"STAR TREK" AND STARE DECISIS:
LEGAL REASONING AND INFORMATION TECHNOLOGY*

by

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ABSTRACT

What impact does the changing technology of information have in the process of legal reasoning? Using the 1967 episode of Star Trek entitled "Court Martial" as a launching pad to explore the issues of legal reasoning and information technology, this article explores where no one has gone before. First, how have previous changes in information technology influenced legal reasoning, such as the rise of the doctrine of stare decisis during the advent of the printing press? Second, what impact may computer information technology have in the processes of legal reasoning in contemporary society? Live long and prosper!

INTRODUCTION

We are not far from a legal information parallel universe that once only the likes of Asimov and Star Trek writers could envision.

Donald Dunn (1993: 60)

CALR [computer assisted legal research] can impede the understanding of the legal process, which is reinforced by printed sources. Printed sources are designed in such a systematic and interconnected way that by using them the legal researcher not only will arrive at an answer to the issue being researched, but in doing so will reinforce his or her understanding of the legal process. To the extent that CALR allows the researcher to deviate from the system imposed by printed sources, some knowledge of the legal process itself may be sacrificed.

James Acker and Richard Irving (1998: 5)

Criminal justice practitioners are increasingly bombarded with new information technologies.
From the Internet superhighway to computerized legal databases, information technologies grow and demand increasing time and money, not only of judges and lawyers in criminal courts, but also of police, corrections, and juvenile personnel in wide-ranging roles (Acker & Irving, 1998: vii-viii). Compounding information overload are the uncertainties and criticisms of legal method as well as interpretation and impartiality in the use of the legal method. Like my previous published work (Chilton, 1991), this manuscript focuses on the confluence of emerging problems in information technology and legal reasoning. It uses the 1967 episode of "Star Trek" entitled "Court Martial" as a launching pad to explore these issues as part of a growing literature on futuristics in criminal justice (see Klofas & Stojkovic, 1995) and on "Star Trek's" general legal values (see Joseph & Carton, 1992; Scharf & Roberts, 1994) and social meaning (see Greenwald, 1998). This short article overviews the development of professional legal literature and the influence of three factors in the rise of the doctrine of stare decisis: (1) The invention of the printing press; (2) The development of court hierarchy by the 19th century; and (3) The efforts of entrepreneurial printers and publishers. The manuscript concludes that the rise of stare decisis was not simply due to the legal factors of court structure and hierarchy, but also because of the extra-legal influence of the printing press and the efforts of individual printers and publishers. The implication of this synergism is applied to contemporary developments in computer assisted legal research for criminal justice practitioners.

"STAR TREK"

"Court Martial," Stardate 2947.3, episode 15 of the original 1967 "Star Trek" series, features the court-martial trial of Captain James Kirk of the starship U.S.S. Enterprise for negligent homicide. During an unscheduled layover at Starbase 11 for repairs to the U.S.S. Enterprise from ion storm damage, Captain Kirk is accused of the negligent homicide of Ben Finney. Finney had been taking readings of the ion storm from a pod attached to the Enterprise when Captain Kirk ordered it jettisoned to escape the storm. The computer records of the Enterprise indicate that Kirk negligently failed to follow standard procedures and notify Finney before jettisoning the pod. Kirk, who becomes the first starship captain to stand trial for a criminal homicide in the line of duty, is totally exonerated of all charges when it is revealed that Finney had tampered with Enterprise computer records. In fact, Finney remained alive and was discovered aboard the Enterprise in a dramatic fight with Kirk where Finney confessed to altering the computer records. In their Starfleet Academy days, Finney was an instructor and befriended midshipman-student Kirk (about Stardate 2086) and became so close that Ben named his daughter, Jamie, after Kirk. But aboard the U.S.S. Republic, NCC-1371 (also about Stardate 2086), Kirk reported an error by Finney, causing Ben to be passed over for promotion and leading him to insanely blame Kirk for never attaining command of a starship. The "Court Martial" story concludes with Jamie apologizing for her emotional outbursts against Kirk and helping her father off to his rehabilitation (Paramount Home Video, [1967] 1985; see also Okuda & Okuda, 1993).

