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Choreography for a Dancing Bear: The Web, Markets, and Strategies

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Abstract: WorldWide Web technology is non-proprietary, flexible, cheap and global. Its growth has been staggering. This paper makes some predictions about its future development and also some searching questions that legal academia would be well advised to answer.

Introduction

A friend and colleague of mine often refers to what he calls the "dancing-bear" phase of new technology. An admiring crowd surrounds this wondrous performer, saying, "OOOH", and "AHHH" and "Wouldja look at that? It's a by-God dancing bear!". Only later, says my friend, does anyone bother to ask how well the bear can dance, or if dancing bears are somehow *useful* .

With my colleague Peter Martin, I have spent the last few years working at the Ursine Choreography Dodge, mapping out new dances to be done by a particular bear -- the suite of technologies known as the WorldWideWeb. In this paper, BILETA have asked me to make predictions about near- and not-so-near-term uses and consequences of this set of technologies. As I carry on with this task I hope that the reader (or listener, or net-surfer) will keep in mind that I am, in fact, attempting to predict the wrist-twitches of a two-ton mammal gyrating wildly in a space of indeterminate size to a musical selection which oscillates between Mozart and the Sex Pistols. There is some possibility of error.

Important characteristics of the technology

Our particular bear wears a barrister's wig and has a rucksack full of legal information on his back. But let us first consider what he has on his feet, the nature of the technology itself.

A cheap pair of sneakers

This bear needs no peau-de-soir pumps. Web technology is inexpensive for the producer, and is becoming increasingly so for the consumer. Web server software runs on microcomputers and workstations, and the software itself is largely public-domain. Some commercial server software exists; the steepest annual licensing fee known to me is approximately $5,000 (US) per year(1). Of course, editorial and maintenance costs far outweigh the cost of hardware and software. Unfortunately, they are highly content-sensitive and therefore less easily estimated, but informed guesses are possible. Some high-end operations are talking about offering full-service Web publication to Fortune 500 companies at rates ranging from $25,000 (US) to $50,000 per year, including conversion and editorial costs. Given the expense of distributing comparable materials on paper (or indeed any other means where something must be physically shipped to the consumer) and the potential audience (up to 25 million(2) depending on whose Internet demographics you believe), even this is a bargain.

For the information consumer, access to the Net (in general) and the Web (in particular) is getting cheaper and incentives (in the form of worthwhile content) are growing explosively. For hardware, even a high-end user need only have a GUI-capable personal computer, a modem, and access software. In the United States, the mass-market client software price point is hovering at around $40-$50, with some technical support offered. Those who do not require technical support are of course able to use any of a number of "freeware" browsers, which are as capable as the commercial offerings (sometimes more so). The cost of connectivity is fairly low as well; the casual user's bill for services might well be under $50 per month -- the cost of business telephone service in the United States. Of course, one should also bear in mind that many users of interest to legal information providers will not be paying their own access

costs directly; the cost will be borne by the organization they work for, be it a law firm, university, or government organization. While this does not necessarily reduce the real cost of access overall, it does make some economies of scale possible, and creates a situation where many users do not feel they must nervously count the number of minutes spent online. The price of admission is low.

The ticket the consumer buys at that price is a general-admission ticket. Legal information is not by any means the only thing they will find in this arena; the same software and hardware permit access to myriad other forms of information, including entertainment and other powerful attractors for the mass market. It has been our experience that those who come for entertainment pursue other informational interests and needs as well, and may form an entirely new market for legal information (albeit legal information which has been recast for a non-professional audience).

The bear in pieces: distributed technology

The WorldWideWeb is, at bottom, a common protocol and markup standard which allows the interlinking of hypertext across the Internet using a client-server model. The component documents in a Web-based collection can be anywhere on the Net; formation of a "collection" is virtual, and does not depend on physical or institutional co-location. Users navigate from one document to another using hypertext linkages (most often, by clicking a mouse on specially-presented text). They do not know, and for the most part do not need to know, that the different documents are physically housed in different places. But ease of use is perhaps the least important of the implications of this approach, as we shall see. It is possible for third parties to structure entire collections of pointers, forming tables of contents and other value-added organizing documents as they see fit. This is an extraordinarily powerful technique.

