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On the edge: ICT and the transformation of professional legal learning

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Summary

Information and communications technology in professional legal education courses is perceived as problematic for teachers and course designers. It is so not because technology is inherently difficult or strange, but because at a deep level it can threaten the practice and identity of teachers. However the contextual challenges of their position, caught between academy and practice, may actually enable professional legal educators to take account of new technologies. The article discusses this proposal, using the example of the incremental development of a discussion forum. It suggests that the tools of pragmatist and transformative meta-theory may point the way forward for professional legal educators to create their own community of practice in the use of ICT in professional legal learning.

> One possibility is that people are going to do what people always do with a new communication technology: use it in ways never intended or foreseen by its inventors, to turn old social codes inside out and make new kinds of communities possible. CMC [computer-mediated communication] will change us, and change our culture, the way telephones and televisions and cheap video cameras changed us – by altering the way we perceive and communicate.
> Rheingold (1992)

> Research replays the essential disjunction between *any* imagining of our condition and social life as a fabrication of divergences and of events quite unforeseen.
> Strathern (2000a)

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Introduction

Information technology changes at a breathless and bewildering pace. Moore's law is the classic benchmark for hardware improvement; but when we consider the use as well as the industrial production of IT it becomes apparent that there is more than one rate of change involved.[1] In her summary of the literature on how such change affects social institutions, Marlene Scardamalia (2001, p 171) drew the useful comparison between four different rates of change – technological innovation (very fast); the rate of adoptions of technological innovations (fast, but depends on the product – compare mp3 players with video conferencing, for instance); the rate at which practices change as the result of new technologies (much slower – in education, the 'glass book' is still depressingly common); and the rate at which practices improve generally as a consequence of a technological innovation (very slow – touch screens in commercial applications, for instance, or networked learning ecologies in education).[2]

These different rates of change are of course context-dependent, on geography, wealth, social networks, and much else. In the midst of such bewildering change, and faced with the hype of the virtual and the false lure of context-free information networks and exchanges, how can we tell what is peripheral in the field of legal education and ICT, and will perish soon, and what will endure for more than the market lifetime of a silicon chip (Harnad 2001a; Harnad 2001b)? Which *bits* of IT, in both the technical and ordinary sense of the word, are important to professional legal

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[1] Moore's law states that the number of transistors on integrated circuits will grow exponentially. The rate of transistors has doubled every year since Gordon Moore first made his prediction. While it has slowed recently, the rate of data density has actually doubled approximately every 18 months (Moore 1965). Processor speed is not the only quality of chips that PC users appreciate. The success of Intel's Centrino chipset platform (in the last three quarters of 2003 Intel held 11% of the Wi-Fi chipset market; in the same period in 2004 the company almost doubled its share) has meant that PC users now expect wireless local-area networking as standard, and will increasingly expect applications to converge, seamlessly, within that environment. See Intel's Centrino Solution, in *Technology Review MIT's Magazine of Innovation*, Feb 2005, 31-2.

[2] For an interesting user description of texting as technological change, see Extrasonic blog at http://www.extrasonic.com/archives/2005/01/24/texting-and-other-signs-of-technology-ubiquity/ . See also Gartner's predictions for 2005 at http://www3.gartner.com/research/spotlight/asset_113278_895.jsp.

educators? The question requires us to define at least two important issues. First, who is involved in professional legal education? Second, social perceptions of the role of professional legal education affect how ICT will be used within it, and any analysis must take this into account. Bearing this in mind, what do professional legal educators interpret as their practice or practices in legal education, and where does ICT fit into this interpretation?

Professional legal education: teaching on the edge

A brief glance at the life-cycle of a professional legal education course will show there are fundamental differences in almost every aspect between undergraduate and postgraduate professional legal education programmes of study – in pre-student attraction to the institution and its course, application interview, clearing offer, new student arrival, registration, induction course teaching, communications, library, computing, teachers and their backgrounds and experience, assignments, assessments, results, appeals, resits, careers, welfare, administration, graduation, and alumni activities. Where in general a liberal consensus regarding content and method is pre-defined for undergraduates by academics, where the boundaries of that consensus during a programme of study is defined in many subtle ways, where content is assessed by academics and the whole process is under academic control, the professional legal educator's life is by comparison less in his or her control regarding matters right across the course life-cycle (the literature on this goes back at least to Twining (1967) – see also Hepple (1996)). There are important regulatory issues and codes to which professional programmes require to conform, and which affect the culture of a course. Undergraduate courses, though they are under pressure from other directions, are largely sheltered from such close-quarter regulatory concerns. To be sure, there are quality assurance issues and procedures to be attended to, but in the past few years, in Scotland at least, these have tended to be review processes internal to the university, and not directly under the control of external regulators.

For those involved in professional programmes, though, the environment is more commercially competitive, is more exposed to market values and neoliberalist values of accountability and enterprise. There are more stakeholders: the profession, the regulatory bodies, the Bars, the universities are but four principal players, and by no means the only ones. The identity of professional legal teachers itself is multivarious, protean. They are practitioner-tutors, or full-time staff with a practice background but a few of them are academics with responsibility for professional legal education. Some of them exist in-between, with both regulatory and academic research obligations to fulfil.

The ground of their teaching practice has not been that of the 'high ground' of academic practice, as Donald Schön has it, but is much closer to the swamp of practice, where political and cultural pressures, particularly those of policy and audit, affect them profoundly, in all the jurisdictions of these isles. And by the phrase 'policy and audit' I refer particularly to the analyses of it carried out by Marilyn Strathern (see for example Strathern (2000a; 2000b; 2004) – more of this below). In Ireland they have been subject to reports by the Competition Authority. In Northern Ireland there have been similar attentions. In England and Wales the Training Framework Review has recently put the whole system of professional legal education into doubt. In Scotland the Diploma Working Party is reviewing the content and

method of the primary course in the professional education programme in Scotland, and this will affect the entire three-year programme of professional education. The depth and speed of the change within professional legal education, its proximity to political pressures such as that brought about for example by Clementi in England and Wales, means that professional legal educators are under more pressure from this direction than their academic colleagues.

As a result, professional legal education is permanently on the edge. It exists on a fault-line that is constantly shifting, between the academy and the profession, between education and training, between university and external regulatory demands. Professional educators live and work in border country where there are boundary disputes, jurisdictional claims, shifting allegiances and the constant negotiation and re-negotiation of educational claims and counter-claims; and their modes of working reflect this.

Or at least one assumes so. But while there is emerging a body of research on the working lives and practices of legal academics, there is little that examines the working lives of professional legal educators (Brownsword 1999; Mytton, 2003; Cownie 2004). How do they resolve these remarkable sets of pressures and conflicts in their everyday educational practice? If, as Barnett says of academics, research performance is a crucial part of their 'professional identity', what then is the fulcrum of the identity of professional legal educators, most of whom engage in little published research (Barnett 1990, p 135)? Above all what is their 'living educational theory'?[3]

The answers to these questions would in effect be a form of *raison d'être* for professional legal educators, where the *être* must be more of a phenomenological construct than a mere *raison d'employ*. Remarkably, there is almost no discussion of what might be regarded as meta-theory by which they explain their work and lives to themselves and to others (statements of programme learning outcomes are hardly a meta-theory). Meta-theory is a substantial project on its own, and there is insufficient space to do it justice here; but towards the end of the article I shall describe possible theoretical approaches which, I would suggest, can at least begin to underpin the use of ICT in imaginative and powerful ways within professional legal education.

Teaching staff and ICT

That it *is* difficult to inhabit the demesne of ICT is shown by the research literature into academic staff use of technology. Coupal identified three stages of development in ICT use by teachers: 'literacy uses (a technology-centred pedagogy); adaptive uses (a teacher-centred, direct instruction pedagogy); and transforming uses (a student-centred, constructivist pedagogy)' (Coupal 2004, 591); and this has been observed by other researchers (eg Bottino 2004). What do teachers feel about the use of ICT, though, and how do they perceive its effects on their practice? Over a decade ago Klem and Moran analysed why teachers had negative reactions to ICT (Klem & Moran 1994). In their study, teachers viewed ICT as bringing about a loss of power,

[3] The quotation comes from the web site ActionResearch.net, at http://www.bath.ac.uk/~edsajw/. See also Haigh's concept of 'personal practical knowledge', which is close to Schön's and Polanyi's concepts of personal knowledge – Haigh (1998).

control and authority within the traditional teaching environment. Their view of technology was that, to misquote Christensen (2003), *all* technology was disruptive; very little of it was seen as being sustaining of traditional educational practices.

In one sense the introduction of ICT is a new twist to an old thread of protest, where teachers perceive they are oppressed in one way or another by varied forms of new educational practice. Dewey, for instance, in an early version of protests against the New Managerialism, once declared:

> "In the name of scientific administration and close supervision, the initiative and freedom of the actual teacher are more and more curtailed. By means of achievement and mental tests carried on from the central office, of a steadily issuing stream of dictated typewritten communications, of minute and explicit syllabi of instruction, the teacher is reduced to a living phonograph. In the name of centralization of responsibility and of efficiency and even science, everything possible is done to make the teacher into a servile rubber stamp." (Dewey 1991 [1927], pp 122-3)

Penteado (2001) came to the same conclusion as Klem and Moran, but she postulated that such confrontation between old and new was inevitable, and that as a result teachers using technology were forced to move from what she called relative comfort zones into risk zones. As a consequence, and at a deep level, teachers required to re-negotiate their educational practice in order to use technology. Applying Penteado's findings to law leads one to realise that such re-negotiation is a constant process, depending on many factors: stability of an area of law from one academic year to another, feelings of certainty about course content, experience of teaching the course, experience with some of the technology being used or none of it, the perceived riskiness of the technology in use with students, and so on.