The "Star Trek" writers of "Court Martial" (Don M. Mankiewicz and Steven W. Carabatsos) also presented their vision of future legal information technology. Both Areel Shaw, the prosecutor, and Samuel T. Cogley, Kirk's defense lawyer, were placed in scenes demonstrating extraordinary legal databases and accessing a wide range of legal codes, cases, and materials from several galaxies and over three millennia. And beyond the obvious falsification of Enterprise computer records by Finney, these scenes dramatize uncertainty and criticisms of the legal method.
and interpretation in the use of computer assisted legal research. Defense lawyer Cogley, for example, is portrayed as a charming eccentric who still insists on using antiquated books in his legal method. He insists that the internal, historical narrative of law is found only in books, even dull old law books, and is lost in the sterile world of the computer. The computer legal database has none of the dog-eared pages, hand-scribbled notes and bookmarks, and well-thumbed versus untouched pages to cue the reader. And so, he insists on stacks and stacks of books, even in the courtroom (Paramount Home Video, [1967](1985)).

**STARE DECISIS**

Perhaps the most distinctive aspect of Anglo-American common law is the doctrine of *stare decisis*. According to the simple definition in *Black's Law Dictionary*, *stare decisis* is the:

> doctrine that, when court has once laid down a principle of law as applicable to a certain state of facts, it will adhere to that principle, and apply it to all future cases, where facts are substantially the same (West Publishing, 1987: 1577).

Of course, this definition presents too simplistic a conception of *stare decisis*, which is in reality a complex endeavor, not the simple application of principles. This essay seeks to develop this more complex understanding of *stare decisis* in the follow two sections.

For at least one hundred years, Anglo-American courts have spoken of *stare decisis*, either in the "strict" or "latitudinarian" form (Wise, 1975), and applied its precepts in the resolution of legal disputes. Various scholars of legal history allege the doctrine of *stare decisis* was brought into being by the influence of: (1) The invention of the printing press; (2) The development of court hierarchy by the 19th century; and (3) The efforts of entrepreneurial printers and publishers. Sir William Holdsworth, in his multi-volume treatise on the history of English law, claimed that the invention and application of the printing press influenced the rise of *stare decisis*, arguing "it could be attributed to the fact that reports of judicial opinions were by that time not only officially reported in writing, but printed and published" (Holdsworth, 1937: 331). Others have repeated the claim that the technology of the printing press may have influenced the rise of *stare decisis* (Mellinkoff, 1963). Traditional legal scholars have argued that the rise of *stare decisis* was due to the hierarchy of courts that emerged in the early 19th century (Dawson, 1968; Kempin, 1959; Wise, 1975). Still others attribute the rise of *stare decisis* to the efforts of individual entrepreneurs in the printing and publishing world who stood to make profits from the requirements of large book purchases by lawyers across the country (Parrish, 1979; Young, 1975).

**ENGLISH LEGAL LITERATURE, 1066-1800**

The professional legal literature of English common law had its origins in the conquest of England in 1066 A.D. by William the Conqueror. After his victory at the Battle of Hastings and the death of King Harold, William attempted to take the "treasure" of his conquered domain. For the collection of taxes, he spent most of his remaining life in a survey of property ownership in England called the *Domesday Book*, assembled in 1086. As the first official record of England, William did not impose a new set of statutes or code on the conquered peoples, as did the Romans.
and other European conquerors. Instead, laws were found in the common customs and traditions of the peoples in the small "shires" or villages of England (Plucknett, 1956). Hence, the name "common law."

In spite of this departure from Roman civil code traditions, the early English legal literature was modeled after the Roman civil code legal encyclopedias like Justinian's Institutes. The earliest of the English legal treatises focused on property law, such as Laws of Edward the Confessor (written anonymously in 1118), and Glanvill (written by Justiciar Ranulf de Glanvill in 1187). These early works simply compiled legal documents (deeds, etc.) with commentary in Latin. A much larger treatise was written in the 1220-30s, attributed to Henry de Bracton (d. 1268). Bracton attempted to meld the two legal traditions together in this work, organizing in Roman encyclopedic fashion the many individual case decisions on the common law. But he only once referred to a specific case. Bracton's work was widely distributed in the 13-14th centuries, but its influence did not last because it was written too early; the common law grew greatly in the centuries after (Baker, 1979).

The common law was always in some sense "case law." Thus, it is no surprise that some of the earliest legal literature to appear in England were manuscript records of cases. Until about 1300, only the formal Latin phrases that service as the title of an action of law were recorded in the "plea rolls," a sort of court record. However, lawyers and their apprentices soon began taking notes of interesting judicial arguments in cases. As early as the 1280s there appeared specifically dated reports of legal arguments attributed to named judges and lawyers in the English courts. By the 1300s, there was a regular chronological series of these summaries. As they were written anonymously, they were given the generic name "yearbooks," probably produced by apprentice-students who listened to the court proceedings and took notes (Henderson, 1975). These early yearbooks were produced by some sort of collective effort from 1300 to about 1550, informally and anonymously written in manuscripts, and often omitting details such as the names of the parties (Henderson, 1975).