Generalized and non-proprietary

Web technology is available to anyone who wishes to implement it, and clients and servers are for the most part wholly interoperable. The standards which describe the underlying markup language, the system for constructing hypertext links, and the means by which client software (browsers) interact with servers are publicly distributed and reasonably easy to implement. It is, in short, a non-proprietary interface to information which has thus far remained reasonably free of proprietary features which would grant market control to one or another information provider or client software developer. This stands in sharp contrast to the inner mysteries of software used to access existing commercial services and CD-ROMs, which are heavily wrapped in intellectual property protections.

Malleable

Like other forms of electronic text, the Web is malleable. But where traditional services are malleable in the sense of being easily updated by the provider, the Web is malleable in ways which permit the user of Net to personalize and structure their own information environment. All browsers support the use of a "bookmark file" or "hotlist" which permits the end user to retain a list of favourite places for easy access. Some permit annotation of online resources. Finally, most users find writing their own HTML rather easy -- so that very little effort is involved in (say) dumping out a bookmark file, adding some explanatory text, and using the result as a personal directory of Net resources. This suggests, too, that there is a short and evolutionary path from being a passive consumer of information to being a collector of pointers to being someone who publishes that personal collection for the benefit of others -- and indeed this is a path which many have taken.

There is another aspect of malleability worth considering, and that is the ability which publishers have to quickly garner reactions and incorporate corrections to their texts. The Web contains mechanisms for feedback via e-mail and forms input, and our experience has been that they are used. Information consumers are quick to spot errata and to notify us of their existence, and even quicker to point out to us those areas in which our collections are deficient. Contrast this with the world of Lexis and Westlaw, or of print, where there is no clearcut or speedy mechanism for the correction of errors or for obtaining market reactions to new materials.

Beyond the Web: linking to other technologies

Just as Web documents can be linked to other Web documents, they can be linked to other technologies and used to drive other kinds of software. Web software can thus be used to create attractive, interactive entry points for other technologies and approaches. From the beginning, the HTTP protocol used for client-server interaction has been designed to accommodate at least rudimentary accounting and billing functions, though it is only recently that these have come close to being viable in a real-world commercial environment. The day is not far off (a matter of months at the time of writing and perhaps a matter of days by the time you read this) when full-blown, secure commerce will take place via the Web. The Web's support for forms-based entry coupled with a generalized mechanism for gatewaying to external scripts (the Common Gateway Interface) makes it easy to couple Web servers with other technologies as well. One significant example of this is the CUPID distributed-printing technology, which permits printing on demand via high-end document production machines such as Xerox Docutechs and Kodak Lionheart machines as well as on PostScript-

capable printers. The person who orders the document, the publisher, and the print shop can each be anywhere on the Net, with orders being placed through a Web interface and results being delivered (with full user control over all significant attributes of the print job) at any available printshop on the Net.

A world-wide Web

Finally, the WorldWideWeb is just that: world-wide. Information providers are able to offer materials to international audiences in ways that they simply could not if they were required to develop the necessary networking infrastructure themselves. At the present moment this is perhaps most significant for the large American providers of legal information, who have been largely ineffective in peddling their wares elsewhere. But of course the Web is not a one-way street; the opportunity to provide information across national boundaries exists in the other direction as well.

First-order implications

The significant aspects of the Web technology can be stated simply: it's inexpensive, global, distributed, non-proprietary, highly flexible, and capable of reaching a wide audience. But the simple items in that laundry-list of capabilities have some very complex implications.