Some of these points were raised in the legal domain by Alldridge & Mumford (1998), though they drew no distinction between academic and professional stage use of ICT, possibly because in the late nineties neither ICT applications nor specific use by students and staff involved in professional legal education were sufficiently developed or widespread for the distinction to be visible. What is interesting about Penteado's findings is that it presents us with an unsettling picture of constant change that would appear to be a consequence of the speed of change implicit in Moore's Law and summarised by Scardamalia above.

But there are deeper issues here than personal negotiation of IT processes. Too often our analyses of ICT in education exist at the level of the instrumental and teleological. We need to consider the deeper issues of what we do and why, and above all the context of how we use *any* technology, whether it be computer, webcast, podcast, blog, interactive whiteboard, photocopier, book, vellum, clay tablet, oral statement. In this respect the analyses that Marilyn Strathern (2000) has made of the role of policy and audit, and her critique of the concept of the 'virtual society' are helpful to our present analysis. As she has observed, 'ICT is a highly visible ally of audit practices. Its speeding up of the performance of office equipment does not just facilitate the production of the audit reports and so forth, but as an entity in itself (*as* ICT or IT) can be used as an indicator of performance.' Audit, she suggests, elicits 'a view of an institution or organisation as a system – as a system, not as a "society"';

and she compares the closed loop of such system analyses with the open-ended analyses of ethnographic practices that treat organisations as social organisms, where disconnections, loose ends, uncertainties and unpredictabilities are not to be tidied away but studied for what they tell us about an organisation's development and culture.

Changing cultures of use and identity

Strathern's observations are enacted by anthropologists of workplace learning such as Lave and Wenger. As they remind us, most learning we undertake in our lives does not consist of lectures and tutorials followed by a two-hour unseen essay assessment in an examination hall. Instead, the vast majority of our learning is situated in the world, and rises out of our actions there. Lave and Wenger's analysis of Liberian tailors is a classic study of learning in the workplace, where they show how, over time, apprentices are drawn closer into the centre of valued work practices, after demonstrating their ability in peripheral activities (Lave & Wenger, 1991. See also Billett 2001; Engerström, Engerström & Karkainnen 1995; Engerström 2001; Evans, Hodkinson, Unwin 2002). Such activities are important to the developing expertise of the apprentice tailors: they are in effect ways of legitimising practice and progression within a community of practitioners – hence the title of Lave and Wenger's text, *Legitimate Peripheral Participation.* They help to develop 'shared participative memory' (Wenger 1998, p 11). As Lave & Wenger put it,

> "Legitimate peripheral participation provides a way to speak about the relations between newcomers and old-timers, and about activities, identities, artefacts, and communities of knowledge and practice. It concerns the process by which newcomers become part of a community of practice."(p 29)

As they point out, the slow accretion of learning within the community alters identity as well as practice: indeed, changed identity is the essence of apprenticeship, not merely for apprentices, but for anyone learning new sets of skills, knowledge and values.

In many ways the literature on situated learning gives professional educators a body of profound theory with which to view their own practice as teachers, positioned between academia, regulators and practice. But it also shows them an alternative future in the use of ICT in learning and teaching. Technology need not be baffling, dangerous, fraught with anxiety, and a disempowering experience for staff, as Klem & Moran and Penteado report it to be. It can be a process of legitimate peripheral participation, of moving steadily ever inwards, towards more and more complex use of technology in educational design and implementation. Communities of practice and design, in the workplace and beyond it, and learning from the literature, from our own practice and that of others, are essential to this approach. For students are drawn to professional practice, and if ICT is to be integrated successfully into professional educational curricula, one useful way would be to adopt an ethnographic approach to the professional use of IT; to examine how professional practice uses ICT, and adopt versions of it adapted to professional courses.

This presupposes, of course, a professional legal educational research culture. The good news is that in terms of the use of ICT, legitimate peripheral participation

happens already – what we need to do is to recognise it, build upon it, and construct support networks for ourselves. Most of us are aware of the web, for example; and almost all of us use email. We need to build on that and develop our experience with other forms of communications applications. If we are unsure about using discussion forums with students, why not use them amongst ourselves before we step into the risk zone? The literature is full of guidelines on how to do this well, and there are plenty of forums on the web where it is possible to lurk and read until you catch the drift and tone, and contribute. If chat rooms or SMS, with their multi-pitch audiences and fragmented conversations seem crazily fast and complex forms of communication, why don't we use them with each other, before we attempt to use them in relation to legal education? For an inspirational example of how students can use such media to good effect, see http://journals.aol.com/transmogriflaw/journey/entries/69. We could also read the literature – see for example Walker (2004); Cox, Carr & Hall (2004). Are we interested in simulation for legal learning? Find out about simulation by joining any one of the many massively multi-user online role-playing games on the web. At a cost of around 12 dollars a month, you will have more fun and grief than you ever thought possible on the web. Do you use personal digital assistants (PDAs)? Why not think about using them for teaching with students? This has been done a number of times in various areas of medical education, and there is little reason why we should not learn about the local conditions of such implementations and attempt similar innovations in our own discipline (Smørdal & Gregory 2003; and the special issue on wireless and mobile technologies in education in *Journal of Computer-assisted Learning*, 2005, 21, 3).

Above all, we need to build a community of practice where we can discuss ideas, communicate and examine results, compare implementations, and learn from each other. Such a community can help us to learn in a safe environment before moving into the risk zone – as Lave and Wenger point out, the reality of a task is significantly different when it is performed for real rather than in simulated environments. The practice of extending safe zones into zones of risk is a basic human activity. It defines us and identifies us to others around us. We become who we are as a result of it and learning becomes, quite profoundly, a part of us. If professional educators (institutions as well as individuals) are to risk innovations and the unintended consequences that the epigraphs quoted above caution about, then they need to start in the safe zone, practise there; then move out of it into the riskier areas of practice. The process requires an infrastructure that supports this movement. It also requires ahead of us the challenges that we can move into from our current positions. Staff development within communities of practice is a key to this, and in particular helping staff to:

- Explore the fit between their personal theories of teaching and learning, and those embedded in forms of innovative teaching
- Access resources that support them in learning to use new technology
- Acknowledge and address their fears about teaching innovation in a constructive way
- Access examples of good practice and successful implementations

Out of this can arise the material for research publication -- state-of-the-art papers, meta-analytic research reviews, narrative reviews, best-evidence syntheses, forum

papers, methodological reviews, thematic reviews and much else. In the next section I shall give an example of this happening in one area of my own experience of ICT, namely the use of discussion forums.

Dialogue, I

In 1996 I ran a first version of a Personal Injury Negotiation Project, with around 20 students, using MS Mail client, on Windows 3.1.1. The project ran within a level 3 Clinical Legal Skills module on the BA Law with Administrative Studies programme, Glasgow Caledonian University. Within the project students responded to me and to each other by email, and project instructions and the client matter were set out in paper-based confidential instructions. Students were divided into 'virtual firms' of two or three students. Half the firms acted for claimants, while the other half consisted of solicitors for the insurers. In both technical and communicational terms the system was crude, and because the network was prone to crashing it required constant technical maintenance; but over the following three years it enabled me to develop a basic repertoire of dialogic moves with students over email (*ie* familiarity with the types of questions that students asked in the project environment, and best ways to answer them – see figure 1 below). It gave me confidence that I could deal with student questions on the broad range of issues that I expected they would want information, namely:

