Abstract

As we enter the age of the new electric lawyer, information technology is clearly shaping both legal practice and also the legal profession. The rapid commercial, development of the internet and other information technologies is providing a vehicle for lawyers to trade legal services and to even deliver some services in their entirety. Importantly, this capability also provides clients with the facility to seek the best advice wherever it is located. Moreover, in the not-so-distant future, it is possible that the internet may even provide a forum for the determination of some types of justice, say through, through mediated dispute resolution.

This paper draws upon empirical research to explore the impact of information technology upon legal professionalism. It demonstrates that information technology is not the benign force that we are frequently led to believe it is: it does not introduce itself, rather, it is the product of commercial policies that are driven by ideology and pragmatism. Furthermore, by assisting firms to achieve gains in economy, effectiveness and efficiency, information technology accelerates the deskilling of the 'intellectual craftwork' of legal practice by dividing, and then sub-dividing, tasks until they eventually become automated. Whilst the enskilling of some tasks, for example, to operate the technologies which perform the newly automated tasks, appear to contradict this view, the stark reality is that all work tasks are eventually broken down into their component parts and are therefore vulnerable to automation. Such an understanding is important for both the future development of legal information technology, the management of legal practice and also legal education. The findings also contribute to the ongoing debate over the legal profession by suggesting that our conceptualisations of legal professionalism will constantly undergo change and that we should therefore perceive the changes, not as the decline of legal professionalism but, rather, a re-negotiation of the legal profession's relationship with the institutions around it.

A summary of the main points in this paper

a) Changes in society and law which have led to the development of information technology.

- Changes in society: time and space has become disembedded:
  - time factor in the legal process is no longer related to physical factors (post, transport)
- space is no longer physically bounded (Fax to WWW)

- Law has changes substantively:
  - growth in the volume and complexity of legal procedures
  - knock on effects from government policy
  - increasing advice culture and demand for advice
- The managerialist ethos driven by the need to rationalise capital has encouraged the introduction of IT

b) A survey of the use of information technology by lawyers in Leeds

- The aim of our research was to explore lawyers' use of information technology and to look at its implications for legal education and legal professionalism.
- Questionnaires were sent to all 1273 lawyers in Leeds - 911 solicitors and 300 barristers (plus the 62 who work in private industry or local government).
- The response rate was 35 per cent.
- Interviews were conducted with solicitors, barristers and practice IT managers.

c) The main research findings

- Firms are still in the process of introducing information technology.
- Traditional areas of law (eg, family, crime) are least likely to use it than the newer areas (IP, environment).
- Gradual introduction of IT means that some practitioners will tend to continue their existing working practices and thus avoid embracing IT.
- There are gendered differences in usage of IT, but this was subsequently found to be related to the overall position of women in the law firm.
- Dedicated team of IT staff tended to create cultural conflict within the firm, eg. IT managers v. practitioners.
- The actually use of IT tends to be determined attitudinally rather than rationally.
- Firms see themselves as selling a product, which is the fee earner's time. Therefore they use only relevant IT.
- Law firms like to train their own staff in their systems. But training was found to be lacking.
- Contradiction between IT strategies and practice - IT is under used in law firms.
- Overall use of IT still tends to be reactive rather than pro-active.

d) The implications of the findings for the legal profession

- Polarisation of profession into users and non-users.
- Differential use between legal specialisations. Some areas will become more IT dependent than others.
- Growth in communication.
  - solicitors and barristers with clients.
  - solicitors with barristers.
  - solicitors and barristers with the justice system as a whole.
- General implications for the bar.
  - IT influences solicitors choice of counsel.
  - choice of counsel no longer as geographically determined.

e) Conclusions: The industrialisation of legal practice
Developments in the legal world have shown the hallmarks of industrial rather professional
development.
- Polarisation of the profession into the `knowledge class' and the non-engagers.
- Deskilling of many existing roles and the reskilling of new roles.
- Provides opportunity for surviving lawyers to concentrate upon more `rewarding' tasks.
- More control over the legal process by fewer people.
- The practice of law in cyberspace will create considerable opportunities and some practical
  problems.

Information technology and the shaping of legal practice

Introduction

This paper draws upon empirical research findings to explore the impact of information technology
upon legal practice. It will inform the above debates over the legal professions, as well as addressing
the wider debates over modernity and the sociology of professions. By focusing upon the
technologisation of the legal practice, it will be argued in this article that the engine of change is not
the introduction of information technology, but the new managerialist philosophies[2] which
embody the `logic of industrialism' (Kerr et al, 1971) which continually seek to rationalise productive
activity and have come to mould high modernity. Moreover, they seek to rationalise legal practice
and thus redefine the traditional relationships between lawyer and client, between lawyers
themselves and between lawyers and their employers.

So, these are increasingly difficult times for the legal professions, not only are they suffering from a
highly publicised legitimation crisis (Wachman 1996:1; Sweet 1996:1), but they are also undergoing
considerable change within their organisation and in terms of their traditional concepts of legal
professionalism. Whilst there is a fairly broad consensus that these changes are taking place, there is
considerable disagreement about their effects. At one extreme is a school of thought which interprets
these changes as being symptomatic of the decline of the legal profession (Abel 1988). At the other
extreme is the more optimistic belief that the reports of the death of the legal profession are grossly
over-exaggerated and that the changes result from the re-negotiation of professionalism (Paterson
1996:137). Cutting across both viewpoints is a growing debate over the role played by information
technology in changing the nature of both legal practice and also legal professionalism.