Inexpensive technology

The fact that Web technology is widely available and inexpensive implies first of all that many will use it to establish themselves as information providers. Many are using it, and are becoming, in effect, very small electronic-publishing houses with a reach as great as that of electronic publication giants such as West and Lexis/Nexis. Of course, just as the technology acts to enable individuals to publish, it raises the bar for existing publishers. It is no longer enough to simply provide or control a distribution channel. Those who wish to call themselves publishers will need to do more than provide the pipes through which information with little added value flows.

This is not to say that the existing services do not provide added value; they do. And for the most part they do a better job than the current crop of Internet volunteers can; they're better funded. But without significant effort and expense beyond the current norm they would not, as a rule, be able to offer the same value that an expert in a particular area of law -- a treatise author, perhaps -- would be able to add to a narrow but deep collection in her area of expertise. In future, the large information providers will be able to rely, as they always have, on comprehensiveness as a powerful selling point. They will be, as they always have been, wide but shallow sources of information. But they will also have to make decisions about whether they wish (on the one hand) to compete with experts publishing in narrow niches, or (on the other) to serve as "background providers" of the plain-vanilla information which those experts refine into electronic products with more sophisticated content than they themselves can generate. Of course, they might do both, and they might make the same decision differently with respect to different bodies of material.

Current commercial providers, particularly in the world of CD-ROM, use many techniques to differentiate their products from one another, of which added editorial value is only one. User interface is another powerful differentiator, and indeed for some texts (the IRS code, for instance) seems to be the only thing distinguishing one information product from another. For the moment, this kind of differentiation may be a powerful selling tool, but it will be much less so in the future -- particularly if the differences in interface are trivial. End-users, exposed to a relatively seamless, non-proprietary environment, will come to insist on the same seamlessness and ease of navigation in other information products as well. They will also want those products to be linked, or linkable, to external data resources in the nonproprietary world. At the present moment, the fully-wired American attorney might have a half-dozen icons on his desktop, each representing a different user interface to a different, isolated data resource, and is grumbling about the differences in interface and the lack of linkage between them. I doubt that this not-so-hypothetical lawyer will tolerate the presence of forty such icons. The message here, as always, is that as the number of information sources proliferates the need for a common interface grows exponentially and it will no longer be possible to "lock in" an audience through the use of a proprietary interface. (3)

A systematic look at value

Thus far I have used the term "editorial value" generally, as a sort of code phrase for an entire complex of possible value-adds which a publisher might provide. A detailed taxonomy of editorial value exists. In a paper published in 1991 (4), Henry Perritt listed ten types of value which it is possible to add (singly or in combination) to electronic information, grouped in four categories of activity: creation (possibly individual authoring, or the generation of regulations by an agency, or other forms of text generation), organizing (which takes in the chunking and tagging of texts, and the construction of internal and external pointers to other information), assembling and communicating (comprised of query and retrieval, presentation, duplication, and distribution functions), and marketing (made up of promotion, billing, and quality-assurance activities). Perritt argued that networked information infrastructure has the effect of "unbundling" these value-adds in a way which permits each type of value to be added by separate, independent entities. In the intervening 3

years, the WorldWideWeb standard has grown from nothing to the most popular application on the Internet, and Perritt's analysis has gone from being a largely predictive one to one which is entirely descriptive of commercial and non-commercial activity in legal information on the Net today. One can go through his list of added-value types and match each with the name of an actual company or institution which, in 1995, is providing it -- either singly or in combination with others.

The unbundling of these value-adds is a natural consequence of the distributed hypertext capabilities of the Web, something Perritt clearly anticipated in considering hypertext systems generally. If I can point at any single document anywhere on the Net, then I could (for example) construct my own collection of pointers which would co-locate diverse documents from diverse sources, within a structure of my own devising. I might do this with the knowledge and cooperation of the original information providers, or I might not. The point is that neither I nor anyone else need undertake every activity in the value chain; I can fill one of those ten roles, or three, or six, with the rest left to others with whom I might be in collusion, or not. The remaining value-adds can be left to others.