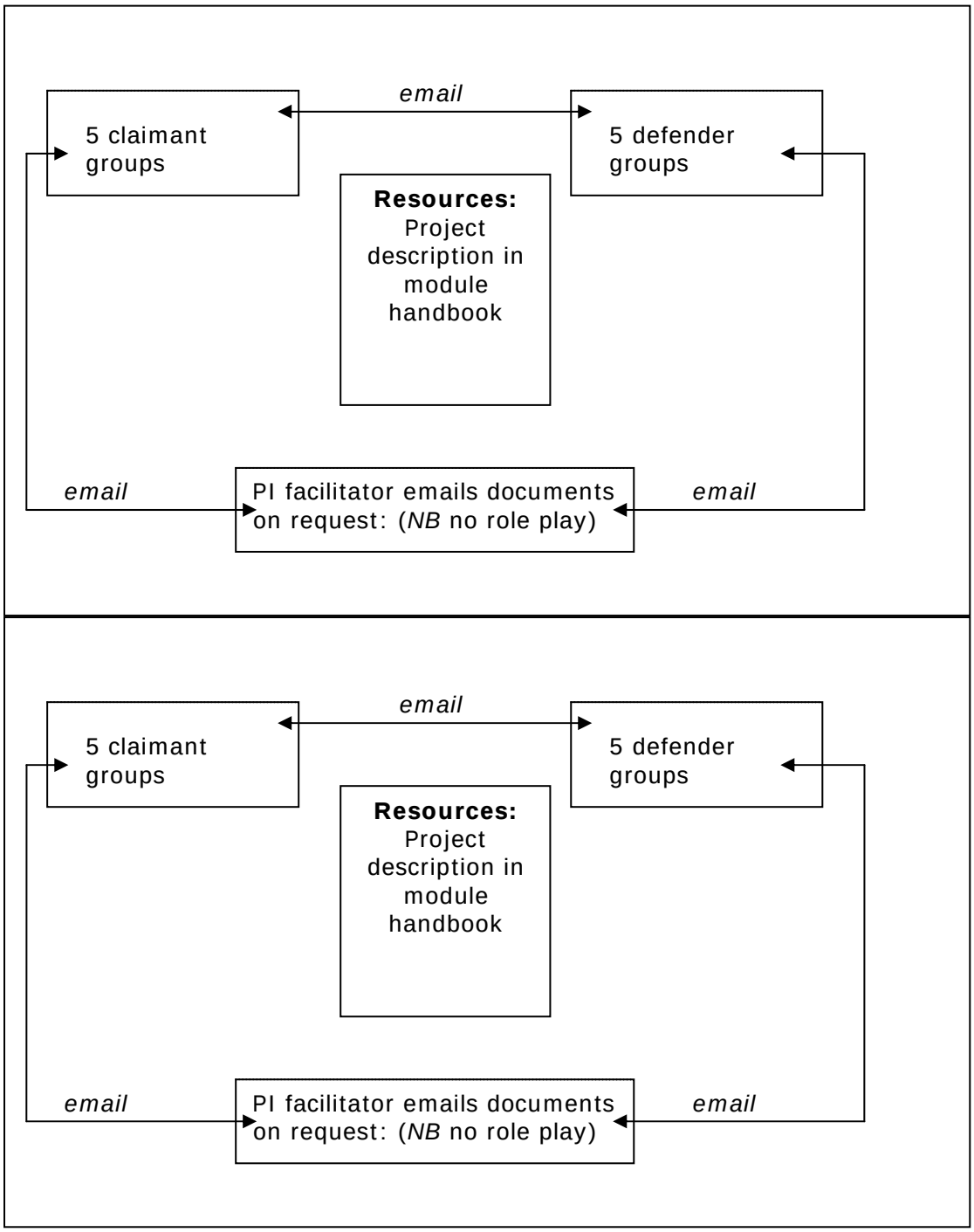
1. procedural & substantive issues relating to the transaction.

However I found that students asked other sorts of questions:

2. technical issues – how to carry out particular procedures, for instance
3. 'realia' issues – how real does the simulation become? Eg were the clients to be billed? The more real the project became with each succeeding year, the more pressing and interesting these questions became
4. interpersonal problems that arose between firms negotiating with each other
5. interpersonal problems that had arisen within firms, either interpersonal or workload-related (eg freeloaders in a firm, or quality of work produced by one firm member being perceived as below-par, and the like)

In addition students wanted to communicate confidentially at times. They wanted to email each other, email other firms on the same side of the negotiation, and email me as tutor. There was no equivalent of a private chat facility in the single email channel that could accommodate this. It became clear after the two years of running the project that the complexity of the environment demanded more than a single point of information, and that the informational structure of the environment would need to be re-planned. My personal use of email had given me the confidence to embark on the project; but the simulation project required not a univocal channel of communication, but an architecture that was much more polyphonic and flexible in order to accommodate the communicational requirements of the students as well as the complex relationship between simulation and reality.

Figure 1: PI Negotiation Project 1997 – paper-based and email-based information flows



On the basis of this experience, in 2000 for the first time discussion forums were used on the project, which now ran within a quite different institution and progamme of study, and with a student body of around 159 students.[4] We set up separate forums

[4] The project was developed further for the Diploma in Legal Practice at the newly-founded Glasgow Graduate School of Law, a joint graduate school between the law schools of the universities of Glasgow and Strathclyde. The forums were initially programmed in ColdFusion, and are now part of the MS SharePoint Services suite of facilities. For brief descriptions of this project, see Maharg & Paliwala 2002; Maharg 2004a & 2004b. To see the public-facing simulation environment, see http://www.ardcalloch.org/. There is discussion of

for the claimant firms and the defender firms, and began to address points 2-5 above. For point 2., students were given better training in the use of the online environment, and thereafter queries were dealt with by the FAQ or as a last resort, technical support. To deal with point 3, we used FAQs that were reviewed each year on the basis of points raised by students during the project. A year later, once the project had migrated from MS Outlook to a fully web-based project, we dealt with point 4 by creating a 'deal-room' area online for the students, whereby they could negotiate direct with each other. Several solutions were adopted for point 5, none of them entirely satisfactory, until we began to think seriously about the social and phenomenological nature of the problem. This is described in detail elsewhere (Barton & Westwood 2005). The solution that worked best was to use tutors on the Diploma's Practice Management course as *actual practice managers* to the virtual firms. In many ways this was a break-through for us. The tutors served as both mediatory and disciplinary figures for the firms, as appropriate. We hoped that issues under point 1. would channel to the forum. But the occasional students would still email me privately. Where it was of little use to the others, I would respond; but where an issue was useful to all, I did not reply to the person privately, but asked permission to quote anonymously & comment on the forum.

The forums have run every year since then to support student learning. Now, the student year group of around 275 – a more than tenfold increase in student numbers on the original project– is divided into virtual firms.[5] There are, therefore, two forums, each passworded – one for the claimant group of firms, and one for the

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the project in a games conference, State of Play II, New York University Law School, on the Terranova blog at http://terranova.blogs.com/terra_nova/2004/11/state_of_play_2.html. For an equivalent in the context of legal education in the Netherlands, see http://www.frg.eur.nl/lia/icto/projecten/rechtenonline/sieberdam.pdf.

From this point on in the article, when I refer to 'we' the pronoun includes Scott Walker, now Learning Technologies Development Officer, but in 2000 the only technical officer in the GGSL. Scott's input, conceptually and technologically, has been crucial to the development of the learning environment and the suite of tools associated with it. On the technical side he was later joined by Michael Hughes, now one of our applications developers. Other academics made invaluable contributions to the development of the concept of virtual transaction – Patricia McKellar, Karen Barton, Fiona Westwood. Without their sustained creativity, innovation and hard work the concept would have remained far less developed than it is now. A number of practitioners deserve special mention. Leo Martin, co-Director of Legal Practice Courses, Visiting Professor and founding partner of Sinclair McCormick Guisti Martin, developed the resources and structure of the Conveyancing transaction, and gave us much valuable advice and support on transactional learning generally. On the PI transaction the work of Charles Hennessy, founding partner of Hennessy Bowie and Visiting Professor to the GGSL, has been crucial at almost every level – resource-drafting, negotiation strategy, forum co-facilitator, mordant wit at dark moments…

[5] By the term 'virtual' I mean that the main representation of the work of the firm is present on the firm's web pages. 'Virtuality' has become rather a modish term for anything to do with the internet. However it could be argued that the concept, vague as it is, has a long history within Western artistic practices. In the 16th century Giovanni Battista della Porta's walk-in *camera obscura* was one early example, as were nineteenth century cinematoscopic experiments, such as Simon Stampfer's invention of the phenakistiscope (literally, 'deceptive view' – see http://en.wikipedia.org/wiki/Phenakistiscope), in 1830, and the remarkable Charles Wheatstone's invention of the stereoscope in 1838 (http://en.wikipedia.org/wiki/Stereoscope).

defender firms. The postings are answered by myself and a practitioner, a Visiting Professor to the GGSL, Charles Hennessy (Charlie). The discussion threads tend to be brief: often a single posting, answered by Charlie or myself. Sometimes students will follow up with a qualification or supplementary question, but the conversation largely consists of 'how-to' questions and replies. This suits the nature of the information that students need at this level of their learning in the project. With no formal classes, apart from a voluntary 'surgery' held by Charlie, this is the only way for students to obtain expert advice on this particular transaction (they can of course obtain general advice on PI transactions from textbooks, but we want them to learn the specifics, and learn *from* the specifics, of handling a transaction).

By any standards of natural, face-to-face conversation, the postings are shallow, abrupt. There is rarely any extended conceptual discussion. They mostly concern factual or procedural matters, with the occasional matters of negotiation strategy being discussed. If one were to imagine the threads as topics of conversation in a tutorial, they would be disjunctive and irritating to listen to. But students are not listening to a conversation in real time: they are reading a slowly evolving list of Q & As that is relevant to the progress of their own transactional files; and for this reason, the discussion forum succeeds as a method of disseminating ideas, guidelines and practice that is directly relevant to the students' own learning in the project.

The forums succeed, therefore, but they do so because they fulfil a need on the course. There is a deliberate *lack* of face-to-face classes: to get information and knowledge, students must enter their forum to scan for answers to their questions, or post questions themselves. The forums were designed to take this form: students will seek for information by the quickest and most intuitive route – almost invariably, face-to-face from tutors. The forums supply information that is, in one way, highly constrained; but in other ways is highly flexible and adaptive, and addressed to large numbers of students.