The increasing growth and complexity of law

As long a go as 1905, Louis Brandeis perceptively observed that the work of lawyers is 'limited by
time and space' (Hazard and Rhode 1985:15). It was the very embeddedness of the legal process
and its relationships within what was a local, physical medium which governed the pace of the legal
process. Simply put, the legal process was largely dependent upon the physical carriage of
information from one party to another. This simple device combined with their exclusive knowledge
enabled the legal professions to exert considerable control over the legal process.

Since Brandeis's time, the pace of the legal process and the world in which it has taken place has
increased considerably, necessitating the introduction of new organisational culture and practices. We now live in a world that some contemporary thinkers believe has developed beyond its natural capabilities. In the early 1970s, for example, Illich warned us that:

"once the barrier of bicycle velocity is broken at any point in the system the total per capita monthly time spent at the service of the travel industry increases... Transportation beyond bicycle velocity demands power inputs from the environment. Velocity translates into power and soon power needs rise exponentially (1973:95)."

Illich told us that in traditional societies our conceptualisation of time was derived from the natural pace of life which in turn was defined by human abilities. Bourdieu affirms this observation in his 1963 study and cites a traditional song to illustrate it, 'It is useless to pursue the world, no one will ever overtake it' (Bourdieu 1963).[4] However, the technologically driven imperatives of capital have threatened to do precisely that: overtake the world or at least its pace.

Writing two decades after Illich, Giddens and other commentators (Giddens 1990; Cornell 1990:267-297) have further informed our understanding of modernity by identifying fundamental changes to our understanding of time, space and place. Giddens has argued that the pace and scope of change that arises within new modern institutions has separated modern and traditional social orders, thus creating 'discontinuities' with the past (Giddens 1990:6). These discontinuities have led to the disembedding (Giddens 1990:13) of time and space which have traditionally bound social orders. They have also led to the 'lifting out' of social relations from local contexts of interaction and their restructuring or 'distanciation' across infinite spans of time-space.

The engine of change which has led to this distanciation has not been technology per se but the ideas arising from the logic of industrialism which continually seeks to rationalise productive activities by dividing them into their component parts. The technology is only a means by which this rationalisation can be effected. Of particular interest here is the impact of the internet which, during the past five years, has revolutionised communications technology and has further accelerated this disembedding and distanciation. Communications can now take place instantaneously without respect of geo-physical or social boundaries and thus redefine our understandings of time, space and place. Moreover, the internet has provided an infrastructure for the development of cyberspace (Gibson 1984; Sterling 1994), a socially constructed, abstract space, which is not physically bounded (Wall 1997). It is within this virtual community that we now conduct much of our social and intellectual activity, whether it be in work, leisure or pleasure. So, human social relationships, once separated by time and space, are now united once again as the social relationships of production have become redefined by the logic of industrialism. These characteristics will apply just as equally to the legal process and it is perhaps interesting to note that one of the significant growth areas has been the virtual legal community, which highlights the need to understand the technologisation of legal practice. However, whilst the virtual legal community is an exciting development it is still in its infancy and it is not discussed here, rather the focus is upon the technologisation of the legal process.

Within the legal process three main trends can be identified[5] which, during the past thirty years, have been responsible for creating internal pressures within the legal profession to increase operational efficiency, make working practices more economic and make organisational structures more effective. First, Smith (1996:52), has demonstrated the growth of an 'advice culture' by illustrating the increased use of a wide range of helping organisations over the past two decades. He argues that the increased use of lawyers follows an increasing trend of people who are reaching out for help in relation to 'both the material and psychological aspects of their problems' (Smith 1996:52). In support of his argument Smith cites increases in requests for assistance in the following agencies, shown in Table 1. Table 1 shows that over the past two decades there has been considerable increase in requests for all types of advice. When aggregated Smith's figures show almost a five fold increase in the numbers of people seeking legal advice.
Table 1. Numbers of people seeking various types of assistance 1971-1991 (Smith 1996:53)

<table>
<thead>
<tr>
<th>Service</th>
<th>1971</th>
<th>1991</th>
<th>times increase</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcoholics anonymous</td>
<td>6,300</td>
<td>45,000</td>
<td>7.1</td>
</tr>
<tr>
<td>Citizens Advice Bureaux</td>
<td>1,500,000</td>
<td>7,648,900</td>
<td>5.1</td>
</tr>
<tr>
<td>Relate</td>
<td>21,600</td>
<td>70,000</td>
<td>3.2</td>
</tr>
<tr>
<td>Young people's advisory and Counselling service</td>
<td>89,000</td>
<td>470,000</td>
<td>5.3</td>
</tr>
<tr>
<td>Samaritans</td>
<td>21,600</td>
<td>70,000</td>
<td>3.2</td>
</tr>
<tr>
<td>Civil legal aid</td>
<td>201,072</td>
<td>256,000</td>
<td>1.3</td>
</tr>
<tr>
<td>Crown Court criminal legal aid</td>
<td>52,575</td>
<td>137,175</td>
<td>2.6</td>
</tr>
<tr>
<td>Magistrates court criminal legal aid</td>
<td>71,618</td>
<td>477,170</td>
<td>6.7</td>
</tr>
<tr>
<td>Legal advice</td>
<td>n/a</td>
<td>1,230,000</td>
<td>n/a</td>
</tr>
</tbody>
</table>

All stated sources of legal advice (excluding legal advice) 4.7

Second, is the overall growth in the volume and complexity of legal procedures. Whilst the annual number of acts of Parliament and statutory instruments have remained fairly constant since 1951 at about 65 and 2,500 respectively, the number of pages of covered by the acts has tripled. In 1951 they covered 675 pages, in 1991 it was increased to 2222 and the number of sections and schedules more than doubled from 803 to 1985.[6] Similarly, the number of pages covered by the statutory instruments almost doubled from 3500 to over 6000 (Hansard Society, 1992). So, whilst the annual number of laws remained the same, their procedural complexity increased considerably. In the area of criminal law there were, for example, three criminal justice acts in the three years between 1991 and 1994.[7]