At the moment, most sites which are taking advantage of this capability are doing so in a relatively unsophisticated way. Most common is the humble resource list, often just a listing in which a site is in effect saying, "Here is what some other people are doing", followed by some links the user can follow to those other sites. More sophisticated instances include resource lists which are topically organized; indeed some sites (like the international trade law site at Tromso(5)) are put together entirely on this principle. Perhaps the most sophisticated example is the LII's system of topical and searchable indexes to the US Supreme Court decisions mounted at Case Western Reserve University under Project Hermes. It provides a variety of topical and non-topical views of the same material -- material which is not held at Cornell, but at Case Western -- and offers added value ranging from the simple ability to find cases by party name to the ability to search for cases based on a fixed vocabulary of topical keywords.(6)

There is, of course, room to do much more. In particular, little has yet been done by law teachers. One can imagine that they might provide students with outlines and overview documents which use hypertext links to point directly into related texts offered by others, either as part of a course or as an electronically published supplement to a textbook of which they are the author. The core materials offered by the LII -- most particularly the various US intellectual-property statutes -- have been developed with this use in mind, but thus far few have taken us up on it.(7) I believe that situation will change as law teachers become more familiar with the Net and with the tools used to work in this medium.

Who are the providers?

We have spoken generally about providers, and given some clearer definition to one group: small-scale providers operating in narrow substantive niches. We need not rely on such an abstract description; there are many real-world examples, and the population is growing explosively. In 1992 there was one law-oriented WWW site. Now, less than three years later, there are more than 150(8), with one or two new ones appearing each week. Many of these are operated by academic institutions, which have been given a leg up by inexpensive Net access and long experience with its dynamics and requirements. Increasingly, though, the new sites are operated by law firms, by legal publishers, by professional associations, and by government agencies; the greatest growth appears to be in the number of sites operated by law firms.

Each of these groups has its own reasons for being in cyberspace. Firms wish to showcase the talents of their partners and the quality of their intellectual inventory(9). Publishers wish to gain a toehold in this new medium, and offset an appearance of being left behind by new technology. Professional associations want to provide services targeted to their memberships and, like publishers, to show that they are firmly astride this new beast. Government agencies are operating under mandates to make public information public. As of this writing, there is considerable overlap of content and pointer collections; many academic sites are little more than laundry lists of pointers to material offered by others, and often those pointers lead to the same two dozen high-quality sites. But there is increasing interest in original publication, and the overall volume of available content is growing by leaps and bounds. Cooperative projects, or interactions among sites which go beyond the simple "I'll point at you if you'll point at me" paradigm are as yet fairly rare, but do exist.

Of these various groups only one closely resembles the traditional electronic legal-information service, the electronic legal-information service itself. In future some providers of legal information will not be "law people" at all. It is easy to imagine that an urge to offer legal information over the Net might arise in other types of business or organization. Consider for a moment the way in which pharmaceutical companies sell nonprescription drugs. The typical advertisement for a headache remedy identifies the problem ("you have a pain in your head, and you look awful, and here's a picture which looks just as bad as you feel"), identifies itself as the cure ("we give fast relief"), and shows a satisfied customer. One can imagine a similar approach using (say) government regulations: identification of the problem ("your workers are required to have safety equipment, and here's the regulation which says so"), identification of the cure ("we sell safety equipment"), all presumably followed by a picture of the satisfied, hardhat-wearing business executive. One should keep in mind that the ad agency which asked, "How do you spell relief?" as part of their ad for a sinus remedy might well have been talking about another kind of relief altogether.

It may seem grotesque to equate the law with a headache -- though no doubt some students would agree that there are points of correspondence -- but the idea that there are potential publishers of legal information outside the current universe of law people is not a farfetched one. There are many individuals and groups who neither create, practice, nor study law in a formal sense who have ample reason to put legal information in front of an audience. They might wish to demonstrate the need for some product -- the regulatory headache nostrum -- or they might be serving a narrow interest on the part of their constituency. For example, one can imagine a collection of broadcast regulations put together by a society of amateur radio operators for the benefit of its membership.