We can see this in operation if we briefly analyse below a couple of forum postings.[6] In the first, Sarah is unsure how to form a strategy for obtaining medical information. She sought an answer on the forum, and watching her question were around 130 other students… This is her posting, headed 'Medical Records':

> "We have been discussing the best way to obtain medical evidence of the injury sustained by the claimant. Since the accident resulted in a hospital visit, we feel that the records made by the hospital and the GP at the time of the accident would be relevant. I notice that there has been a lot of prior discussion in past years regarding medical mandates although this seems a very detailed topic. Would it be competent for the client to obtain copies of his medical records and simply pass them onto our firm?"

From my point of view as a facilitator, this is an interesting posting. Sarah has obviously thought about the issue before posting to the forum. She has scanned the archived forum, and has a sense from them of how she might proceed. She thinks she wants to see the records, but is not entirely sure. She is also aware that obtaining

[6] Student permission for quotations sought and granted; and student names are anonymised to protect privacy.

mandates, writing to hospital administrators and the like takes time and effort and understandably she wants to streamline this process; but in a way that fits with practice. She has arrived at a solution that seems to sever the Gordian knot of information dissemination and retrieval at a stroke. But she is unsure if this is 'competent' on several levels: can one communicate with the client in this way? And are students allowed to do this on the PI project? Reading her posting, I was aware that I would need to address all these issues.

My response was as follows:

> "This is an interesting point, Sarah. I'll deal with your ingenious solution first. It's doubtful whether the client will be in a position (either from a medical or a legal point of view) to pass on to you the information that you're seeking. He's also liable to wonder why he's paying you to represent him when he has to visit medics, come away with records, be told that these are *not quite* what you were looking for, and asked to go back again for more."

If your firm were to ask for medical records from hospital or doctor, the same general point about medical competence would apply. Suppose that the hard-pressed admin staff in Ardcalloch Royal send you sheaves of your client's medical records. Which are relevant to the accident? And are you going to be able to interpret (or even decipher) medical short-hand, scribbled notes, medical jargon, etc?

Best to request a medical report; and for that report to be focused on specific points that you want clarified as to the nature and extent of injury, and other related matters. And for that, your doctor or consultant will need your client's mandate. Don't get too involved in it: mandates can be more complicated, but they aren't in this project. Just a simple two-liner will do. Your client will return it, signed, and you can forward to whomever with a letter stating what you want.

My reply addresses the transactional issues, and the project issues. Sarah is given advice as to the procedure to follow, and why practitioners do it this way. She is also, in the last paragraph, given directions as to how realistic the project is. In this respect the forum performs an interesting function in the simulations that take place in Ardcalloch, our simulated virtual town. It mediates between the wholly simulated world of Ardcalloch, the reality of the Diploma, and the reality of personal injury transactional practice. It is also an online space where students can step out of role in the simulation and obtain advice on what they have done, or are about to do, before they step back into the simulation again. If at first it seems shallow and superficial, the space itself, mediating between three areas of information and knowledge, actually performs a relatively sophisticated educational role.

As the personal injury claim develops throughout the course of the project, the procedural issues become quite complex for the firms, and involve ethical issues. Here is an example, this time from a firm acting for the insurance company in the claim (Ardcalloch University is the employer of the injured claimant), and answered by Charles Hennessy:

> "I read in the FAQs that the HSE has not been informed about the accident. On the basis of having read the Executive website, it would seem that the

> University has breached its duty in not doing so. Are we as legal representatives under a duty to report this to the Executive? My gut feeling would say yes but I am thinking that it would not do the University any favours and may upset our client!"

Charles' answer:

> "Good question.
> No, you have no duty to report the accident to the HSE if the client hasn't done so.
>
> You could always write and advise the client that they should have (why do you think they should have ? - don't rely on their website, look at the legislation and let me know the legal basis for the obligation to report an accident like this) - Assume the client says "Fine, thanks for your advice but we are not doing it. What will happen to us if they find out - which they probably won't?" What advice would you give then?"

Charlie's posting answers the initial problem, but raises several issues arising from the student's question, and which arise from the situation that the student has described. In other words, he is extending the range of the simulation into hypotheticals, modelling practical legal thinking for students, mapping out possible ethical issues that arise not from problems hidden in the scenario (teacher-based interventions…), but from the students' own queries and approaches.

Both discussion forums follow general guidelines as to good practice, without making this too overt. We have a list of protocols for students, but unseen protocols were there too, and guided student participation. We encouraged students to participate, but if they did not, we assumed they were content with the information on the forum or had consulted previous forums, or had found the information they needed elsewhere, for example in practitioner journals or texts. We were content if the majority of students 'lurked' on the forum. Amongst a number of summaries of this aspect of the literature, one could take Klemm's synopsis, and compare it with our own practice (Klemm 2002; Table 1 below).

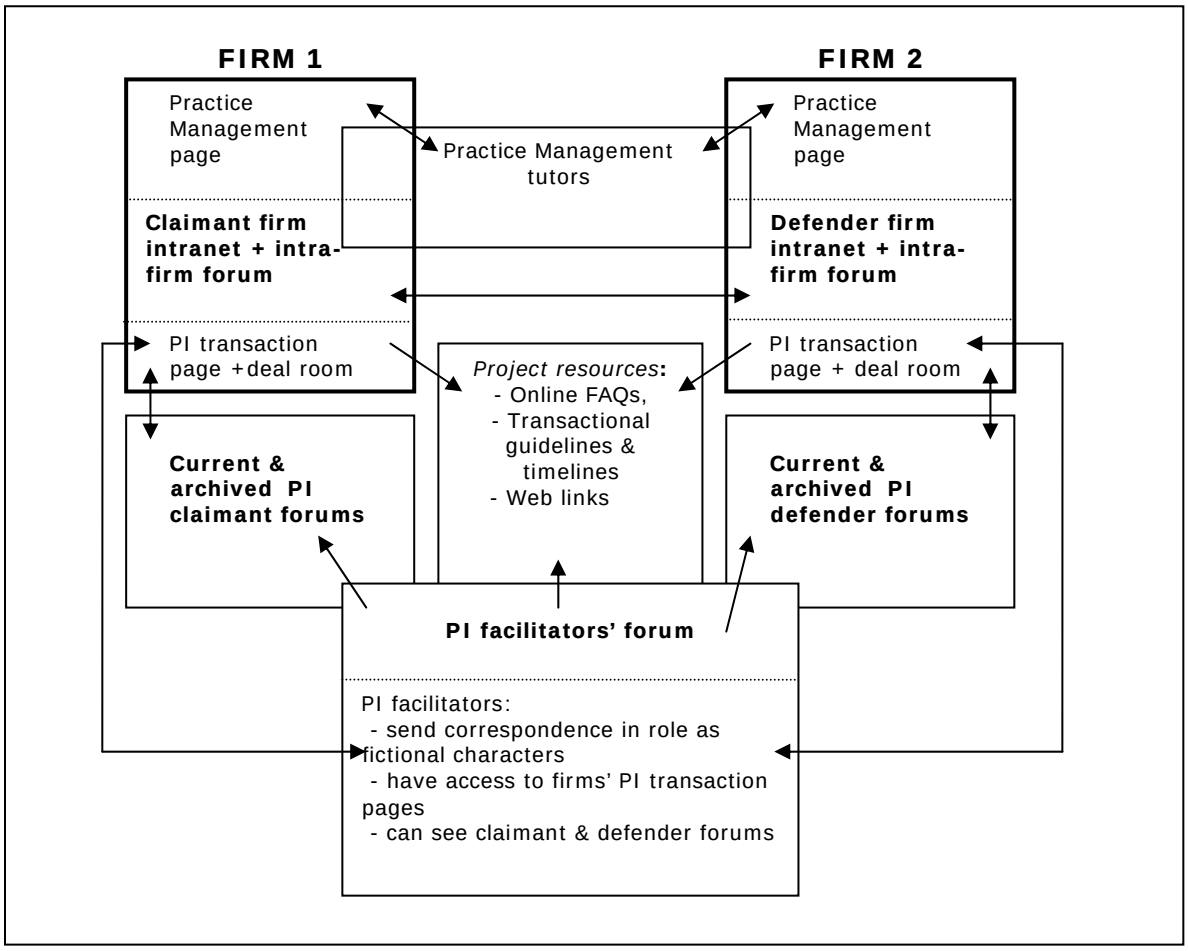
Table 1

	Klemm's anti-lurking protocols	**Our practice**
1.	Require participation – don't let it be optional	Lurking was OK for us – the forums, after all, were resources for students. And if students had no questions, and no useful comments, we were happy for them to learn from others.
2.	Form learning teams	Our virtual firms were just that
3.	Make the activity interesting	Feedback from students told us the transaction was interesting and highly relevant
4.	Don't settle for opinions only	Students asked precise questions and were given precise answers
5.	Structure the activity	Better still – students structured their own activity, based on our guidance (and the forum contributed to that set of guidance)
6.	Require a 'hand-in assignment' (deliverable)	Students required to achieve the negotiated settlement that was the end-point of the transaction.
7.	Know what you are looking for and involve yourself to make it happen	Students are clear about the aims of the forum, and both Charlie and I answered postings on it.
8.	Peer grading	We did not use this nor do we consider it useful, given our students' inexperience in PI transactions. However next year we shall introduce peer grading of *perceived effort*.