Third, is the overall pervasiveness of law. Galanter (1992) for example, has described the legal explosion, (Barton 1975:57) excessive litigation and the liability crisis. Developments, which, he argues that these are a product of 'recondite anxieties' about the 'bureaucratisation of the world' (Macneil 1985:900), 'the juridification of social spheres' (Teubner 1987) and the 'colonialisation of the life-world' (Teubner 1987). Galanter compared the legal world of the late 1980s with that of 1960 and concluded that there are now more lawyers, more claims, more strategic players of the law game, and more expenditure, both absolutely and proportionately, on law. In addition to the quantitative expansion of law there have been a number of qualitative changes to the legal environment such as the increasing concern within legal institutions to operate in a rationalised cost-effective and business like manner. Broadly speaking, lawyers, administrators and judges are more entrepreneurial and innovative than they ever were in designing and re-designing institutions and procedures. The law itself is plural, decentralised, and now comes from multiple sources and more rules and standards are being applied by more participants to more varied situations. This means that legal outcomes are contingent and changing. Galanter also concluded that more outcomes are being negotiated rather than being decreed. Because law is contingent (conditional) flexible and technically sophisticated, he argues that legal work has become increasingly costly. Galanter's analysis broadly concurs with the conclusions of Redhead (1995) who described the eroticisation of law, 'where law itself becomes desired, seduced and consumed as a form of popular culture' (Redhead 1995:111).
Not surprisingly, the trends illustrated above led to an overall increase in the number of practising lawyers. Skordaki (1996:7) has demonstrated that the number of annual admissions to the roll of solicitors more than doubled from 1877 in 1970 to 4265 in 1990, resulting in a rise in the numbers with practising certificates. For example, during the eleven years between 1983/4 and 1994/5 the overall population of solicitors increased by 50 per cent from 44387 to 66123.[8] However, the period when the main increases in the numbers of practising lawyers occurred was also a time of increasing economic uncertainty and legal practices, like most businesses, have experienced considerable pressures to adapt to modern market forces in order to survive. As stated earlier, one of the adaptation strategies employed was the introduction of new managerialist philosophies into practice management (Stewart and Walsh 1992:499). These philosophies seek to achieve the aforementioned holy trinity of economy, effectiveness and efficiency and are largely responsible for engineering the introduction of information technology. In order to further understand their importance we therefore need to look at the practitioner's use of information technology.

The use of information technology by lawyers

This section explores the impact of information technology upon the legal profession. It reports the findings of a study of the use of information technology by legal professionals. The aim of the survey was to examine lawyers' use of information technology and to explore the implications of that use for legal professionalism and legal education. Leeds was chosen because it is one of the UK's largest provincial legal centres and would contain a broad spectrum of legal specialisations, it was also a convenient site. Questionnaires were sent to each of the 1273 lawyers who practised in the city during 1995, 911 went to solicitors and 300 to barristers. A further 62 were sent to solicitors who worked either in private industry or local government. In addition to the postal survey questionnaire, interviews were conducted with solicitors, barristers and practice IT managers to elicit further information about their use of information technology, their firm's strategy and what levels of IT competency they expected of their recruits.

Please note that gender is not specifically discussed here, because although an initial analysis of the data revealed some differences in usage, these differences were subsequently found to be the product of the unequal positioning of women within the lower echelons of the legal practice rather than their gender. This does not mean, however, that further qualitative research into usage by gender should not be carried out.

The response rate to the postal questionnaire was 35 per cent and as there were no particular patterns of non-response[9] the data was weighted so as to reflect the composition of the local legal profession. The responses provided a profile of the legal profession, showed who was using information technology, whether or not they were using it, what was available to them and what they used. It then looked at why they did not use information technology. This latter group were of particular interest, was this because their firm did not provide the relevant equipment or because they wished not to engage with information technology?

The last (distribution) row at the bottom of the Table 2 gives a profile of the legal profession in Leeds according to their legal specialisations. The largest single specialist group are the commercial lawyers who represent over a third (36 per cent) of all lawyers in Leeds, which is reputedly the second largest financial centre outside London. The other specialist groups are much smaller by comparison. When the lawyers' use of specific applications are examined it is found that word processing is the most popular application used (52 per cent), followed by electronic forms (42 per cent) and databases (36 and 39 per cent).