Who is the audience?

The amateur radio operators of the preceding paragraph are not conjectural. One of them wrote us not long after the LII began operations on the Web two years ago, one of many such inquiries from non-lawyer visitors to our site. We now receive an average of three such questions each week, and our log files reveal that they are simply the tip of an iceberg made, it seems, of private citizens worldwide who have some interest in some aspect of the law. The audience is large, it is by no means exclusively professional, and it extends well beyond the population currently being served by the online legal-information services. Indeed, there is a large, clearly identifiable segment of that audience which one could describe as those disenfranchised by the large commercial providers, who are inaccessible to them for reasons of cost, lack of network infrastructure, or other reasons. Others are those who have an interest in legal information for personal reasons; still others are non-lawyer professionals wishing access to information of concern to a more general class of administrators, such as employment law. Finally, a troublesome few who write us are people with an actual legal problem they wish us to solve -- electronic counterparts of the pro se patron who has so deeply concerned law librarians in the past.

A more exact categorization is difficult, partially because the audience is so diverse, and so it is difficult to name specific services which might in future be directed at this population. But the Net's collective experience with large audiences so far is encouraging. The sustained popularity of narrowly-focused listserv- and USENET-based discussion groups is an adequate demonstration of the idea that large audiences make narrowcasting -- the targeting of information to groups with extremely selective interests -- a viable enterprise. Moreover, these existing systems are almost without exception the first ones used by people new to the Net, and they acclimate those new users to the idea of self-selection as the first step in obtaining information. Put another way, those niche information providers we postulated earlier are going to find a critical mass of interested consumers.

What is important about the audience in general is that it is large, that it self-selects, that it extends far beyond the target market of the existing commercial online information providers. Finally (and worth noting in its own right) it is an audience which defies the current belief that marketing on the Net is the rough equivalent of the Home Shopping Network, that cybermalls will work(10), and that old advertising techniques will apply to this new audience. Many of our audience may not be lawyers, but they are certainly seeking information at a fairly high level. Some of this is no doubt owed to the demographics of the Net, which remain heavily weighted toward upscale professionals. But much of it embodies a concern for quality and depth which ought not to be surprising in people who are, perhaps, curious about the workings of the legal system, led to an interest in law by the requirements of another (perhaps managerial or medical) profession, or, simply, motivated by finding themselves in a tight legal spot. They are not using the Net to shop for toaster ovens, and they will not be satisfied with handwaving and informational glosses of the "You and the Law in Thirty Seconds" variety.

Some future developments

The first-order implications of Web technology listed above will themselves work together in interesting combinations to change the scene we know. Here are some (rather randomly organized) ways in which I believe things will change in the next several years:

Recombinant resources

If the reader (or listener, or net-surfer) has now formed a picture of a universe of small information providers each adding a different type of value to a small collection of information without reference to any grand organizing scheme...then so be it. We have, and will continue to have, large numbers of providers of legal information, who might be law people or not; each will be adding different levels of value for different reasons; they will have a wide range of institutional, national, and cultural affiliations. This is a confusing scenario to be sure, but it is one which offers tremendous choice to the consumer and which has room for interesting forms of innovation and growth. It is like an enormous vat of recombinant DNA rather than the dancing bear we began with.

The opportunities for cooperation amongst these various "recombinant" providers -- academic institutions, private practitioners, commercial publishers, and government agencies -- are enormous. What remains murky is how these relationships will be structured. We have concentrated on process as well as product at Cornell, to the extent of

constructing an Institute which is an explicit technologist-scholar collaboration which actively seeks partners in the academic, public and private sectors. We believe this to be a viable model in the long term. At present, we have undertaken several projects jointly with the private sector(11), but most have fallen into traditional joint-study, consulting, or software-licensing paradigms and have not taken full advantage of the opportunities for cooperation. We have been much slower to approach the world of private practice and of government, but are eager to do so. As usual, it is much easier to build technologies which permit these barriers to be broken than it is to create administrative and cooperative business structures which will fund and carry out the work or to reconcile the differences between different institutional cultures.