With the advent of the printing press in England came the publication of the hand-written yearbooks found in London law libraries. The first printed law book, however, was a textbook entitled, Littleton's Tenures, printed in 1481 and popular until the 1800s. As one scholar has observed, "within ten years of the introduction of printing into England in the 1470s, the London printers had found a market in the legal profession" (Baker, 1979: 154). The last hand-written yearbook was dated in 1535 and called the Michaelmas Term 27 Henry VIII. By 1558, a complete set of yearbooks had been printed.

The rise of printed yearbooks correlated with the increased number of references to prior cases (or precedent) in judicial decision making. In summary of older legal historians, Robert Ruppin (1980) observed: "Jenks speaks of 'books of precedents which so rapidly appeared after the introduction of printing.' Published judicial decisions did undoubtedly influence the decisions of judges." This correlation causes some scholars to conclude that the advent of the printing press was the first cause of the doctrine of stare decisis in the use of precedent. However, other scholars point out that the printing press was also in use on the continent, but no doctrine of stare decisis or use of precedent was found in continental courts (Dawson, 1968). In fact, until the 20th century, the use of precedent in continental courts was considered prejudiced and unethical judicial conduct (Wise, 1975). It would be reckless generalization, therefore, to argue that the advent of the printing press
alone caused the rise of the doctrine of *stare decisis*. However, there is no doubt that it was an important cause among others.

The rise of printed law books brought an extensive new source of business to printers. Scholars note that as the sale of printed yearbooks climbed, the attendance of apprentice lawyers at required court hearings and "moots" (simulations) declined. In fact, by the mid-1700s, attendance by apprentices and their supervising trainers (attorneys) was nil. And in spite of significant fines for nonattendance! Scholars speculate that attendance waned as it became possible to cheaply acquire a printed book of the recorded proceedings rather than to laboriously write them all out manually (*Henderson, 1975*). Indeed, until the rise of university training in law in the 1700s, the apprenticeship lost its oral component and had become a matter of "reading the law," a phrase used to this day to describe legal education during this period. The effect of printed legal materials on legal education warrant even more commentary, but we must leave the history of legal research education for some other day and manuscript as we move on with the presentation at hand.

The demise of this oral transmission of information and the increased reliance on printed books appears to have synergized the development of a class of court reporters, printers, and booksellers to meet these needs. The modern case reporters that were published after the 16th century incorporate the efforts of this service industry. Court reporters were sent to important courts to take down, word-for-word, what judges said in decisions. Printers worked closely with booksellers who were sensitive to the needs of lawyers and the law book market. Summaries were inserted by publishers for each case to meet the demand for speedy searching. Publishers also developed separate books, the "abridged" or indexed versions, which made the cases and their summaries even faster to search. And they developed other treatises to assist the lawyer in learning or practicing the law.

**AMERICAN LEGAL LITERATURE, 1750-PRESENT**

*Erwin Surrency (1981)* recounted the rise of similar changes in law book publishing in America from colonial times through the 1970s. He noted the close cooperation and responsiveness of the law book publishing industry to the bar. For example, when lawyers complained that there were too many cases being published, the printer responded with the beginnings of "casenotes" or short outline summaries of the case (now standard). Eventually, law book publishers developed complex indexing systems for retrieval, such as the "keynumber" system of West Publishing Company. But Surrency neglects the obvious influence this change in information processing must have had on the bar. The staff at these publishing houses had taken on more and more of the tasks once reserved for the bar. And they had come to interpret, define, categorize, and index these cases. The bar had delegated these functions to the publishers to save money, but also placed in the hands of others control over the legal information process.

*Jenni Parrish (1979)* develops more fully a thesis on the influence of early American law book printers and publishers on the development of common law in the US. Early American lawyers had a surprisingly large number of law books. This great output of publishing was due to the prodigious efforts of individual printers and publishers who armed all of America with law books. Indeed, most early American lawyers learned their trade by "reading the law," from law books borrowed from a cooperative practicing lawyer. Most popular among lawyers and laymen alike were
Blackstone's Commentaries, first published in America by Robert Bell in 1771-72 (see also, Billings, 1993).