Table 2. Use of applications by legal specialisation
<table>
<thead>
<tr>
<th>Total</th>
<th>Commercial</th>
<th>Crime</th>
<th>Family</th>
<th>Litig'n</th>
<th>IT/IP</th>
<th>Env't</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word Processing</td>
<td>53%*</td>
<td>45%</td>
<td>34%</td>
<td>37%</td>
<td>91%</td>
<td>92%</td>
<td>60%</td>
</tr>
<tr>
<td>Spreadsheets</td>
<td>40%</td>
<td>19%</td>
<td>17%</td>
<td>22%</td>
<td>71%</td>
<td>78%</td>
<td>40%</td>
</tr>
<tr>
<td>Operational d'base</td>
<td>40%</td>
<td>16%</td>
<td>21%</td>
<td>26%</td>
<td>76%</td>
<td>75%</td>
<td>41%</td>
</tr>
<tr>
<td>36%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Admin.d'base</td>
<td>42%</td>
<td>22%</td>
<td>20%</td>
<td>27%</td>
<td>91%</td>
<td>88%</td>
<td>44%</td>
</tr>
<tr>
<td>Forms/precedents</td>
<td>17%</td>
<td>18%</td>
<td>20%</td>
<td>27%</td>
<td>85%</td>
<td>81%</td>
<td>52%</td>
</tr>
<tr>
<td>42%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Elect'r c mail</td>
<td>40%</td>
<td>9%</td>
<td>11%</td>
<td>18%</td>
<td>71%</td>
<td>86%</td>
<td>28%</td>
</tr>
<tr>
<td>31%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Presentations</td>
<td>26%</td>
<td>-</td>
<td>-</td>
<td>6%</td>
<td>62%</td>
<td>58%</td>
<td>18%</td>
</tr>
<tr>
<td>18%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Electronic diary</td>
<td>40%</td>
<td>7%</td>
<td>-</td>
<td>21%</td>
<td>62%</td>
<td>94%</td>
<td>22%</td>
</tr>
<tr>
<td>27%</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total n=100%</td>
<td>444</td>
<td>141</td>
<td>103</td>
<td>226</td>
<td>34</td>
<td>59</td>
<td>226</td>
</tr>
<tr>
<td>1233**</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Distribution 36% 11% 8% 18% 3% 5% 18% 100%
* Percentages represent use of application by the number of lawyers in each specialisation

** 45 missing cases

Table 2 displays quite a broad usage of IT applications but also a very varied use. When this is broken down by specialist group it becomes apparent that the more recently developed, and smallest areas of law (environmental law and intellectual property) are far more IT intensive than the traditional areas of law (criminal and family law). These differences are summarised in Table 3 which displays the average percentage use of applications across the legal specialisations.

Table 3. Use of applications consistency co-efficient (by legal specialisation)[101]

- Environment law 0.82
- Information technology/ Intellectual property 0.76
- Company/commercial law 0.31
- Litigation 0.23
- Criminal law 0.17
- Family law 0.15
- Other areas of law 0.38
- All areas of law 0.35

The above tables show that whilst the smallest groups of law are in fact the most consistent user of IT, it is the company lawyers who are numerically the greatest overall users of IT within the legal profession in terms of their size and consistency.

http://www.bileta.ac.uk/98papers/wall.html 02/04/2005
Table 4. Which lawyers personally use IT for their work?

<table>
<thead>
<tr>
<th></th>
<th>Barristers</th>
<th>Solicitors</th>
<th>Solicitors (in-house)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Yes</td>
<td>60%</td>
<td>58%</td>
<td>67%</td>
<td>59%</td>
</tr>
<tr>
<td>No</td>
<td>40%</td>
<td>42%</td>
<td>33%</td>
<td>41%</td>
</tr>
<tr>
<td>Total</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
<td>100%</td>
</tr>
</tbody>
</table>

Table 4 shows that a majority of lawyers (59 per cent) use information technology in their work. Interestingly, this compares with the Law Society's figure of 54 per cent (Jenkins, 1997: 3). Also of interest in the table is the observation that there is no overall difference between solicitors and barristers in their use of information technology. This appears to contradict Kelly's (1993) finding, namely that solicitors deal more with the administering of law and therefore will more likely to use information technology than barristers who's role it is to deal with 'the law' (Kelly 1993). There are, however, some qualitative differences in use and these are illustrated in the following table.

It can be seen from Table 5 that barristers use information technology in a different way to solicitors. For example, a slightly higher percentage of barristers use word processing than solicitors, however, solicitors use a much broader range of applications than do barristers. These findings are reflected in the types of hardware used by each type of lawyer (see Table 6), for example, solicitors show a preference for desktop machines (60 per cent) rather than lap-tops (14 per cent), whereas slightly fewer barristers prefer laptops (50 per cent) to desktops machines (39 per cent).

Table 5. Use of IT applications by type of lawyer

<table>
<thead>
<tr>
<th>Software</th>
<th>Barristers</th>
<th>Solicitors</th>
</tr>
</thead>
<tbody>
<tr>
<td>Word Processing</td>
<td>52%</td>
<td>44%</td>
</tr>
<tr>
<td>Spreadsheets</td>
<td>13%</td>
<td>16%</td>
</tr>
<tr>
<td>Operational Databases</td>
<td>10%</td>
<td>26%</td>
</tr>
<tr>
<td>Administrative Databases</td>
<td>6%</td>
<td>31%</td>
</tr>
<tr>
<td>Standard forms/Precedents</td>
<td>27%</td>
<td>39%</td>
</tr>
<tr>
<td>Email</td>
<td>5%</td>
<td>35%</td>
</tr>
<tr>
<td>Presentations</td>
<td>0%</td>
<td>12%</td>
</tr>
<tr>
<td>Electronic diary</td>
<td>10%</td>
<td>27%</td>
</tr>
<tr>
<td>No of lawyers (n=100%)</td>
<td>301</td>
<td>911</td>
</tr>
<tr>
<td>Total number of applications used</td>
<td>371</td>
<td>2088</td>
</tr>
<tr>
<td>Mean use of applications</td>
<td>1.2</td>
<td>2.3</td>
</tr>
</tbody>
</table>
Table 6. Use of equipment by type of lawyer*

<table>
<thead>
<tr>
<th>Hardware</th>
<th>Barrister</th>
<th>Solicitors</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>IBM Desktop</td>
<td>39%</td>
<td>60%</td>
<td>54%</td>
</tr>
<tr>
<td>IBM Notebook</td>
<td>50%</td>
<td>14%</td>
<td>23%</td>
</tr>
<tr>
<td>Apple desktop</td>
<td>2%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Apple notebook</td>
<td>0%</td>
<td>0%</td>
<td>0%</td>
</tr>
<tr>
<td>Other</td>
<td>10%</td>
<td>27%</td>
<td>22%</td>
</tr>
<tr>
<td>Total</td>
<td>101%</td>
<td>101%</td>
<td>99%</td>
</tr>
<tr>
<td>n=100%</td>
<td>181</td>
<td>507</td>
<td>688</td>
</tr>
</tbody>
</table>

* Respondents were asked to list the type of hardware that they most regularly use.