In addition to facilitating the claimant and defender discussion forums, I also answered with Charlie on a project facilitators' discussion forum. This was used as a means for the seven postgraduate facilitators to contact Charlie and me and each other during the project if any problems arose regarding the correspondence they were sending to students in the guise of fictitious characters in Ardcalloch, or if they wanted advice on proper procedure.

The following diagram (Figure 2) illustrates the structural relationships between the communication flows in the project as of 2004 and subsequent years to the present; while Figure 3 gives a sense of the workspace within which students completed the transactional tasks.

Figure 2: PI Negotiation Project, 2004 – web-based information flows. Note the three forms of discussion forum used in the project, represented in bold.



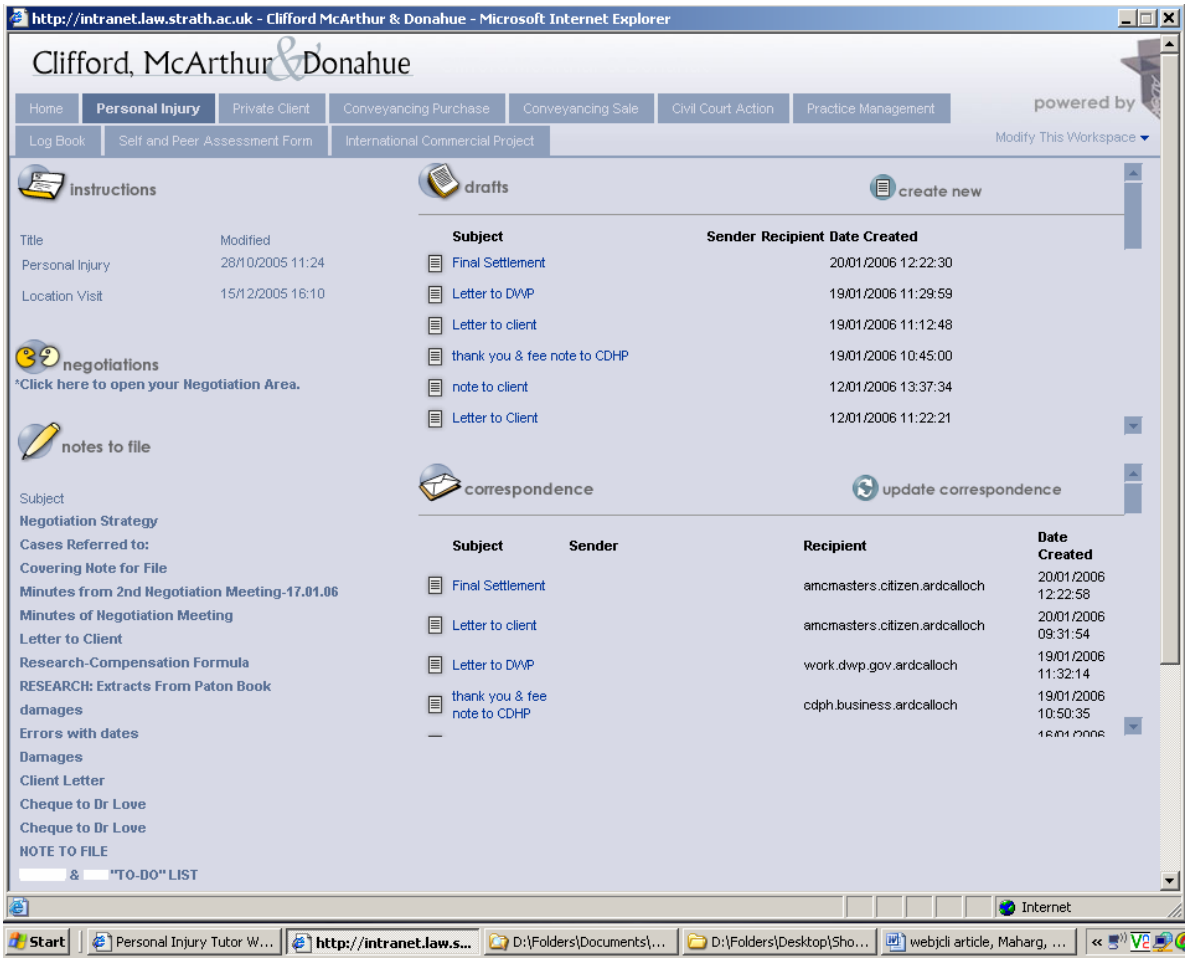


Figure 3: sample student intranet page, Personal Injury transactional workspace (names removed for anonymity)

The transactional work undertaken by students was therefore sustained by at least three different dialogue communities, which had different and sometimes overlapping audiences, each of whom brought different questions and bodies of knowledge to the discussions. The discussions exemplify rhetorical guidelines regarding audience, purpose, channels and media (Flower 1994). Above all, they are appropriate to the audience needs, and they are so because they both help to create and sustain different *communities of practice* within the project. Throughout there is conversation – nearly always student-initiated – which is essential for student learning on the project – a permanent conversation in pixels and bits that leaves a trace and perishes only if erased – *verba volent, scripta manent* (Harnad, 2001b)

The concept of *verba* as *scripta* can lead us to think of discussion forums as awkward, clumsy affairs – not a real conversation, after all, and surely not as effective as a tutorial on a Personal Injury topic. But we would argue that a discussion forum is simply different from a tutorial, neither better nor worse as a medium for learning. Where tutorials and discussion forums overlap is that designing, structuring and facilitating discussion forums is an art, an educational skill similar to good tutoring, or to lecturing or writing educational resources, but separate, and worthy of special staff

development support in the move from safe to risk zones. And as with most arts, sometimes the most unlikely ideas are actually the most productive. At first glance the use of chat-room technology might have no place to play in face-to-face meetings, for instance. But in an experiment reported by Clay Shirky, the software was used to match and enhance the communicative complexity of certain types of face-to-face meetings -- for example, notes to self (a kind of public 'thinking out loud'); high-quality text annotation, and \whisper commands (by which one could 'whisper' to anyone in the room – Shirky (2002))

As Gilly Salmon (2000) has shown, students often require to feel confident in their use of a VLE before they can begin to dialogue. The dialogue *space*, too, needs to be a safe one before students will move from the relatively safe evanescence of *verba* to committing themselves to more permanent *scripta*. Salmon's concept of 'e-tivities' can help create such a space (2000b – see also Pavey & Garland 2004). The concept needs to be treated as highly flexible, depending on the audience, but it is, nevertheless, a valuable acknowledgement of the *social* nature of online dialogue. As Bourdieu and others have pointed out, there are no such things as neutral spaces in education (Lefebvre 1991; Bourdieu 1989). Crook & Light (2002, p 156) made the same point as regards virtual space: for them, online discussion cannot be 'decoupled from the artefacts, technologies, symbol systems, institutional structures, and other cultural paraphernalia within which it is constituted'. In this, as in much else regarding technology, we need to separate the peripheral from the essential. And as Harnad and many others have pointed out, the permanent bits are the communicative essentials – those trace elements of communication on the web that are evidence of knowledge, dialogue and learning.

But *do* the forums help students to learn, or are they just talk for talk's sake (McKellar & Maharg 2004)? The simple fact that students communicate using them is crude evidence: students can, after all, communicate with each other in much more intuitive and cool ways – mobiles, SMS, IM, etc. The research of Howell-Richardson & Mellar (1996) indicates that much learning can take place, but that even small modifications to the structure of an online learning environment or task can affect communication outcomes considerably. We need to have a way of analysing and graphically representing such learning for our purposes as teachers. One way of doing this in the near future will be by computer-generated content analysis. It is possible, using neural net technology, to generate methods for autonomically categorising postings into cognitive categories. Already such systems are generating strong reliability findings (McKlin *et al* 2002).[7]

Just as the physical space of learning contributes to student learning, so the construction of the forum can enhance or inhibit learning (Becker & Steele 1995).

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[7]McKlin *et al* used Holsti's coefficient of reliability (CR) which measures the agreement between two coders divided by the total number of messages analyzed and Cohen's kappa which corrects for chance agreement among coders. They achieved reliability figures of CR = 0.68 and K = 0.31. Their analysis of learning was based on Garrison *et al*'s community of inquiry model, in turn based upon John Dewey's practical inquiry model, and which divides community-based learning into three overlapping areas: social presence, cognitive presence, and teacher presence (Garrison *et al* 2000; 2001; Dewey 1933). For more information on Holsti's coefficient, see Holsti (1969). For further information on this interesting line of research, see Henri (1992) and Riffe, Lacy & Fico (1998)

The literature on situated learning emphasises the effect of physical and social contexts on learning. According to this research, learning is more likely to be deep and effective when situated in discipline-specific and authentic tasks (Brown (2000), Brown, Collins & Duguid, (1989) Barab, Hay & Duffy (1998); Herrington, Oliver & Reeves (2002)). But the construction of tasks and dialogue in such spaces requires effort, skill, reflection, practice. Above all, it requires an awareness of the different forms of dialogue that can contribute to an educational experience. There are times when tutors are best to intervene, but there are occasions when it is best for a tutor to remain silent (Rohfeld & Hiemstra 1995; Hughes & Daykin 2002). Tutors need to think carefully about the forms of questions they ask online, which can inhibit discussion, or stimulate it (Muilenberg & Berge 2002). Tutors also need to think about the ways in which postings represent different forms of group interactions, based upon how individuals interact with each other, and how 'roles and strategies emerge amongst the participants', which in turn can lead to 'deeper insights into how professionals collaborate to develop their own practice, and into the complexity of the interactions between individual and group processes during these collaborations' (De Laat & Lally (2004), p 171; Klemm (2004); Prammanee (2003)). Such collaborations, between students, between students and staff, and between staff, can only occur within relatively safe zones.

