

Economics 101, On-Line Learning and Copyright

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ABSTRACT

This paper looks at ways in which web-based learning technologies can be used (and are being used) to facilitate economic literacy and learning amongst undergraduate (especially first year) students by exposing them to a range of recent newspaper, magazine and other web-only articles about current topics.

The paper goes on to document the ways in which copyright laws and policies practically limit the range of articles that can be made immediately available to undergraduate students through their learning technologies software. It is important to note that the concern of this paper is about access to general writing (eg newspaper op-ed articles) and not to academic journals.

This paper reviews relevant literature relating to education and the impact on modern educational practice of copyright restrictions placed on the use of material on the world-wide-web.

The paper notes that the issue is part of a more general issue of access to knowledge that is - or is widely understood to be - in the public domain.

The paper concludes by suggesting ways in which this kind of public material can be made available to students at the click of a mouse without lecturers and educational institutions facing undue transactions costs, and without compromising publishers' and writers' opportunities to make a profit.

BACKGROUND

On-line learning technologies, predominantly internet-based, play an increasing role in almost all levels of education. While such technologies are an obvious boon to distance education, they are also a potent resource to support on-site "face to face" teaching (Jensen-Lee and Falahey, p.292).

Much of the power and appeal² of internet-based technologies lies in their ability to create world-wide hypertext links³ to any website or document that resides in the global public knowledge commons.

In having this capability of universal access, the internet brings to the fore a deep philosophical problem that presumably reaches back in history to the invention of agriculture: namely, is property (aka land, resources etc.) inherently public, or inherently private?⁴ One writer (Boyle 2003) develops this analogy by describing the recent flurry of intellectual property legislation as "The Second Enclosure Movement", noting that "The first enclosure movement in England ... took land that was formerly held in common and transformed it into private property." He notes, though, that the "commons of the mind ... doesn't get depleted" and cannot be stolen from in the way that a cultivated field could be. The process of copying does not destroy the original.⁵

In the former 'commonist' view, private property is the exception, public property the default. That is, property is "common" unless legitimately appropriated. Further, this commonist view, suggests that the public sphere is integral to capitalism, a thesis argued by Milberg and Heilbroner (1996 p.120) and Rankin (2004).

This presupposition is reversed by the 'anti-commonists'.⁶ They argue that common property leads to tragedy, and that the process of "propertization"⁷ of all commons is both the key to economic efficiency and the only means to avoid degradation of the physical and the creative environments.

This argument, applied to intellectual property, asserts that creativity and authorship will not flourish in an environment in which their fruits can be acquired free of charge. In our context, commonists such as Ronald Bettig (1996) and Smiers (2000) are known as "copyright pessimists" (Boyle 1997, Goldstein 1996 p.11), whereas the anti-commonists who would privatise knowledge⁸ are the "copyright optimists".

There is now a very rich literature on the tragedy of the commons, much of which focuses on the severe limitations of the original concept (Hardin 1968), which was actually an argument for property rights over the human breeding commons, couched in the emergent environmental language of the late 1960s. We now have the "diametrically" opposite "tragedy of the public knowledge commons" (David 2001 p.12), the *Drama of the Commons* (Ostrom ed. 2002), the "tragedy of the anticommons" (Heller 1998, Oxford Report 2004) and the "comedy of the commons" (Rose 1986), which, to avoid sounding funny, and to nearly complete the set, might be called the "anti-tragedy of the commons".⁹

There are pundits today who believe that intellectual property will be *the* issue of the twenty-first century. Some see intellectual property as a modern-age goldmine; others as a global public good. If the pundits are right, the great ideological clash of the century may prove to be a stand-off between the commonists and the anti-commonists.¹⁰ Unlike the big debates of the 20th century, however, this one does not fit easily into the left-right axis of disagreement. Perhaps it fits better into the dichotomies of the eighteenth century of which Adam Smith, known for his strong opposition to the prevailing "mercantile system" in Europe, was one of the most important participants.¹¹ Could we be dealing today with the New Mercantilism (government protection of big business and its "freedom to" control the exchange of information as a means to extract economic rent)¹²¹³ and a parallel to the rise of classical liberalism (*laissez-faire*) with its initial emphasis on "freedom from" intrusive governments and their corrupt relationships with rent-seeking business monopolies. In that

century, *laissez-faire* was left-wing. The "extraction" of rent (David) is the name of the big business game in the twenty-first century, as it was in the eighteenth and probably every other century.