It is quite clear from Table 6 that both the different branches of the legal profession, and also the various specialisations, make different use of information technology. Three types of usage emerge from the findings. Firstly, is that which supplements the back office function,[11] much of this usage replaces the dictated letter. Secondly, it is the information technology that assists the firm in developing its administrative efficiency. Again mainly 'back office' this IT tends to combine and assist case handling and billing, readily providing the organisation's managers with performance indicators. Thirdly, is the use of information technology to assist the lawyer to engage the law itself. This IT ranges from Lexis/ Nexis to specialist legal networks to the use of the many CD-Rom databases that are now becoming available, expert systems and document assembly software. Online and CD Rom information retrieval systems have become a growth area and many applications are now available. They range from legal to corporate business oriented information systems, including Datastar/Dialog (includes news, periodicals, articles, company and corporate information), Lawtel (daily summary of cases in UK law since 1980), Textline (news and business information service), Westlaw (US legal information from all federal courts including US code, case law, citations and federal regulations), Lexis and many more.

With a variety of information retrieval systems currently available, it is important to differentiate between those applications which are available for use and those which are actually used. The responses relating to availability reflects the lack of knowledge that individual lawyers have as to what is available to them for use within their firm. These differences are illustrated below in Table 7. The table also illustrates the reliance of solicitors on the internal know how databases compared to minimal personal use of other research databases. While legal specialisation impacted on the use of different applications it had minimal impact on use of information retrieval systems, this confirms Webb's (1995:24) findings.

Table 7. Availability and personal use of information retrieval systems

<table>
<thead>
<tr>
<th>OnLine</th>
<th>Available</th>
<th>Used</th>
</tr>
</thead>
<tbody>
<tr>
<td>Know how databases[12]</td>
<td>35%</td>
<td>23%</td>
</tr>
<tr>
<td>Lexis</td>
<td>35%</td>
<td>8%</td>
</tr>
<tr>
<td>Lawtel</td>
<td>16%</td>
<td>5%</td>
</tr>
</tbody>
</table>
Column one of Table 7 shows the availability of on-line and CD-Rom facilities.[[13]] Not much more than a third of all firms have such systems available for the use of staff, but this area is rapidly developing and the medium and large firms are developing them. Column two shows the level to which the respondents actually used the facilities that are available to them. The percentage column indicates that not only are firms poorly equipped with information technology but there is a considerable gap in take up by the staff involved. The information retrieval systems are the most widely used. As stated earlier these tend to be concerned with the management of cases and clients. Rather interestingly, it is the legal information sources that are the most under-used by lawyers in general and especially by solicitors. Most of the small percentage using Lexis/Nexis and Celex etc were barristers. This finding suggests that solicitors spend most of their time giving procedural advice and/or conducting legal business with their clients rather than giving legal advice. One reason which might exaggerate the solicitors' apparent low usage of Lexis could be the fact that they tend to rely on support staff, para legals, secretaries and librarians who do make use of the facilities on their behalf. However, the interviews with IT managers and practitioners found this not to be the case. Rather it suggests that the work of solicitors tends to be related more towards giving advice about legal procedure than law.

Most of the larger firms in the survey area were planning to, or have introduced, in house case management databases which allow them to store, process and make available to staff vast amounts of information collected throughout the organisation. Thus facilitating the development of a consistent approach by providing practitioners with information about clients, current cases, cases that have already been dealt with by colleagues and the outcomes of those cases. In addition, these systems seek to eradicate unnecessary duplication of effort, for example, by providing up-to-date copies of standard legal forms in electronic format. The growing emphasis on the use of internal know how databases indicates the extent to which firms are responding to the competitive market for legal services.

Interviews conducted with several lawyers and IT managers, confirmed that their firms were very aware of the expectations that corporate clients had of them in terms of their ability to converse electronically (see table 8) and generally be seen to be running IT systems.

**Table 8. Use of electronic communication***

<table>
<thead>
<tr>
<th></th>
<th>Barrister</th>
<th>Solicitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Firms Offices</td>
<td>8%</td>
<td>39%</td>
</tr>
</tbody>
</table>

[(13)]
Other Solicitors         4%                   3%
Barristers Chambers 8%                     6%
Courts                        2%                   1%
Clients                         2%                 29%

No of lawyers who use IT 180 = 100% 528 = 100%

* N.B. Percentages are of those lawyers who said that they used IT in their work.

All interviewees indicated that their corporate clients tended to have considerable knowledge about what IT facilities are available for lawyers to use. Clients had quite realistic expectations about what can be achieved by using IT driven methods, for example the electronic transfer of documents and ability to access their own files. In this way the clients themselves are becoming an important factor in encouraging change and are becoming increasingly responsible for changing attitudes within the legal profession, moulding the development of IT strategies and even encouraging the restructuring of legal business.

