicated private instruments.

Recent developments in the field of symbolic logic and electronics suggest the possibility of using these disciplines to test the internal coherence of statutes and to determine the extent to which a proposed statute would be inconsistent with current statutory law.

One development has been the conception, if not birth, of a "logic machine." The capabilities of the propositional calculus for solving logical problems is well established. Experiments in the field of military strategy, for example, have already suggested the feasibility of using the propositional calculus to test the internal logical coherence of military texts. The same approach could make it possible to test the internal logical coherence of an existing or a proposed statute. The only new elements are (1) the possibility of translating the relatively crude language of legal instruments into the unambiguous and consistent language of formal logic, and (2) the possibility of mechanizing the process of logical testing.

The possibility of a logic machine is based on the fact that the logic of classes (Boolean algebra) and the propositional calculus involve the use of expressions that can be digitalized by the assignment of binary numbers, which in turn permit the use of electronic devices. The use of binary numbers is possible because in these disciplines all materials can be translated into statements that are either true or false.

This would also make it possible to determine which provisions of an existing statute would need to be amended to give effect to a proposed statute. Under such an approach, statements of law needing amendment would appear as statements with which the proposed statements of law were inconsistent. Inconsistencies could be brought to light by forming the logical product of the numbers representing the statements respectively involved. Both the underlying logical process and the mechanized version of it are capable not only of detecting the existence of a logical inconsistency, but of ascertaining the specific provisions of existing law that created the inconsistency. The latter would be the provisions that needed to be amended or repealed.

Similar problems could also arise for very complicated private instruments. Indeed, I understand that Edmund Berkeley used Boolean algebra in the late 30's to improve the substantive coverage of insurance policies. Anything that can be handled by Boolean algebra can be computerized, where that is considered desirable.
Computers are useful not only for lightening the burden of deadening routine, but for making calculations that it would be extremely onerous or impossible to do manually. Ordinarily, calculations of this magnitude are not involved in the preparation of legal instruments. In the field of estate planning, however, it is often desirable, among other things, to be able to estimate the probable tax consequences of various alternatives. Accordingly, the computer is beginning to be used in estate planning. As far as I know, there are now two commercial enterprises operating in this field.

One is the Amerad Corporation, of Charlottesville, Virginia, which has developed a computerized program for figuring for a given situation the estate and inheritance taxes that it is reasonable to anticipate. So far as that information affects the testator's judgment, this can be an aid to estate planning.

A more sophisticated system has been developed by Carl G. Paffendorf of COAP Systems, Incorporated, in Greenvale, Long Island. As stated in his words,

The manual analysis of estates is not only a time consuming process, but also presents an abundance of opportunities for mistakes. Arithmetic errors and data transposition oversights frequently distort the data relied upon in making major decisions. Many calculations require a fair knowledge of algebra, and more than a fair share of patience. An example is the complicated formula required to calculate taxes when the surviving spouse's inheritance (and, there, the marital deduction) falls below one-half the adjusted gross estate owing to the apportionment of death taxes. Lawyers who have made this calculation will appreciate the value of having it done automatically; the computer can make the calculation without error for whichever allocation and apportionment rule is required.

Other pitfalls and problems which arise in the manual analysis of an estate include questions such as: Will debts be borne by the beneficiary or the estate? What part of the taxes and probate costs will have to be borne by each beneficiary? What part of jointly held property should be included in the estate of each joint owner? What amount is includible in the donor's estate when a gift in contemplation of death is inherited back upon the prior death of the donee? How should one handle income in respect of a decedent? Should this type of income be included in a marital gift?

Another advantage in using a computer lies in its capacity to organize data into meaningful categories, one of the first steps of estate analysis. The system with which I am most familiar organizes the client's estate and administers it through two hypothetical probates: the first assumes he dies before his spouse, the second assumes that his death follows that of his spouse.
The preadministration of the spouse's estate is also done twice. This approach uncovers many latent problems and opportunities, and provides the attorney with a basis for comparing the relative value of his proposals.