Resource location and intelligent agents

Not surprisingly, the proliferation of publishers has created problems of resource location which are likely to get worse rather than better. (As already pointed out, much of the value being added by third parties at this point is organizing value; this is in many cases a straightforward, small-scale response to a situation which is inherently unmanageable). Many hold out so-called "intelligent agent" technology as a future solution to this problem, and envision a world in which we dispatch "knowbots" to retrieve information of interest to us and filter it into manageable form.

This hope is not an unrealistic one, but it has limits. Good work has already been done on meta-indexing, cooperative and distributed indexing(12), and other such automated systems for finding that which interests us. Confronted with this resource-location problem, and offered the prospect of automated solutions, the author finds himself thinking about jars of pickles. It is impossible to pack pickles into a pickle jar using entirely mechanical means. In commercial canning, the jar is filled almost entirely by machine -- but the last pickle is inserted by hand. So too with intelligent agent technology. Now and in the future such tools will take us up to a point -- but will then require the intervention of human expertise (our own, or that of an editor) to create a truly useful resource. Experts and editors will continue to be needed, and, if we accept that competition between commercial providers will increasingly focus on editorial value added, they will be needed in great numbers.

There are, of course, many points of correspondence between this organizing, editorial activity and the work which has for many years been performed by faculty research assistants and the staffs of student-edited law journals. It also corresponds quite closely to the activity of many librarians. It may be that one or both of these groups succeeds in internalizing Net-related editorial activity in the near future.(13)

Information versus advice

Some legal-information offerings were characterized earlier in this paper as "handwaving". Certainly we are all familiar with attempts to offer legal information to the mass market (for example, a legal-advice column in the newspaper) which are either so general as to be immediately recognizable as useless to the reader, or which simplemindedly restate the problem at a higher average syllable count and suggest that the reader call an attorney. At the opposite end of the spectrum we find the diagnostic and therapeutic services offered by an actual attorney in consultation with a real client. We might conceive these as simply representing the ends of a spectrum of increasing detail which, were an actual attorney involved, would be the product of interaction in one or more client interviews, fact-gathering processes, etc. It is not difficult to imagine interactive hypertextual systems which offer a more fixed type of interactivity to permit the user to reach increasing levels of detail; indeed, many existing document-assembly systems work in precisely this way. The question which will confront publishers in this new medium is one of where the line ought to be drawn; as a practical matter, providers of such information are going to have to cruise between the Scylla of worthless generality and the Charybdis of malpractice.

The author recently posted a question on precisely this point to the "Law in a Digital World" electronic conference hosted recently by West Publishing. The sole respondent asserted that in fact legal information and legal advice exist in a hazy spectrum. This came as no particular surprise to the author, who was well aware of the fact when he posted the question. The point is, of course, that a time is approaching when real-world entities in the publishing game are going to have to make decisions about where the division point had ought to be, an undertaking which does not permit comfortable ambiguities in the way that academic discussion does. It will be interesting to see where the line is drawn, whether different entities draw it in the same spot, and how often it is crossed.

A shift in author-publisher relationships

Amplification of the editor's role, a natural consequence of the emphasis these new media will place on editorial value, assumes that there is an editor distinct from the author, and this will not necessarily be the case if the normal activity is one of self-publication rather than publication via separate publishing house. Yet I doubt that publishing houses will disappear, for a number of reasons. First, there is work which authors will not be willing to undertake themselves -- HTML formatting, for example, or preparation and conversion of illustrations in digital form. Second, most authors will feel the need for a "second eye" in preparing work to go before the public, and will wish to work with someone who will

fill that role. Finally, the whole category of value-add which Perritt refers to as "marketing", which is comprised of promotion, billing, and quality-assurance activities, is one best undertaken by a publishing house.