Whilst our study largely concentrated upon lawyer's use of information technology, we also collected data on those who do not use computers. Just under half (41 per cent) said that they did not use a computer and it is apparent from Table 2 that they are to be found in the more traditional areas of law, such as crime and family. This group were asked about their non-use and their responses are shown below in Table 9. The main reasons for not using information technology were either that the respondents did not have access to the relevant equipment (54 per cent) or that they did not feel the need to use them in their work (20 per cent). Only a small percentage (10 per cent) said that they could not use computers. When the distribution of data was examined by branch of the legal profession some interesting differences were found, barristers and solicitors had very different reasons for not using information technology. A sixth (17 per cent) of barrister non-users said that they did not have access, a small percentage when compared with almost two thirds (64 per cent) of solicitor non-users. However, this is not surprising when it is remembered that barristers' use of information technology tended to be word processor based (see earlier). This is confirmed when it is found that a third of barristers did not feel that the use of computers was relevant to their work. And yet a comparatively small percentage (18 per cent) said that they did not know how to use them, however, it is possible that a large number of the barristers who said that they did not think computers were relevant to their work and or felt that they could not afford them actually did not know how to use them either.

Table 9. Reasons for non-use of information technology

<table>
<thead>
<tr>
<th>Reason</th>
<th>Solicitors</th>
<th>Barristers</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Don't have access to computers</td>
<td>64%</td>
<td>17%</td>
<td>54%</td>
</tr>
<tr>
<td>Do not need them in the work that I do</td>
<td>17%</td>
<td>32%</td>
<td>20%</td>
</tr>
<tr>
<td>Don't know how to use them</td>
<td>7%</td>
<td>18%</td>
<td>10%</td>
</tr>
<tr>
<td>Not sure of their efficiency</td>
<td>1%</td>
<td>7%</td>
<td>2%</td>
</tr>
<tr>
<td>Other (included cost etc.)</td>
<td>11%</td>
<td>26%</td>
<td>14%</td>
</tr>
<tr>
<td>Total lawyers not using computers(n=100%)</td>
<td>384</td>
<td>108</td>
<td>492*</td>
</tr>
</tbody>
</table>
So the main reasons for solicitors not using information technology was lack of access of computers and for Barristers it was the belief that IT is not relevant to the work that they do. Susskind has painted a picture of UK lawyers being up to 5 years behind US attorneys in terms of their acceptance of IT (Susskind 1993:3); a theme which he recently restated (Susskind 1996). Our findings are somewhat contrary to those of Susskind, suggesting that a majority of UK lawyers now wish to use IT. Over five sixths (85 per cent) of all respondents stated that IT was important to their work, a figure which included most (79 per cent) of those who did not use a computer for their work. Almost three quarters of all respondents (73 per cent) said that they thought that computers were necessary for the work that they do and the same percentage said that they wanted to develop or further enhance their existing IT skills. However, the fact that a minority wanted a general introductory session on computers suggests that their overall level of existing knowledge is limited. A large minority also said that they specifically wanted to acquire skills such as word processing. These findings bear a close similarity to those of a Law Society survey which found very little dissatisfaction with existing IT capability, but found that over three quarters wanted more training (Law Society Gazette 1996:22; Jenkins, 1997).

Our research into the use of information technology paints an interesting picture of a profession in transition. More importantly, it illustrates that information technology impacts upon legal professionalism in a number of different ways. Whilst we would expect legal practices to be keen to introduce IT, we were somewhat surprised at the overall level of willingness amongst lawyers to engage with new technology. And yet in their haste to introduce IT, legal practices would appear to have under-estimated the requirements for the management of change, especially with regard to training programmes. One of the more telling impacts of information technologies was the degree to which it demonstrates how much of a solicitor's job now involves administrative and legal procedures and, by comparison, how little it involves the substance of law. Thus indicating the degree to which lawyering has become rationalised and has moved away from the traditional
conceptualisation of legal professionalism.[14] These observations have important implications for the discussion of deskilling in the next section which seeks to understand further the impact of information technology upon legal practice.

Information technology and the deskilling of the legal profession.

Much of the writing on the impact of information technology upon the legal profession tends to discuss it in benign terms, as a device by which to increase the efficiency of legal practice. The resulting analyses, therefore, concentrate upon cost-benefits; with the benefits invariably outweighing the costs. In focusing upon the organisation, these analyses fail to address the deeper impacts of information technology upon the individual legal professional. We must therefore seek a framework which focuses upon the worker rather than the work place. One such framework is Braverman's deskilling thesis (1976:100) which illustrates that the history of capitalism is marked by the progressive degradation of work arising from the managerial expropriation of control from workers through the deepening division of mental and manual labour. This division is achieved by scientific management techniques which seek to sub-divide work into core tasks and results in the replacement of workers by machine process. Braverman illustrates that the outcome is always a detailed division of labour which results in the degradation or deskilling of work from a high to low level of generic skill and from a higher to a lower rate of pay. Whilst Braverman was writing about the eclipse of industrial craftwork, Burawoy (1996:299) argues that his thesis could equally be applied to the intellectual craftwork of the professions.

Frequently contested (Tomich 1976) and very often misunderstood,[15] Braverman's thesis is important because it places the individual worker, rather than the organisation, at the centre of the analysis. Moreover, the deskilling thesis enables us to perceive the changes that are being experienced by the legal profession as the continuation of a process that has been common to the production process since the beginning of the industrial revolution. Perhaps the most frequent misunderstanding of the deskilling thesis is that it simply polarises the work forces into skilled and unskilled, in fact Braverman himself recognised that the rate of birth of new skilled occupations counteracted, or even, overwhelmed progressive deskilling (Burawoy 1996:297). So, while the deskilling process has the general impact of deskilling and degrading the quality of the work, it nevertheless requires some individuals to develop new specialised skills, for example, to operate the new technologies. However, the impact of deskilling is always the reduction of the marketable value of the individual worker's skills.