This held true for the developmental process as well. The snapshot comparisons that are represented by Figures 1 and 2 will show the difference in polyvocality, and in informational flows between the two iterations of the project. It was certainly the case for me that the complexity of the architecture as it now exists could not have been generated in the first couple of years of the project's development. Quite simply, the tools to create the project 'middleware' did not exist in 1996; but more importantly, none of us then had the confidence that such a complex environment would work for students, for staff, or indeed how the environment could be maintained from one year to the next. It required the slow accretion of experience, and the development of a local community of practice within the GGSL to create sophisticated tools for learning (the acknowledgements at endnote four make this quite clear). But our own community was also a tiny fragment of a much vaster community of interests stretching globally and historically across the web: the emerging practice in legal education and ICT; the literature on constructivism, on web-based instruction and design; the form of newsgroup communities of the web, the early communities grouping around MUDs and MOOs, educational experiments in online communities and suchlike.

Pragmatism and professional legal education

I have given a detailed example of communities of practice in action in professional legal education, and a brief description of one of the applications used in that arena. Such examples, of course, can be appropriated by any sector of higher education, and by any discipline. But is there a body of meta-theory that can guide our practice as professional legal educators, and which can help us to come to terms with new technologies such as described above? I would argue that there is, and that it arises not just from educational practice, or from contemporary research on web-based learning and teaching (important though that is); but also – following Strathern – from the very uncertainties and marginal position of the teaching practices of professional

educators. I shall set this out in greater detail elsewhere, but for now let me sketch out the position very briefly.

The nature of our teaching is close to practice, much closer than for many academics. We can adapt forms of theory that grow in part from the dialogue of the academy with practice, and of these, there are none so apt as pragmatism, and that form of pragmatism associated with American realism. I do not refer primarily to the form of neo-pragmatism that enjoyed a brief popularity during the eighties and early nineties, but the pragmatic realism of John Dewey, Karl Llewellyn, and others within and beyond the Metaphysical Club (Menand 2002). What might be the relevance of this theory for us today?

We can illustrate it by taking an interesting episode that involved Dewey in the early twenties, when he was at Columbia University. Soon after his arrival at Columbia, Dewey became involved in collaboration with a number of different departments. In the summer of 1922 he was invited by Harlan Fisk Stone, dean of the School of Law at Columbia, to give a course on Logical and Ethical Problems of Law. This course may have been one of a number of experimental courses held in the session 1922-3, and organised by Herman Oliphant. The course outline and materials have survived in manuscript form amongst Stone's papers in the Butler Library at Columbia, and it is clear that the materials produced for this course were later used as an essay, 'Logical Method and Law' (Dewey 1983) In this essay, Dewey is concerned to define the form of logical enquiry used by law. In doing so, he notes the 'apparent disparity which exists between actual legal development and the strict requirements of logical theory' (p 68); and quotes one of Holmes' famous apothegms - '"The actual life of the law has not been logic: it has been experience"' (p 69). Dewey agrees with Holmes, but only in so far as one defines logic as strict syllogism. As he points out, 'No lawyer ever thought out the case of a client in terms of the syllogism. He begins with a conclusion which he intends to reach, favourable to his client of course, and then analyzes the facts of the situation to find material out of which to construct a favourable statement of facts, to *form* a minor premiss.' (p 72). Dewey emphasises in this form of logic 'principles of interpretation' over against rigid rules, and the role of general rules as working hypotheses, needing to be constantly tested by the way in which they work out in application to concrete situations (pp 75-6). He defined this logic as '*relative to consequences rather than to antecedents*' (p 75, his italics). For Dewey, this 'infiltration into law of a more experimental and flexible logic [was] a social as well as an intellectual need' (p 77). While acknowledging that rules of law should be as definite as possible, Dewey points out that the regularity of decision springs not only from the rules themselves but from uniform and relatively static social conditions. However, where 'new devices in business and communication bring about new forms of human relationship' (p 74), then the power of 'antecedent assurance' (p 74) is diminished.

In this brief essay we have a pre-eminent example of the effect that sociologists and philosophers had upon the American legal realists (for discussion, see Twining (1973); Hunt (1978); Duxbury, (1997)). Dewey's language is pragmatist - the emphasis upon new forms of enquiry, the language of progressive, evolutionary reform, the social ameliorism and underlying optimism; an insistence upon the uncertainty of legal rules and their artificiality; the dwelling upon experimentalism and instrumentalism. Realist views of legal process (*eg* Frank's famous statement

that 'law may vary with the personality of the judge who happens to pass upon any given case' – White 1978, p 123) accord with pragmatist views on educational theory (see Dewey (1948, p 189) where he attacks the generalist tendencies of individualistic, socialist and organic social philosophies). In his general definition of pragmatism, Dewey put this well:

> "Pragmatism … does not insist upon antecedent phenomena but upon consequent phenomena; not upon precedents but upon the possibilities of action. And this change in point of view is almost revolutionary in its consequences. An empiricism which is content with repeating facts already past has no place for possibility and for liberty." (Dewey, J. (1989), p 33)

In statements such as these we can see many aspects of the anti-formalism of the legal realists, not least a version of what Llewellyn was to call 'situation sense' (Llewellyn (1960); Twining (1973), p 216). As Dewey put it in a later essay, 'law is through and through a social phenomenon; social in origin, in purpose or end', and he later defined law as an 'inter-activity ... [which] can be discussed only in terms of the social conditions in which it arises and of what it concretely does there'.

I would hold that everything in the last paragraph holds powerfully for those of us involved today in professional legal education, and no more so than in the forms of teaching that we use with technology. New devices in business and communication have indeed brought about new forms of relations within the world of business and the law, and they can be adapted and used to transform our own teaching and learning. To do that, we need to carry out empirical field work to determine how legal professionals work with IT – visit firms, talk with IT service providers to law firms, with fee-earners using software applications, visit legal IT conferences, discuss amongst ourselves how we might better prepare our students for the use of ICT in legal practice, think critically about the role and effect that IT has upon the legal profession.

But is that all? Is professional legal education simply to be a *mimesis* of legal practice? Is this the limit of our educative ambitions, given what Dewey says about the place of possibility and liberty in education? If it is, then we risk repeating the failure of the realist enterprise. For most historians of the movement, the realist projects of the early twentieth century were unsuccessful – even realists themselves acknowledged that the integration of social science methodology was partial and limited at best (Duxbury (1995), p 130, quoting Llewellyn & Hoebel (1941), p 41). Much of it ultimately transmogrified into pretexts of rationalised instrumentalism. In legal educational theory, while reacting vigorously against the Langdellian orthodoxy realists failed, for whatever reasons, 'to devise a convincing alternative framework of their own' (Duxbury (1995), p 158). It is deeply ironic that Dewey's own radical educational approaches could have given the realists the conceptual tools with which to transform their own educational practices – tools which were left largely unused.

I would argue that as educators, we need to avoid the evasion of the realists (as Cornell West termed it – West (1989)) while using the tools that stem from the pragmatist tradition. There are many ways we can represent our educational practice to ourselves, discuss it, research it, and seek to change it. Nowadays, there are many developments of educational theory and practice, stemming from theorists and

practitioners such as Dewey, who have in many ways successfully transformed the educational fields in other disciplines. We can thus begin to construct for ourselves and our discipline a pragmatic approach. For example, it might be no bad thing that we listen to Elliott Eisner's concept of connoisseurship, where educators become connoisseurs of learning experiences, and critics of that experience (Eisner 1998). Or we could listen to what the theorists of transformative education have to offer us.

Transformative learning

Transformation of *experience* is the key idea here. For if professional education can be both pragmatist and realist, this is not all that it can be. Pragmatism has had a bad lay press for being primarily a description of a fairly cynical way of being in the world, and an accepting of social power structures. I hope I have said enough about it in remarks above to indicate that this is not my reading of it. Nevertheless it could be said that our practice as professional educators should not simply rest with a realist view of practice and legal education. I would make a plea that we take on board a transformative view of professional legal education. I would hold that professional legal educators have a duty to transform professional legal education – we are, after all, deeply concerned with what it is to be a professional in the world, and in communicating that vision of professionality to our students. Our definition of professionalism cannot be defined by the ethical code of a profession alone: it must be defined in more committed moral terms. We often talk of teaching professionalism in terms of thinking like a lawyer, or dealing with uncertainty, or domesticating doubt, or routinising transactions. But professionalism must have deeper moral foundations than these. It must be redefined, and we must be part of the movement to transform professionalism, that of our students and our own as teachers, the transformation of which must otherwise lie with political bodies, market forces and other forces within society which care much less than we do about our profession. There is already a substantial literature on the subject in other disciplines. On the subject of teaching professionalism in the medical fields, for instance, the work of David Stern (2005) is useful, as is that of Cruess & Cruess (1997a & b).