Information calculated by the computer for each of the four hypothetical probates includes:

1. Expenses, debts, and state and federal taxes;
2. Optimized marital deduction data;
3. Liquidity needs and funds available to satisfy these needs;
4. Post-mortem income;
5. Apportionment or allocation of taxes;
6. Net inheritances to various beneficiaries; and
7. Surviving spouses' elective shares.

Other points are analyzed when appropriate, e.g., the applicability of IRC Sections 303 (stock redemptions) and 6166 (extension of time to pay estate taxes); the taxation of partnerships and corporations which have elected to be taxed as partners under Subchapter S; and the effect of deaths within a prescribed period of time.a

During the stage of composition, automatic typewriter complexes of the kinds already described are useful in providing continuously collated results, where the changes being made at any particular state are not so extensive that they decimate the text of the preceding version. Thus, text can be carried on magnetic or paper tape in such a way that, after specific changes are made in it, the remainder may also be reproduced automatically, but without the risk of new errors. This makes it necessary to proofread only the changes.

This system has been used with some success in several states during the legislative process. As soon as the text of a bill that is being considered is changed at any point, the corresponding change is made, via keyboard terminals, on the magnetic tape. The collated result is available on almost instantaneous call. The normal period for engrossment is thus reduced almost to zero. This particular system is called the "Administrative Terminal System."

Associated equipment is available for both magnetic tape and paper tape that on a second typing justifies both left and right margins. This provides a typographically more impressive result. Equipment is also available that

will enable the tape to drive a typesetting machine (e.g., GPO's "Linotron" system) that produces, for example, a fully printed will. In some instances, the completed will has been printed by this method on a continuous paper scroll, assuring a result that would be hard to tamper with.

Finally, electronic equipment such as that used in the Administrative Terminal System permits wide, immediate dissemination. Although probably of little use for the majority of private instruments, it promises to be useful for legislation. For example, once the Governor has signed the enrolled bill, it has been possible to reproduce it simultaneously at 40 outlets dispersed throughout the state. This goes far towards solving the more serious problems of disseminating new laws.

If this is a fair summary of how computers and other devices can be used in drafting legal instruments, it must be clear that the uses of the computer for this purpose are only incidental. However, the fact that the central aspects of the drafting process necessarily remain with the draftsman does not deny the usefulness of technological aids along the way. The main danger here is that the draftsman may become beguiled by technology to the point where he makes the economically bad judgment of using devices more elaborate than the problem at hand calls for, or where he abdicates his responsibility to supply the essential professional judgments in which he has been trained and which he is being paid to provide.

Let me conclude by making some general observations on the use of system, whether automated or not. The greatest value of system in the law is not that it saves time and money, but rather, that it provides an enormous resource in substantive feedback. This is a point that I have been at some pains to explain in my book, and I see it verified every day. The rigorous pursuit of consistency in idea, form, and style; the adherence to generally accepted usage; and a careful attention to structural design or architecture are bound to lay bare for the draftsman to see all sorts of opportunities for substantive improvement. This is the basis of Professor Layman E. Allen's "language normalization" program at the University of Michigan.

How best to exploit this opportunity is a problem. I suggest here that we should not over-emphasize the importance of getting the facts and grasping the minutiae of the client's policy goals before starting to compose. Professor Seavey surely overstated the opposite approach when he said that he wrote his articles first and researched them afterwards, but he had a solid point. The draftsman who tries to have his detailed ideas completely in hand before starting to write is making a serious tactical error; he overlooks the needed substantive feedback that only an attempt to formulate tentative conclusions provides. Besides, why research matters that a more mature consideration may show to be irrelevant?

The discipline of decision theory, games theory, symbolic logic, and elementary mathematics, which represent systems rather than technology, may also turn out to offer advantages as valuable to the practicing lawyer as what the computer may ultimately provide.

Let us keep our minds open to the possibilities here. Let us make the law more truly interdisciplinary and perhaps we may all become not only better draftsmen but better lawyers in the service of society.