Its origins as a military communications network for the Pentagon notwithstanding, the internet, which became a link between the leading universities of the world (Phelps and Lipscombe 1996), has represented a *public* information conduit. The World Wide Web is the global public space - a digital commons - that is fully interconnected through the internet. Like physical space, however, "cyberspace" is dotted, not inappropriately, with many private (password-protected) sub-spaces.

An important class of private subspace is the educational intranet; a space shared by students and their instructors and, in some cases, invited guests. It gives students directed access to the public world-wide web, plus to other exclusive subspaces for which permissions have been granted through a licensing arrangement with the educational institution. Problems arise when

- the mere act of linking to a news item in the public web may not be permitted under national or international copyright law.
- news items are removed from the public web after a few days and into a pay-per-view 'peepshow' format and/or a user-pays database.
- items simply cannot be accessed in a form that is palatable to students, who, having paid their course fees, not unreasonably expect to get a clean copy with a single mouse-click.

I have a particular interest, not only because I teach "Economics 101" (called *Economic Principles* at Unitec) but also because I write op-ed articles, mainly for Auckland's daily newspaper, the *New Zealand Herald*. Thus I am a producer as well as a consumer of copyrighted material.

PURPOSE of COPYRIGHT

Copyright, the "proptertization" of the creations of human minds, represents a single means to achieve dual ends: to establish authorship; and, to profit from ownership. The interests of authors have in many cases diverged from those of the corporate publishers or recorders of their works. Modern intellectual property law is principally a statement of publishers' rather than authors' rights. Authors want their work to be disseminated as widely as possible, to create an audience and a reputation. Profit, sought by commercial publishers but rarely the prime motive of authors and artists, is not of itself a driver of creativity. The modus operandus of artists and authors is to draw from the public domain, and in return, to add their works to the public domain.

Profit is the modus operandus of the commercial publishers of creative and intellectual works. Unlike authors, they have an incentive to restrict user access to such works in order, as any rational monopoly or cartel will want to do, to force up the price of those works. Economists call this kind of behaviour "rent-seeking". Software, a 'virtual public-good' which includes all forms of art and writing, can now be digitally copied at virtually zero-cost. That means there is a huge new opportunity for economic rent seeking. One group of such rent-seekers have been labelled "pirates", and the existence of piracy is used to justify tight-copyright. I am not aware of any significant piracy problems in the newspaper industry.

The "public good" problem is one of the forms of market failure that economics' teachers teach. "While copyright law is designed to remedy the market failure of the "public good", it causes another type of a market failure by creating a monopoly.... Thus, a monopoly granted under copyright law should be limited to the scope necessary to provide incentives to create and should minimize restrictions on access to works" (Elkin-Koren). Public goods are not themselves a form of

market failure. Rather, it is the absence (or paucity) of public goods that constitutes market failure. Wholesale depublicisation can not be a solution to a problem of too few public goods.

Economics 101 shows that the theoretical social optimum requires the simultaneous achievement of the conflicting assumptions of perfect knowledge¹⁴ (that is, knowledge is required to be a free public good) and the absence of public goods. Through the works of Coase (1960) and others,¹⁵ it also shows that third-party costs can in principle be eliminated if all property is subject to unambiguous private (ie exclusive) property rights, so long as transaction costs are zero. Where transaction costs are high and are themselves a result of privatisation, the better policy is to reduce transaction costs than to further privatise.

While it is universally agreed that copyright does create restrictions on access, the argument that a copy right has an upside is much less clear-cut. Copyright optimists argue that creative activity will wither in the absence of copyright protection. The whole body of Schumpeterian economic thought (beginning with Schumpeter 1912), from which endogenous growth theory (eg Romer 1994) and its emphasis on software (Romer 1995)¹⁶ has its antecedents, makes an important distinction between "invention" (the creative process) and innovation (the capitalist exploitation of inventions). Invention, as other arts, can be seen as, more than anything else, a process of the enrichment of the public domain built upon previous enrichments (Rankin 1996, Smiers 2000).

The creation of works (as opposed to their exploitation) is more of a gift than a sale. I do not believe that many writers believe that they should receive a royalty every time their work is copied in order to facilitate its use. While I have been paid a fee for many of my articles, I have yet to receive a royalty for copies made.¹⁷ When I write an op-ed, I do not do so in order to be paid; rather I do so to add my two-pennies worth to the public domain of ideas.