What might such transformative learning actually involve? It could include the following:

- Making apparent to students the 'invisible framework' of the legal profession[8]
- Analysing practice, and helping students to develop their own reflective practice within the profession, while learning that practice, and being aware of wider societal, cultural and business contexts.
- Acknowledging and then working to change the borders of professional practice
- Transformative growth in professionalism (Taylor (2002; 2004))

[8] And I mean 'invisible' in the sense that psychologists talk of 'perceptual constancy' – our tendency to understand the world as we know it, rather than as it appears on our retinas, eardrums, fingertips. For example, the paper we write on is, within a bandwidth of hue, invariably seen as white regardless of saturation or contextual lighting (colour constancy); a door is seen as a rectangle even when it is trapezoidal when open (shape constancy). Perceptual constancy is useful in screening out perceptual 'noise' around us; but there are times when we need to question perceptual and conceptual constancy.

These points refer to ourselves as much as to our students. Transformative growth for us ought to mean engaging with relevant educational theory (the interdisciplinary literature on professionalism, for instance), dialoguing with each other, with the profession, with regulators, and with many others. In the medical educational field, for example, Eggly, Brennan & Wiese-Rometsch (2005, p.375) recommend in their conclusions that 'future proposals of ideal professional behavior be revised periodically to reflect current experiences of practicing physicians, trainees, other health care providers and patients. Greater educational emphasis should be placed on the systems and sociopolitical environment in which trainees practice'.

In many respects transformative learning might be regarded as a deeper form of pragmatic inquiry. Henderson & Kesson's (2004) 'seven modes of inquiry' are a useful summary of the breadth and reach of this educational approach. For them a teacher's pragmatic wisdom stems from enacting all seven modes of inquiry: *techne* (craft reflection), *poesis* (attunement to the creative process), *praxis* (critical inquiry), *dialogos* (multiperspectival inquiry), *phronesis* (practical, deliberative wisdom), *polis* (public moral inquiry), *theoria* (contemplative wisdom). One might compare this with Schubert's earlier research into typologies of curriculum images that educators hold, which range from conservative images such as *curriculum as subject matter* or *discrete tasks* to more radical images of *curriculum as experience* and *curriculum as currere* (or *autobiographical reconceptualisation* – Schubert (1985); Taylor (2002), p 10.

Indeed, given the tension, uncertainty and constant shifting of the field within which we professional legal educationalists work, I would hold that these concepts are even more important to those of us working in the field of professional education: they are the essence of our practice, they are what enable us to survive in our educational landscape, and contribute to the developing debate on professionalism and other concepts central to our practice. It is an approach that Dewey would have heartily approved of.

Dialogue, II

I hope I've shown that the domain of ICT is a sophisticated and fertile field for those of us involved in professional legal learning. What we need to ensure is that we move from safe to risk zones at our own pace, that our goals for ICT use are specific, measurable, and realistic, and that we create our communities of research, practice and interest. Above all, communication between everyone involved in design and implementation is essential, as research has shown (Dale, Robertson & Shortis (2004); European Commission (n.d.) (2002-06)). The example of ICT, though, has deeper resonances. As with all innovations, it throws into relief our everyday practices, and can make us question what we do, and why we do it. In the process, it shows the need for us to examine our practice in the context of larger theoretical concerns, both legal and educational; and above all the need for meta-theory arising from our professional legal educational practice.

With the permission of the editors, this paper has been posted on my blog at http://zeugma.typepad.com (under 'Publications'), and I invite readers to join the discussion of the paper in the blog. If you wish to comment, go to the permalink at

http://zeugma.typepad.com/WJCLIarticleMahargv.2,14.5.06.doc. I look forward to discussing it with you.

Bibliography

ActionResearch.net, at http://www.bath.ac.uk/~edsajw/

Alldridge, P, Mumford, A (1998) 'Gazing into the Future through a VDU: Communications, Information Technology, and Law Teaching' in *Transformative Visions of Legal Education*, Bradney, A, Cownie, F (eds) (Oxford: Blackwell), 116-133

Barab, S A, Hay, K E, Duffy, T M, (1998) 'Grounded Constructions and How Technology Can Help', *TECHTRENDS*, March, 15-23

Becker, F, Steele F (1995) *Workplace by Design: Mapping The High Performance Workspace*, (San Francisco, Jossey-Bass)

Barnett, R (1990) *The Idea of Higher Education*, (Buckingham: Society for Research into Higher Education & Open University Press)

Barton, K, Westwood, F (2005) 'Collaborative Working Environments in Professional Learning', Practice, Profession, Ethics section, *Society of Legal Scholars Conference*, Glasgow: University of Strathclyde

Billett, S (2001) *Learning in the Workplace: Strategies for Effective Practice*, (New South Wales: Crow's Nest)

Bottino, R.M. (2004). 'The Evolution of ICT-based Learning Environments: Which Perspectives for the School of the Future? *British Journal of Educational Technology*, 35, 5, 553-567

Bourdieu, P (1989) 'Social Space and Symbolic Power', *Sociological Theory* 7, 1, 14-25.

Brown, J S, Collins, A, Duguid, P (1989) 'Situational Cognition and the Culture of Learning', *Educational Researcher*, 18, 1, 32-42

Brown, J S (2000) 'Growing Up Digital: How the Web Changes Work, Education, and the Ways People Learn', *Change*, March/April, 11-20

Brownsword, R (1999) 'Law schools for Lawyers, Citizens and People'. In Cownie, F. (ed), *The Law School: Global Issues, Local Questions (*Aldershot: Ashgate)

Cownie, F (2004) *Legal Academics. Culture and Identities*, (Oxford: Hart Publishing)

Crook, C, Light, P (2002) 'Virtual Society and the Cultural Practice of Study', in Woolgar, S., ed., *Virtual Society? Technology, Cyperbole, Reality*, Oxford: Oxford University Press, 153-75

Commentary: Medicine and Professionalism, *Archives of Internal Medicine,* 2003;163:145-149 at http://teacherweb.com/NY/StBarnabas/Professionalism/HTMLPage3.stm#REF-ICM20044-11

Cox, G, Carr, T, Hall, M. (2004) 'Evaluating the Use of Synchronous Communication in Two Blended Courses', *Journal of Computer Assisted Learning*, 20, 3, 183-193

Coupal, L.V. (2004). 'Constructivist Learning Theory and Human Capital Theory: Shifting Political and Educational Frameworks for Teachers' ICT Professional Development. *British Journal of Educational Technology*, 35, 5, 587-596.

Christensen, C M (2003) *The Innovator's Dilemma*, (New York: HarperBusiness)

Cruess, S.R., Cruess, R.L. (1997a) Professionalism Must Be Taught, *British Medical Journal*, 1997;315:1674-1677

Cruess, R.L., Cruess, S.R. (1997b) Teaching Medicine as a Profession in the Service of Healing", *Academic Medicine*, 72, 11, 941-52

Dale, R, Robertson, S, Shortis, T (2004) '"You Can't Not Go with the Technological Flow, Can You?" Constructing 'ICT' and "teaching and learning"', *Journal of Computer Assisted Learning*, 20, 456-70

Dewey, J (1933) *How We Think: A Restatement of the Relation of Reflective Thinking to the Educative Process*, (Boston: D.C. Heath)

Dewey, J (1948) *Reconstruction in Philosophy*. (Boston: Beacon Press)

Dewey, J (1983) 'Logical Method and the Law' in *John Dewey: The Middle Works, 1899-1924*, vol 15: 1923-24, ed by Jo Ann Boydston, textual editor Anne Sharpe. (Carbondale & Edwardsville: Southern Illinois UP), 65-77

Dewey, J. (1989) 'The Development of American Pragmatism' in *Pragmatism: The Classic Writings*, Thayer, H S, ed, (Indianapolis, Indiana: Hackett). First published 1931

Dewey, J (1991) 'What is the Matter with Teaching?', in *John Dewey: The Later Works, 1925-1953*, vol 2: 1925-1927, ed by Boydston, J.A., (Carbondale & Edwardsville: Southern Illinois University Press), 116-123.