It is important to emphasise at this point that the deskilling is not the product of new technologies but the ideas about the organisation of work which are generated by the ideological need to divide labour into its core tasks. Thus, the new technologies serve to accelerate the deskilling process rather than create it. Sommerlad (1995:168-173), for example, has argued that new managerialist devices, such as Total Quality Management are manifestations of the rational scientific management practices pioneered by Taylor and Ford and practised since the early part of the century. These ideas are not restricted to private practice and can be found in current social policy. Sommerlad cites as an example the transaction criteria which form the back-bone of the legal aid franchising initiative. The transaction criteria seek to gain control of the minutiae of workers time (Sommerlad 1995:168-173). As a rule of thumb, the more differentiated a task becomes the more vulnerable it is to further differentiation and the easier the task is to mechanise.

The detailed division of labour within the profession takes place within an organisational context that has been moulded by the rationalisation of capital. A characteristic of legal firms over the past few decades has been the creation of larger, sometimes referred to as mega-law,[16] firms (Galanter 1992; Flood 1989:569) through the amalgamation of medium and small legal practices. These large firms differ from the old types of legal practice in that they are mainly staffed by salaried, rather than self-employed, solicitors who are encouraged to specialise. The overall impact of these changes has been to diminish the traditional professional autonomy of lawyers. The decline of professional
autonomy has led to the further commodification of labour within the law firm. Firms today quite openly see themselves as selling a product; their fee earners time. Information technology is in this sense a double edged sword. On the one hand it enables salaried solicitors to work more efficiently, as the benign interpretations tell us. On the other hand the same 'enabling' technology also provides management with a tool through which the lawyer's work can be monitored and controlled (Kane 1992:94), both in terms of how their time is being spent and also how effective they are in carrying out that work.

A poignant example of new technologies accelerating the detailed specialisation of labour and reducing overall levels of legal skill can be seen in the development of computerised personal injury systems that are currently used in America are set to become widely used in the UK. These systems enable personal injury claims to be calculated without recourse to a lawyer, unless of course there are exceptional circumstances. Drawing upon a database which contains all statistical data from the Personal Injury Valuation Handbooks the user (not necessarily a lawyer) can establish whether a claim can be made and if so how much can be claimed. The computerised personal injury system therefore allows a firm to take on many more personal injury cases than before by using cheaper non-lawyers, thus reducing overheads and raising profits. While it could be argued that the system frees the fully qualified lawyer to deal with the more complicated matters; the computerised personal injury system nevertheless serves to degrade and de-professionalise work previously carried out by lawyers, thereby undermining the legal profession's guarded monopoly. Moreover, it enables this type of work to be carried out by a broad range of professional organisations, such as insurance companies, estate agencies and building societies. Conveyancing is one area which has been the subject of considerable change. Not only have a number of insurance companies started to offer conveyancing services, but the larger law firms have rationalised the conveyancing process and have automated it through the use of computerised systems. Consequently, the preparation of the case is now largely performed by clerical staff through the computerised system and is subsequently verified by a licenced conveyancer who is not necessarily a qualified lawyer. In the extreme example, the task is fully automated by software, such as in the case of QuickCourt which assists divorce petitioners (Purcell 1995:82; McConnell 1995; Smith 1995) enabling them to initiate legal proceedings themselves.

The brunt of deskilling is always borne by those who's work has been degraded and deskilled to the point that it no longer exists. The expansion of unqualified para-legals and the decline in secretarial staff also confirms this trend. The dynamics of this process were expressed during an interview with the head of litigation section of a large law firm.

An experienced but unqualified person doing fairly routine work can cost us about £32,000 including National Insurance and Pension, but I don't need all of these people with such a high level of expertise. I really only need one of them to oversee things. If I lower the skills base by standardising procedures, introducing procedure manuals and by using relevant information technology then I can create savings or employ two people for the cost of the existing personnel and effectively double my team. Either way it becomes more cost-effective.[17]

Many legal roles are now becoming rationalised. Areas of legal practice that were once the domain of the traditional lawyer have now been reduced to standardised procedures with the result that secretarial support is decreasing. Solicitors are now doing more of the basic administration themselves, especially typing and communications, and their own work is becoming more specialised and narrow in focus. Many of their substantive functions are now performed by para-legals and an increasing number of functions are now being performed by unqualified staff. Our earlier findings (Table 2) certainly confirmed that both solicitors and barristers were initiating some of the basic secretarial work themselves. Word processing, for example, was by far the most frequently used application which suggests that lawyers are now performing many of the tasks that they previously delegated to secretaries. They no longer have to dictate notes or write them on scraps of paper. They can now type them into notebook computers. It is not, therefore, surprising that the
use of secretaries by lawyers is decreasing. In the US the percentage of secretaries per attorney has
decreased from 50 per cent to 33 per cent (Staudt 1991). This trend was confirmed in the UK by our
interviewees who were trying to move away from the traditional one to one ratio of secretary to fee
earners, towards two or more.[18] A trend that is supported by the findings of the 1995 Robson
Rhodes Legal IT Survey (1995:47) which found that the ratio of secretaries per fee earner had
decreased by five per cent between 1993 and 1995. It is also of interest that UK lawyers have a much
higher percentage of secretaries per fee earner than their US colleagues, in 1995 the UK ratio was the
same as that in the US in 1988.

