

Academic intellectual property in a new technological and industrial context

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New information technologies, an increasingly uncertain relationship between the federal government and the public universities, and the changing landscape of industrial relations make the ownership and exploitation of intellectual property a vital issue for individual academics and institutions. As universities turn increasingly to fee-based courses, consultancies and applied research, they naturally seek to make a better fist of exploiting intellectual property. Meanwhile individual academics whose salaries and conditions have been eroded will seek to retain property rights to as much of their work as possible. Enterprise bargaining in universities has only recently begun to grasp the role, exploitation, and distribution of intellectual property rights, licenses and royalties.

In 1993 the *Australian Universities' Review* published a pioneering issue devoted to practical and policy questions of academic intellectual property. In his introduction to the issue David Saunders pointed to some key developments, including emerging claims by university administrators to the intellectual property of staff and students (notably in the 1992 University of Melbourne draft statute); the establishment of Open Learning and the implications of alternative modes of delivery (traditionally, distance education through the post); the consequences of electronic library systems, developments in indigenous cultural policy (where copyright and moral rights questions have figured prominently); the reform of intellectual property law; and the prospect of educational lending right (Saunders 1993).

On these and other fronts, much has happened in the last three years, although the problems remain. Universities are more than ever focussed on the value or potential value of their educational 'products'. An increasing proportion of university income comes from sources other than traditional government funding. Educational lending right was introduced in 1995. Electronic libraries are now a reality. The Internet has rapidly grown, most spectacularly in the form of the World Wide Web. Whatever the Web's current foibles, it seems likely to revolutionise the publication and circulation of much academic work, especially that which now appears in expensive, low-print-run journals.

The problems for academics and universities reflect a general level of turbulence in the current intellectual property scene. In the private sector, large organisations are being advised that they must audit and manage intellectual property rights more effectively. At government level, policy makers are struggling with rapidly moving technological targets. Meanwhile, a drawn out and dispersed law reform process inches forward, reviewing diverse aspects of copyright including computer software protection, protections for Aboriginal work, and moral rights.

This article addresses a few of the current questions. It points to the need for both academics and institutions to have a clearer and more comprehensive understanding of intellectual property issues in the current industrial and technological context.

Old and new regimes

The main relevant forms of IP protection for academic work are as follows:

- copyright for 'works': literary (including computer software), dramatic, artistic and musical works (governed by the Copyright Act 1968 (Cth))
- copyright for 'subject matter other than works': film and video, television and sound broadcasts, and sound recordings (Copyright Act 1968 (Cth))
- patentable inventions (Patents Act 1990 (Cth))
- integrated circuits and circuit layouts (Circuit Layout Act 1989 (Cth))

Intellectual property law also protects designs, trademarks, confidential information, trade secrets and plant varieties. For academics, however, copyright and patents are usually the most important forms of IP protection. But, in the case of copyright at least, the law appears ill-fitted to academic convention and practice. Section 35 (6) of the Commonwealth's 1968 Copyright Act specifies that where a work is made by an author 'in pursuance of the terms of his employment by another person', then that other person is the copyright owner.

What might that 'in pursuance' mean in the university context? The answer has long been unclear. Until recently, section 35 (6) was generally regarded as remote from

the circumstances of academic work. Academics were used to their own fairly simple but legally ill-defined regime. Unlike professionals working for government or the private sector, they owned the copyright to their books, articles and chapters and received any royalties these works generated. While study and course guides were usually understood to be the property of the university, it has been commonplace for lecturers to take their lectures, reading lists and other teaching resources with them when they move to another institution. At the same time, some universities with particular investments in such materials — such as Deakin with its substantial distance education operation — have added clauses to individual contracts to ensure that the University retains rights to teaching materials and, in some cases, textbooks as well. A recent important article by Anne L Morotti has examined this whole contentious issue in detail (Morotti, 1994).

In the absence of any conclusive judicial decisions on the matter, it seems likely that the rule in section 35 (6) has been impliedly varied by academic employers. Academics are not the only employees who escape: a separate section of the Copyright Act enables journalists to retain certain rights to their work. For journalists, the recent emergence of new publishing media has made their copyright a major industrial issue.

As universities enter a new industrial environment of individual employment and performance agreements, new contracts are likely to have new things to say about intellectual property. Universities will also wish to revise and extend the scope of their intellectual property statutes and 'policies'. The status of existing agreements, whether explicit or implied, as well as the status of provisions in 'policies' or 'guidelines', will become critical issues.

In the field of patentable inventions, there has been a different approach. Well aware of the commercial potential, universities have usually preserved their rights to patentable inventions. Their technology-marketing companies frequently attempt to exploit the value of research in medicine and a range of applied sciences. Such inventions may be the work of a number of university staff, including academic and general staff — a distinction that is becoming increasingly blurred. Universities usually negotiate divisions of royalties with academic inventors, but rarely acknowledge or offer monetary reward to research assistants and lab workers.