Duxbury, N. (1997) *Patterns of American Jurisprudence*, (New York: Oxford University Press)

Eggly, S, Brennan, S, Wiese-Rometsch, W (2005) 'Once When I was On Call…,' Theory versus Reality in Training for Professionalism', *Academic Medicine*, 80, 371-75

Eisner, E W (1998). *The Enlightened Eye: Qualitative Inquiry and the Enhancement of Educational Practice*, (Upper Saddle River, NJ: Merrill)

Engerström, Y (2001) 'Expansive Learning at Work: Towards an Activity-Theoretical Reconceptualisation', *Journal of Education and Work*, 14, 1, 133-56

Engerström, Y, Engerström, R, Karkainnen, M (1995) 'Polycontextuality and Boundary Crossing in Expert Cognition: Learning and Problem Solving in Complex Work Activities', *Learning and Instruction*, 5, 319-36

European Commission (n.d.) *Technology Enhanced Learning* (2002-2006 Framework for Research in Technology Enhanced Learning of the Information Societies Technologies [IST] Programme of the European Community), (Brussels: European Commission)

Evans, K, Hodkinson, P, Unwin, L (2002) *Working to Learn: Transforming Learning in the Workplace*, eds, (London: Kogan Page)

Flower, L. (1994). *The Construction of Negotiated Meaning. A Social Cognitive Theory of Writing*, (Carbondale, IL: University of Southern Illinois Press)

Garrison, D R, Anderson, T, Archer, W (2000) 'Critical Inquiry in a Text-based Environment: Computer Conferencing in Higher Education' in *The Internet and Higher Education*, 2, 2-3, 87-105

Garrison, D R, Anderson, T, Archer, W (2001) 'Critical Thinking, Cognitive Presence, and Computer Conferencing in Distance Education' in *American Journal of Distance Education*, 15, 1, 7-23

Haigh, N (1998) 'Staff Development: An Enabling Role', in Latchem, C., Lockwood, F., eds, *Staff Development in Open and Flexible Learning*, (London: Routledge), 182-192

Harnad, S (2001a) 'Re: The "Library of Alexandria" Non-Problem', posting at http://www.ecs.soton.ac.uk/~harnad/Hypermail/Amsci/1780.html

Harnad, S (2001b) 'Lecture et Ecriture Scientifique "Dans le Ciel": Une Anomalie Post-gutenbergienne et Comment la Résoudre', *Text-e* at http://www.text-e.org/debats/index.cfm?conftext_ID=7

Henderson, J G, Kesson, K R (2004) *Curriculum Wisdom: Educational Decisions in Democratic Societies*, (New Jersey: Pearson)

Henri, F (1992) 'Computer Conferencing and Content Analysis', in *Collaborative Learning Through Computer Conferencing: The Najaden Papers*, 115-136, Kaye, A R, ed, (New York: Springer)

Hepple, B (1996) 'The Renewal of the Liberal Law Degree', *Cambridge Law Journal*, 470-87

Herrington, J, Oliver, R, Reeves, T C (2002), 'Patterns of Engagement in Authentic Online Learning Environments', ASCILITE Conference, Auckland, NZ, http://www.ascilite.org.au/conferences/auckland02/proceedings/papers/085.pdf

Holsti, O (1969) *Content Analysis for the Social Sciences and Humanities*. (Don Mills, ON: Addison-Wesley)

Howell-Richardson, C, and Mellar, H (1996) 'A Methodology for the Analysis of Patterns of Participation within Computer Mediated Communication Courses, *Instructional Science*, 24, 47-69

Hughes, M and Daykin, N (2002) 'Towards Constructivism: Investigating Students' Perceptions and Learning as a Result of Using an Online Environment', *Innovations in Education and Teaching International*, 39, 217-24

Hunt, A (1978) *The Sociological Movement in Law*, (London: Macmillan)

Klem, E, Moran, C (1994) '"Whose Machines Are These?" Politics, Power and the New Technology', in Sullivan, P., Qualley, D. (eds) *Pedagogy in the Age of Politics*, (Urbana, Illinois: National Council of Teachers of English), 73-87

Klemm, W R (2002) 'Eight Ways to Get Students More Engaged in On-line Conferences', *The Higher Education Journal*, 26, 1, 62-64

De Laat, M, Lally, V (2004) 'It's Not So Easy: Researching the Complexity of Emergent Participant Roles and Awareness in Asynchronous Networked Learning Discussions', *Journal of Computer Assisted Learning*, 20, 165-71

Lave, J, Wenger, E (1991) *Situated Learning: Legitimate Peripheral Participation*, (Cambridge: Cambridge University Press)

Lefebvre, H (1991) *The Production of Space*, (Oxford: Blackwell)

Llewellyn, K (1960), *The Common Law Tradition - Deciding Appeals.* Boston: (Toronto: Little, Brown)

Llewellyn, K, Hoebel, E A (1941) *The Cheyenne Way: Conflict and Case Law in Primitive Jurisprudence*, (Norma: University of Oklahoma Press)

McKellar, P, Maharg, P (2004) 'Talk about Talk: Are Discussion Forums Worth the Effort? Vocational Teachers' Forum, UK Centre for Legal Education, 2004, http://www.ukcle.ac.uk/vtf/maharg.html

McKlin, T, Harmon, S W, Evans, W, Jones, M G (2002) 'Cognitive Presence in Web-based Learning: A Content Analysis of Students' Online Discussions', in ITFORUM listserv, http://it.coe.uga.edu/itforum/paper60/paper60.htm

Maharg, P, Paliwala, A (2002) 'Negotiating the Learning Process with Electronic Resources', in *Effective Learning and Teaching in Law,* Burridge, R., *et al*. eds (London: Kogan Page and ILT), 81-104

Maharg, P (2004a) 'Virtual Firms: Transactional Learning on the Web', *Journal of the Law Society Online* at http://www.journalonline.co.uk/article.aspx?id=1001154.

Maharg, P (2004b) 'Virtual Communities on the Web: Transactional Learning and Teaching', in *Aan het werk met ICT in het academisch onderwijs,* Vedder, A. ed, (Nijmegen: Wolf Legal Publishers)

Menand, L (2002) *The Metaphysical Club: A Story of Ideas in America,* (New York: Flamingo)

Moore, G. (1965) 'Cramming more components onto integrated circuits', Electronics, 38, 8, ftp://download.intel.com/research/silicon/moorespaper.pdf

Muilenberg, L, Berge, Z L (2002) *A Framework for Designing Questions for Online Learning*, http://www.emoderators.com/moderators/muilenburg.html

Mytton, E (2003) Lived Experiences of the Law Teacher *The Law Teacher* 36

Pavey, J, Garland, S W (2004) 'The Integration and Implementation of "E-tivities" to Enhance Students' Interaction and Learning', *Innovations in Education and Teaching International*, 41, 3, 305-16

Penteado, M (2001) 'Computer-based Learning Environments: Risks and Uncertainties for Teachers', *Ways of Knowing Journal*, 1, 2, 22-33

Prammanee, N (2003) 'Understanding Participation in Online Courses: A Case Study of Perceptions of Online Interaction', ITFORUM listserv, http://it.coe.uga.edu/itforum/paper68/paper68.html.

Rheingold, H (1992) 'A Slice of My Life in My Virtual Community' http://interact.uoregon.edu/medialit/MLR/home/index.html

Riffe, D, Lacy, S, and Fico, F G (1998) *Analyzing Media Messages: Using Quantitative Content Analysis in Research*, (Mawah, New Jersey: Lawrence Erlbaum)

Rohfeld, R W, Hiemstra, R (1995) 'Moderating Discussions in the Electronic Classroom' in *Computer-Mediated Communication and the Online Classroom in Distance Education*, Berge, Z L, Collins, M P , eds, (Creskill, NJ: Hampton Press)

Salmon, G (2000a) *E-moderating: The Key to Teaching and Learning Online*, (London: Kogan Page)

Salmon, G (2000b) *E-tivities: The Key to Active Online Learning*, (London: Kogan Page)

Scardamalia, M (2001) 'Big Change Questions: Will Educational Institutions, within their Present Structures, be Able to Adapt Sufficiently to Meet the Needs of the Information Age?' *The Journal of Educational Change*, 2, 2, 171-176

Schubert, W H (1985) *Curriculum: Perspective, Paradigm, and Possibility*, (New York: Prentice Hall)

Shirky, C., (2002) 'In-room Chat as a Social Tool', at http://www.openp2p.com/pub/a/p2p/2002/12/26/inroom_chat.html

Smørdal, O, Gregory, J (2003) 'Personal Digital Assistants in Medical Education and Practice', *Journal of Computer Assisted Learning*, 19, 320-29

Stern, D (2005) *Measuring Medical Professionalism*, (Oxford: Oxford University Press)

Strathern, M (2000a) 'Virtual Society? Get Real! Abstraction and Decontextualisation: An Anthropological Comment or: E for Ethnography', http://virtualsociety.sbs.ox.ac.uk/GRpapers/strathern.htm

Strathern, M (2000b) *Audit Cultures. Anthropological studies in Accountability, Ethics and the Academy*, EASA series in Social Anthropology, (London: Routledge)

Strathern, M (2004) *Commons and Borderlands: Working Papers on Interdisciplinarity, Accountability and the Flow of Knowledge*, (Wantage: Sean Kingston Publishing)

Taylor, P C, Gilmer, P J, Tobin, K (2002) *Transforming Undergraduate Science Teaching: Social Constructivist Perspectives*, (New York: Peter Lang Publishers)

Taylor, P C (2004) 'Transformative Pedagogy for Intercultural Research', *Culture Studies in Science Education*, Kobe University, http://pctaylor.smec.curtin.edu.au/publications/Transformative%20Research.pdf

Twining, W (1967) 'Pericles and the plumber: prolegomena to a working theory for lawyer education', *Law Quarterly Review*, 83, 396-426

Twining, W. (1973) *Karl Llewellyn and the Realist Movement*. (London: Weidenfeld & Nicolson)

Walker, S A (2004) 'Socratic Strategies and Devil's Advocacy in Synchronous CMC Debate', *Journal of Computer Assisted Learning*, 20, 3, 172-82

Wenger, E. (1998) *Communities of Practice: Learning, Meaning and Identity*, (Cambridge: Cambridge University Press)

West, C. (1989) *The American Evasion of Philosophy: A Genealogy of Pragmatism*, (Wisconsin: University of Wisconsin Press)

White, G E (1978) *Patterns of American Legal Thought*, (New York: Lexis Law Publishing)