Contemporary printer/publishers that dominate today's market arose in the 1870s. West Publishing Company was founded in 1879 with the promise to systematize legal information retrieval. By 1890, West had an extensive series of case reporters covering all sections of America, with extensive indexes to locate each legal issue in each case by its "keynumber." Other contemporary law book publishers include Commerce Clearing House (CCH), Bureau of National Affairs, and Lawyer's Co-operative. These publishers compete with one another, but essentially control all but a few official state and US Government printing of law books.

This perspective on the rise of stare decisis strongly implies that the market demands for profit among law book printers and publishers led to the development of the doctrine of stare decisis by the 19th century. As lawyers and judges were required to follow prior cases under stare decisis, no longer to merely take the precedent under advisement, the bookseller stood to sell a great many more books. While compelling in its argument, this perspective lacks the empirical evidence of actual bookmakers, printers, sellers, etc., stating this intention in so many words. If it was the intent of booksellers to drive the lawyers to stare decisis to sell more books, would not someone have said this at some time? A search of the literature reveals that no printer, publisher, bookseller, etc., is so quoted.

The traditional explanation given by lawyers to explain the rise of stare decisis in the 19th century (from its origins in use of precedent) is in court hierarchy. Frederick G. Kempin, Jr. (1959) argued that stare decisis was given birth in early 19th century America after the constitutionally dictated hierarchy of courts had settled in. According to this interpretation, stare decisis arose only after the U.S. Supreme Court had convinced lower federal and state courts that it was indeed the "Supreme Court of the land." After the Supreme Court had established its power and legitimacy in the early 19th century, other courts recognized this by strictly following the case decisions of the Supreme Court. This hierarchy of authority flowed downward in pyramid fashion to lower courts and maintained a classical bureaucratic information flow (in a Weberian sense). Thus, it is argued, the bureaucratization of courts into hierarchies of authority caused the development of the doctrine of stare decisis (Kempin, 1959).

Of course, the hierarchy of court structure in the 19th century made possible the enforcement of stare decisis. But so, too, did the advent of the printing press and the efforts of individual printers and publishers. While the hierarchy of courts may be said to be a most important factor in the development of stare decisis, it is not the only causal factor. Indeed, the bureaucratization of courts in a hierarchy of authority may be considered simply one link in a chain of events from the advent of the printing press and commercialization of law book publishing that synergistically led to the development of the doctrine of stare decisis.

THE IMPLICATIONS FOR COMPUTERS IN LAW

Computers came to the legal profession in the 1970s as devices for word processing and data storage. However, since 1975, on-line data services for the retrieval of entire legal documents, such as cases, have been available. On-line computer retrieval systems were developed in the 1960s
from experiments by the Ohio Bar Foundation to produce Ohio Bar Automated Retrieval (OBAR), later purchased by Mead Data Corporation. Mead developed and released Lexis in 1972, making it on-line in 1975. Westlaw followed with a 1973 release and was soon on-line, too. Westlaw and Lexis are now standard in most law firms and law libraries, although Westlaw has come to dominate through its market takeovers and introduction of "natural language" search engines in 1992 (Allan, 1993; Berring, 1995; Harrington, 1985).

The printing and computer "revolutions" in legal literature are similar in some respects. First, both involve the incremental adaptation of existing, yet unrelated, technologies by brilliant invention to solve problems with the transformation and retrieval of information. Just as Gutenberg used the metallurgist's punch in rows under a wine press with a screw to "press" paper on the inked rows of assembled works, so too was the computer born out of the inventive application of the binary code from biplanes' machine guns and the jacquard loom. Second, both were aesthetically imitative, designed to create products that emulated existing information technology packages (the hand-written manuscript, or today, the printed book). Third, both were invented for a technologically more efficient answer to the problems of information control. Finally, in their impact on society, both have decentralized the control of information transformation and retrieval (Bolter, 1984; Dahl, 1958).

However, at a most basic level, the current approaches to computerized legal databases fail because of their high costs, ineffective "natural language systems" search engines, and poor ergonomics and psychological fit. This critique is not simply the expression of computer technophobia or a romantic fondness for the printed word; it is a critique disciplined by the observations of technological success in imitation and efficiency. Legal databases are enormously expensive for criminal justice practitioners, not just in initial and monthly fees, but also with each new generation of hardware and software necessary to keep current (Landauer, 1995). The much-touted "natural word systems," such as those announced in 1992 by Westlaw (Katsh, 1993; 1994), are dismal failures in tests of their search capabilities (Landauer, 1995). And no current legal databases work like the "Superbook" developed by Bellcore, incorporating extensive ergonomic and psychological testing of users to more successfully imitate the hand-held book, although Microsoft Corporation's new generation of "notebooks" comes closer (Landauer, 1995: 247). Thus, at this time, computer assisted legal research is severely limited by the inability of the technology to adequately imitate the ergonomics of the printed book.