We can sum up the existing system: loose conventions governing copyright, and more definite claims for patents. There may once have been good reasons for these differing approaches (Ricketson 1993, p. 6), but new information technologies have the potential to create some real difficulties out of the inconsistency. These difficulties are numerous. Most computer software is protected by copyright, not patent law. New networking

and multimedia tools hold out the promise of providing academics in many disciplines with the means to produce works which have considerable commercial value, well beyond the royalties of small run academic monographs or even the occasional best seller. The 'new products' of the humanities, for example, may be educational software, or textual or archival scholarship in networked or packaged data. Who in these cases is entitled to a royalty or a licence fee? Such works are likely to be protected by copyright law, although software patents are becoming common in the United States. If they are copyright works, under the current rules they would belong to their authors. If, as is less likely, they are patented, the universities will divide the royalties.

Some of these new works will incorporate 'older' forms of work, such as textbooks, monographs, edited collections and scholarly editions. Who should pay for the extra work involved in such an adaptation, and who owns what bits of the result and the income it produces? In these cases universities and publishers are likely to see themselves as investors entitled to divisions of a royalty or licence stream that might once have flowed entirely to the author. But if they are copyright works, under the current system such royalties would flow entirely to the authors.

If universities wish to extend their rights over academics' research and scholarship, they must struggle against more than academic convention. They struggle also against the claim that they are ill-equipped to take over such rights. While academics generate an enormous amount of protectible work, Australian universities have not demonstrated being conspicuously successful in exploiting that material. (They have occasionally been sued by people believing they were good at exploiting material belonging to others.)

For instance: although Australian universities have rapidly adopted and developed computer networked communications, their history in print-based publishing is patchy. The experience of university presses, and in particular the closure of the ANU Press and Sydney University Press, is significant. UQP and Melbourne University Press depend in varying degrees on direct subventions, philanthropic income, and campus bookshop sales to remain viable. There are strong arguments for such subsidies and concessions. Without such presses a great deal of work would never see the light of day. Nonetheless, universities such as La Trobe, Deakin and Western Australia have chosen to either close or severely cut back their presses. On the other hand Oxford and Cambridge University Press, and several commercial publishers, have successfully published academic work in Australia.

In the case of patentable inventions and applied consultancies, universities may claim a better record by pointing to the growth of corporate entities like ANU-

TECH or Unisearch. But there is little discussion of where these bodies have succeeded or failed, or how they may change the conduct of research and publication. In the 1993 *AUR* issue mentioned above, Brad Sherman pointed to the effects patenting may have on an institution's research culture: there are important differences in purpose and audience between patent claims and traditional academic writing (Sherman 1993, p. 24). The patenting process is a system of publishing the results of research as well as protecting them.

The AVCC discussion paper

In 1993 the Australian Vice-Chancellors' Committee (AVCC) published a discussion paper, *Ownership of Intellectual Property in Universities*, which was substantially revised in 1995. From an employer's perspective, it makes a case for the importance of intellectual property issues, and points out the need for sound management of intellectual property claims, clear and complete internal provisions, control over decision making, and clear legal standing. For academics, these points also need to be addressed directly.

The AVCC report includes a range of current university intellectual property rules and policies. Cambridge University's determination represents the longstanding conventions which now look outdated: 'Cambridge does not claim copyright in works of scholarship (books, articles in learned journals, etc) produced by its staff, and allows staff to receive in full any royalties from such works.' (AVCC 1995, p. 75.) Arrangements for patentable inventions are handled by Cambridge's development company. But what if an increasing amount of the 'action', in dollar terms, is in the 'etc' quoted above?

The University of Newcastle (NSW) has a more detailed policy which makes a general claim to ownership, then undertakes not to assert ownership of scholarly work. Newcastle attempts to specify some at least of the 'etc':

...the University will assert ownership of intellectual property created by researchers in the course of their employment and of intellectual property materials created by non-academic staff in the course of their employment...

The University will not assert any right or claim to ownership of any intellectual property in scholarly books, articles, audiovisuals, lectures, or other such scholarly work or subject matter generated (whether in written or any other form) by researchers, other than that specially commissioned by the University... (AVCC 1995, 38.)

This raises the question of what 'specially commissioned' means in the university context. Is it only specially commissioned if your Vice Chancellor puts the request? Given complex and variable status hierarchies,

chains of command, and levels of budgetary devolution in the Unified National System, who is the commissioning agent? Do we foreshadow an era where webmistresses and webmasters rule the roost?

Newcastle makes a claim over the work of 'non-academic staff'. Research assistants and research officers are often not regarded as academic staff, although more and more university projects, such as most large ARC grants, CRCs, and other centres employ them to bring scholarly work to fruition. Traditionally academics who worked on such projects involving the employment of one or more research assistants, claimed the ownership of subsequent publications, rarely passing royalties back to either the research assistant — often long gone — or the university. Usually the sums involved were minor, but the new technologies make it more likely that this won't always be the case. 'Non-academic staff' may benefit from a more formalised, comprehensive regime, unless of course the universities reinforce the divide between academic and general staff. This issue is clearly one for the NTEU as well.