What is clear, however, is that the balance of power and the types of activity undertaken by author and publisher respectively will shift. Neither of these two has ever adequately valued the activities of the other, and we are entering an era where a new definition of the relationship will be up for grabs. The locus of some activities (like the marketing functions mentioned above) will be dictated by practicality. Others, which could be done by either party or by third parties under contract to one or the other of these two, might end up anywhere. Some, pre-empted by the distribution facilities inherent in the Net, will disappear altogether.

Legal publishers in the United States, are, as I write this, well aware of this looming problem but are at something of a loss for programmatic solutions. What is certain is that "electronic media permit works of new power and that realizing that full power calls for a new kind of 'writing' and a new process for authorial creation"(14).

Marginalization of faculty

American vendors of electronic legal information are well aware of research which shows that many professionals form lifelong work habits during their graduate studies. For that reason, Westlaw and Lexis/Nexis each donate in excess of $30 million(15) (estimated) in services to law students each year, and back those services up with training courses and other supplementary materials. Indeed, in many US law schools the teaching of electronic legal research has been largely left to these commercial entities. It seems likely that the newer entrepreneurs in the legal-information arena will do likewise(16). The question is one of whether law teachers will sit back and let them do it; we already know that students are much more attuned to the Net than their professors.

My colleague Peter Martin has pointed out that this is a scenario in which the law teacher will be sidelined. Commercial vendors are already a powerful and rich source of learning aids which are widely used by students and just as widely held beneath notice by their teachers. As Martin puts it:

Less visible to law faculty members but increasingly visible to students are the new electronic offerings of those entities old and new that seek to profit from an understanding that law students, eager to find the shortest path to a good grade, will pay significant sums for materials that offer summary, synopsis, straight-forward exposition instead of challenging questions...Unless law schools succeed in transforming old patterns, which will require removing old regulations, the fully networked school will have a marginalized faculty. Their students will be connected with commercial information vendors currying future favor and with educational products offering the least burdensome path through the book, classroom, exam paradigm still practiced by law teachers(17).

Martin paints a picture of a ten o'clock scholar, perhaps, but this is not the only aspect of the student psyche that these services wish to address. Lexis Counsel Connect recently announced a system of free student memberships which would, in effect, permit students to silently "sit in" on online substantive discussions between the private practitioners and corporate counsel who are LCC subscribers. This plays not to student laziness, but to a natural and vital curiosity about the world of work which awaits them upon graduation and to the ever-present suspicion that their education is artificially confined to ivory-tower theorizing. It also offers, one suspects, a view of the law and of legal practice rather different than the one given them by their teachers.

Whatever the motivations of student and information provider, it is clear that the student will be the center of a great deal of attention from information vendors. This presents law teachers with roughly the same question faced by the parents of a teenager interested in but ignorant of sex: Do you want them to find out about it from you, from the other kids, or from a stranger? Law teachers in the United States have yet to address this question, but it is clear that they will need to in the near future; failure to answer is an answer in itself.

Conclusion

The conclusions drawn in this paper proceed directly from the inherent capabilities of the technology and, to me at least, have a sort of flat historical inevitability. A humorist once described his childhood education in the Old Testament as consisting of "all those damned begats", and my efforts here have something of the same air about them: inexpensive technology begat many information providers which begat resource location problems and begat a different experience for law students. Hypertext linking begat unbundling of value adds which begat new forms of business which begat a shift in author-publisher relationships. And so on.

Yet none of this is as inevitable as it might seem. It is always possible, however unlikely, that business will simply go on as usual. Far more likely, though, is that we simply have not arrived at an intuitive understanding of this new, globally-linked hypertext mechanism. An analogy frequently bandied about compares our current position with that of the first filmmakers: hampered by our experience with the old medium, we aim a fixed camera at a stage full of live performers

because that's all we can think of to do. Much more is possible; there's a sense in which we are waiting for someone to invent the jump-cut. And whatever happens, it will have at least one other thing in common with those first, innovative films: it's going to be fun to watch.