Conclusions: The industrialisation of legal practice

The deskilling thesis has provided a framework for a deeper understanding of the impact of
information technology upon legal practice. It has also enabled us to peer behind the benign mask of
managerialism and develop a more realistic understanding of its implications. Moreover, our analysis
suggests that the changes, currently being experienced by the legal profession, bear the hallmarks of
a process, normally associated with industrialisation, that has always been going on. Professional
stability was an illusion that was created by a relatively slow pace of change that was tempered by
the self-control exerted by the profession. It would therefore be wrong to assume that there has been
a rupture of continuity with the past, rather the utilisation of advanced technology and scientific
management techniques, the ideological servants of rational capital, have caused and are still
causing, the rate of change to accelerate. It would also be a mistake to say that we are experiencing
the decline of the legal profession, rather we are experiencing an example of reflexive legal
professionalism. The legal profession is doing what it has always done, and that is adapt to market
forces.

There are however, some significant differences between the 're-negotiated profession' (Paterson
1996) and what we have come to understand as the traditional concept of the legal profession (Royal
Commission on Legal Services 1979; Abel 1988).[19] During the past decade or so main four main
types of change can be identified which have led to the redefining of traditional legal relationships
and the diversification of the legal profession. Firstly, is the changing nature of the relationship
between lawyer and client. The traditional 'trustee' relationship between the lawyer and client
(Johnson 1972) has been superseded by a relationship in which lawyers are no longer seen to provide
a legal service in the traditional sense but are now perceived as conducting legal business with the
client. Secondly, there has been a change in the nature of the relationship between lawyers
themselves. The development of a specialised division of labour within areas of law has brought
about a marked decline in the general practitioner model of legal practice. Lawyers are now expected
to specialise in an area of law. Thirdly, the relationship between lawyers and their employers has
changed. The growth of the mega-law firm has resulted in the decline of the self-employed legal
professional which has led to changes in the employment structure of the legal profession. The
majority of solicitors are now salaried. Fourthly, there is an increasing polarisation between legal
practices which have engaged in the use of information technology and those which have not.

We would argue that the processes that we have highlighted will continue to change our
understandings of both the legal profession and also legal professionalism. Our research has taken
place during the early stages of the advanced technologisation of legal practice, thus our findings
have tended to concentrate upon the impact of information technology upon the administration of
legal practice and only a small part of the findings related to the substance of law. This is partly
because we tend to overestimate the role of substantive lawyer in the work of the lawyer, this is
certainly the case with the solicitors profession, but it is also because the legal professions are only
starting to become aware of the potential for the (virtual) information revolution. The same high
technology that is revolutionising the administration of legal practice will eventually have a
significant impact upon the more substantive areas of law in terms of providing a forum for the
dissemination of legal information and even basic legal advice.
The rise of the new electric lawyer

Cyberspace is a growing area of human social activity that has been created by the internet and provides the potential for cheaper and more effective legal services and also independent personal access to legal information (Wall 1997). It is quite conceivable in the near future, that consumers with legal needs will be able to seek advice, if not fulfilment of those needs, without ever consulting a lawyer. And if they do consult a lawyer it could be that they never meet. The implications are quite profound in that even our currently changing notions of legal professionalism will soon be out-dated as more of the professions' mythical legal knowledge becomes publicly available and software is developed to undertake simple legal procedures, then legal practice will tend to relocate in areas of law which require greater specialist knowledge. At present it is by no means certain that lawyers will remain the 'gatekeepers of the law.' Lockley (1996:17) identifies a growing view amongst some practice managers that if they 'cannot harness the power of the computer package to ensure we remain the source of legal advice, then we will not deserve to survive.' As 'virtual' law rapidly develops on the internet it is quite clear that our story is only half told (Wall 1997). We are entering the age of the new electric lawyer.

References

• Wall, D.S. and Johnstone, J. (1997a) 'The industrialisation of legal practice and the rise of the


[1] This paper is based upon research that was funded jointly by the Department of Law, University of Leeds and the University of Leeds Academic Development Fund (IT). It was conducted with the very able assistance of Jenny Johnstone who conducted most of the interviews and processed the data. This particular conference paper is based upon earlier versions which appeared in the International Journal of the Sociology of Law (Wall, D.S. and Johnstone, J.,1997a) and the International Review of Law Computers and Technology (Wall, D.S. and Johnstone, J., 1997b).

[2] A useful discussion of these philosophies can be found in Sommerlad (1995:159).


[5] The following section is adapted from Wall (1996).

[6] Changes in page dimensions and size of font were taken into account in this calculation.


[9] The origins of the returned questionnaires were compared to the questionnaires sent out. Whilst the questionnaires were anonymous the individual legal practices were coded.

[10] The figure one equals full usage. Calculated by averaging usage of all applications.


[12] This is a colloquial term; these are otherwise known as internal information retrieval systems or case management databases. They usually consist of databases of information specific to the firm, containing counsel opinions, details of current and past cases, company information, articles on relevant law etc.

[13] As a rule of thumb access to on-line and CD-ROM facilities depends on size of the firm, the larger the firm, the greater the likelihood that they will have on-line facilities.


[15] For example in the 'dumbing down' debates.

[16] The findings of a recent survey by FT Professional Publishers Ltd., (Law Society Gazette 1995) revealed that 'many of the smaller firms in the top 100 are now considering mergers.

[18] One firm mentioned that they were aspiring towards one secretary to four fee earners.

[19] Characterised by a) A governing body (or bodies) [that] represents a profession and has powers of control and discipline over its members. b) [mastery of] a specialised field of knowledge. This requires not only the period of education and training but also practical experience and continuing study of developments in theory and practice. c) Admission is dependent upon a period of theoretical and practical training in the course of which it is necessary to pass examinations and tests of competence. d) [A] measure of self regulation so that it may require its members to observe higher standards than could successfully be imposed from without. e) A professional person's first and particular responsibility is to his client. ..... The client's case should receive from the advisor the same level of care and attention as the client would himself exert if he had the knowledge and the means (Royal Commission on Legal Services 1979:28,30).