Monash University's regulations prescribe certain categories of work over which the University does not claim intellectual property. These include copyright works the subject matter of which is primarily concerned with scholarship, research, artistic expression, creativity, or academic debate, except for:

- a) course material;
- b) a work in respect of which intellectual property owned by the University has been utilised;
- c) a work which is owned in whole or in part by a person other than the originator [...];
- d) a computer programme which is created in association with a patent, worthy discovery or invention; and
- e) a film or sound recording in respect of the creation of which the University has made a specific contribution of funding, resources, facilities or apparatus. (AVCC 1995, 50.)

The Newcastle and Monash rules have been carefully considered and both are more generous than the notorious draft guidelines from the University of Melbourne in 1992. But as academic work moves more thoroughly into the 'digital domain', regulations that appear straightforward have a habit of becoming troublesome. Are moving images generated on a university computer captured by Monash's point (e) above?

To take an example of how complicated these issues may easily become: if a staff member in a university history department has built up a collection of their own photographs of important historical sites, do they hold the copyright to these images? Most academics would expect the answer to be yes. But if the photographs are

used for teaching purposes, do they become 'course material' in the sense claimed by Monash under subsection (a)? Or if the academic has borrowed a university camera to take them, Monash may have a claim to them under subsection (e). If university equipment may have been used to scan and digitise them, subsection (d) may apply. Does it make any difference to a university's case if all this photography has been done on weekend excursions outside the working week? Without a more practical and rigorous definition of what constitutes intellectual property these questions cannot be readily answered. But a collection such as the example here is precisely the kind of material which may be more valuable as a result of new publishing technologies.

The NTEU Model Policy

As a response to these issues, the NTEU has, among other initiatives, developed a model intellectual property policy. The Model Policy includes a 'statement of principles' underlining three important considerations: the general community benefit of the distribution of knowledge and ideas in the public domain; the moral rights of academic authors, and the right of authors to participate in decisions affecting the distribution of their work; and the right of academic authors to an 'equitable share' of the financial returns of commercialised work.

In essence, the Model Policy's system of ownership is divided between different intellectual property rights. Universities claim everything which is not copyright; academic authors claim works which are copyright. Further provisions set out the rights of students, and assign a university's rights to authors if they are not acted upon in certain specified ways. For non-owners, whether academic authors or universities, the Policy also provides for a non-exclusive and irrevocable licence to use the work for 'teaching, research or professional purposes'.

The difficulty with the Model Policy lies in finding an up-to-date rationale for the dichotomy between copyright works and everything else. The status of computer software is an example of the problems that arise. Under the current system, there are good reasons for insisting that universities make a case for the ownership of software, since writing software may be just as 'creative' or 'scholarly' as writing a more traditional literary work. If this is so, software which happens to take the form of a circuit layout (for example, a 'smart card') protected by the Circuits Layouts Act should also be owned by its author. But the Model Policy as it stands would assign such a work to the university. And what about software which is inventive enough to be patentable?

Conclusion: Is higher education developing its own intellectual property regime?

University rules, as we have noted, make general claims to intellectual property ownership and then proceed to exclude certain specified works. They are seeking ways of moving from the old model — a loose regime for copyright and a strong regime for patents — to a new system allowing them to make more definite claims for some copyright works. Copyright and the EL rights of the Circuit Layout Act arise automatically. There is no process of registration. From the point of view of a university, this raises a problem of management: how can intellectual property resources be audited? How do universities know what intellectual property is being produced?

The lack of knowledge universities have about copyright works contrasts with the increasing amount of information they gather for other purposes. At the prompting of government, universities do monitor their output in another way: they maintain records of a variety of forms of published works. While arguments continue over the formulation and organisation of these records, they are steadily becoming more important as ways of certifying academic performance for the purposes of allocating scarce research resources.

Despite the potential of the new technologies, it will remain the case for most academics that the real economic value of most of their work — for example journal articles such as this — does not lie in the exclusive rights our copyright regime protects. Hence the enormous amount of academic scholarship freely circulated by its authors on the Internet and in other ways. The pressure to publish does not lessen the difference between salaried academic authors and those freelance writers who must depend on exploiting their copyright for remuneration. Instead, the economic return on much scholarly work rests more than ever on a claim to the resources allocated on the basis of authorship — conceptualised in this context as research productivity — by a university or other body. For academic authors, these resources include professional promotion and research grants. At the institutional level, universities use published scholarly work to apply for funds allocated by government on the basis of research output. The resources which academics and universities may apply for are different: their claims do not compete with each other.

From this perspective, the DEETYA-initiated research publications database, and the administrative processes which support it, are particularly interesting: they fulfil some of the functions of a system of intellectual property tailored specifically for higher education, while existing alongside both statute law and institutional ethical regimes such as those concerning plagiarism. This database is the first national, standardised attempt to list the publications of Australian academics. It is now used to

calculate a part of the research quantum that the Commonwealth distributes each year, and local variants of are being adapted for similar purposes in most universities.

The DEETYA database constitutes the nearest measure we have of academic intellectual property output, and increasingly includes audiovisual, multimedia and software works, even if these works don't count for much in the funding system at present. Such systems have the potential to become more sophisticated. In the case of Internet-based publishing, they may be developed to monitor specific uses of works, such as citations. The form these systems take will be important for all who work in universities. They may become more important than changes in laws or university statutes.

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