At a social level, the current approaches to computerized legal databases fail because of problems of access, authority, and the superficial legal method that often results. The impact of the high cost of legal databases includes a host of access problems for underfunded legal services and criminal justice agencies, particularly those dealing with the poor (Berring, 1997; Stefancic & Delgado, 1991). Further, as James Acker and Richard Irving (1998) suggested in the opening quote, legal authority and process is blurred by the lack of context and multiple sources of legal information (see also, Berring, 1997). And the sheer volume of law accessed by computer databases results in certain information overload and greater reliance on headnotes, summaries, and other superficial and low quality understanding of these codes, precedents and arguments (Birkerts, 1994; 1996). Thus, at this time, computer assisted legal research is severely limited by the inability of the technology to provide efficiency of access, authority, and information control when compared to the printed book.
At a phenomenological level, the current approaches to computerized legal databases fail for the reasons prophesied by Gene Roddenberry's eccentric "Star Trek" defense lawyer Samuel T. Cogley: the internal, historical narrative of law is found only in books, even dull old law books, and is lost in the sterile world of the computer that has no dog-eared pages, hand-scribbled notes and bookmarks, and well-thumbed versus untouched pages. The legal method is highly interpretive and extends beyond rule-based models of legal reasoning (Carter, 1998; Rubin, 1988). Legal information is interpreted according to socioeconomic (Mann, 1989), gendered (Bartlett, 1990; Farmer, 1993; but see Duggan & Isenbergh, 1994), and aesthetically determined (Brenner, 1990; Haigh, 1997) phenomenological judgments. [End page 31]

Further, current legal information retrieval systems are syntactic, or based on the structure of key words (even "natural language systems"). But lawyers think of legal concepts semantically, focused on the meaning of synonymous words or phrases. Access to information in Westlaw and Lexis cannot be found by semantic searching for concepts; only the correct key word will locate the case in point. Further, the current computer retrieval technology will not allow the random access or systematic browsing traditionally employed by lawyers. Through systematic browsing, lawyers come up with analogies of law that can be used in cases with unrelated facts (Slayton, 1973). Finally, current legal information retrieval systems assume legal reasoning to be guided by rule-driven logic; that lawyers simply find the appropriate legal prescription and apply it to the case for the single correct answer. But lawyers since the time of Cicero have acknowledged that the same rule has different meanings, depending on one's concept of "Justice." And justice is not rule-driven, but appears to be a somewhat emotional state-of-mind as to what is appropriate or "fair" in a given case. Thus, at this time, computer assisted legal research is severely limited by the lack of decentralization of interpretation of information when compared to the printed book.

CONCLUSION

The information age has brought to criminal justice practitioners the problems of information overload, compounded with the uncertainties and criticisms of legal method in the use of new information technologies. The 1967 episode of "Star Trek" entitled "Court Martial" suggests through science fiction that this dilemma may continue into the far future with the shortcomings of computer information technology. Thus, this article discussed the implications of computer information technology for the legal method and the structure of a core doctrine of legal reasoning: stare decisis. First, based on an examination of the rise of the doctrine of stare decisis during the advent of the printing press, the paper concludes that the rise of stare decisis was not simply due to the legal factors of court structure and hierarchy, but also because of the extra-legal influence of the printing press and the efforts of individual printers and publishers. Second, the implication of this synergism leading to the rise of the doctrine of stare decisis can be applied to an analysis of the contemporary information technology of computer assisted legal research for criminal justice practitioners. While the printing and computer "revolutions" in legal research are similar in some respects, the currently available computer information technology fails at a basic/ergonomic/psychological level, at a social level, and at a phenomenological level. Perhaps, in the end, we are left with the argument of the eccentric "Star Trek" defense lawyer in "Court Martial," Samuel T. Cogley, who stood against computer assisted legal research and for books by saying:
Do you want to know the law - the ancient concepts in their own language? Learn the intent of the men who wrote them? From Moses to the Tribunal of Alpha Three? BOOKS!" [End page 32]

REFERENCE LIST


**ENDNOTES**

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Denton, Texas, 76203-5130 (E-mail: chilton8@juno.com). A paper originally presented at the 1999 annual meeting of the Academy of Criminal Justice Sciences, Coronado Springs Resort, Orlando, Florida, March 9-13, 1999.


2. The keynumber system was the inspiration for numerous other indexing schemes that have appeared since for other professions and literatures. [End page 36]