When drafting laws to protect authorship and invention, "the chance that a law will achieve its intended purpose improves when it is grounded in an accurate understanding of the phenomena it will regulate" (Samuelson 1997). Copyright law today, I believe, fundamentally misrepresents the predominantly public context of the creative process. A law may, however, intentionally or unintentionally, serve other agendas. I have already suggested that copyright serves a new mercantilist rent-seeking agenda. If that is so, the argument that copyright fosters creativity and authorship may, while useful, be incidental to its true purpose.

USE IN TEACHING

At Auckland's UNITEC Institute of Technology, we use a proprietary web-based software system called *Blackboard*. It serves as a repository for course materials, and a means of providing formative assessment, using feedback as a form of supplementary instruction. Most importantly for me, it links easily, through hypertext links, to both the public world of knowledge and, less easily, to material on exclusive databases for which Unitec has paid the required license fees.

Unitec does not get the cream of Auckland's students. Economic Principles is a compulsory subject for first year Business and Construction students, many of whom are not particularly academic and who are more concerned with passing exams via the easiest route than with the process of academic enquiry. Further, they are not generally in the habit of reading newspapers or following news stories. Teaching such students has its own rewards and frustrations.

Certainly, they learn well by examples, and, in many cases become very interested when stories that are interesting to them are placed in front of them through what for them is a user-friendly medium.

That interest, once held, can itself open up new learning horizons. Topics like Economics that at first seem to be dry and boring suddenly become interesting. Abstract reasoning - economic *principles* - starts to become relevant to students' understanding of the issues that face them in their world. My use of Blackboard is broadly consistent with the principles recommended by Jensen-Lee and Falahey (1998), based on their evaluation of a pilot site used by their sociology class in support of (rather than as an alternative to) conventional teaching.

Most of our students are very comfortable with the internet, and the point and click principles that make texts so much more accessible than in the past. Newspaper archives always used to be free to access. Lecturers would take their own clippings of stories that might prove to be useful in a classroom situation, and, when appropriate, photocopy them to distribute to their students. This was always quite acceptable under the "fair use" principles of copyright law.

Today we can project articles onto a screen in the lecture room, but that on its own is no substitute for the students' being able to read in their own time. Hypertext links are not copies; they are an alternative to copies. The link effectively takes the student to the original; or, if a newspaper story, to one of two copies made by the newspaper which published the story. (The second copy is the "printable" version, which tends to be clean of advertising and navigation aids.) As teachers, we need some certainty that the article will still be there when we need our students to use it. Otherwise we have little choice but to make a copy, just in case we are confronted with a dead link when we need to refer back to that original. A good story remains a good story when it is old, and, so long as it continues to serve its pedagogical purpose, should be able to be reused, just by switching on that bit of the course intranet's archive. Well chosen historical articles help to broaden students' minds while being fun for students. For example, it is easy to copy, scan and upload articles from the 1970s, when prices were just 10% of what they are today.

Software packages such as Blackboard tend to use browser frames, with various navigation aids across the top and down the left hand side of the computer screen. Further, most news websites publish their stories in ways that fit neatly into such frames; especially the "printer friendly" versions. These versions contain sufficient information to fully identify the source of the story; ie they contain more information identifying the owner of the story than the old photocopied clippings ever did.

Students like a clean story (ie free of advertising and other distracting paraphernalia) that fits neatly into their purpose-designed educational software, and that fits into older lower resolution computer monitors. They cannot easily be misled into believing that the story belongs to any news organisation other than the one it does belong to. I can see no reason why anyone would want to mislead students as to the authorship of a newspaper article. Newspapers encourage linking (instead of photocopying) by minimising the risks and other downsides of linking. In my case, that means placing printer-friendly versions into the user-friendly frames that Blackboard and Blackboard-like 'learning technologies' are designed to use.

NEWS SOURCES

All the major (and most of the minor) newspapers in New Zealand are (like the banks) Australian owned: by Fairfax or by APN.¹⁸ The largest conglomerate in New Zealand, the Fairfax group, was purchased from NewsCorp¹⁹ in July 2003. I am fortunate, living in Auckland, that my major newspaper source, the *New Zealand Herald* is neither owned by Fairfax nor by NewsCorp. Rather, it is the flagship of APN, 40 percent of which is owned by Independent News Media, with its head office in Ireland.²⁰

The *New Zealand Herald* maintains an excellent web portal that is almost certainly the most accessed news site in New Zealand. It allows its articles to grow into an archive; no labour costs in relocating content, and maximum convenience to educators like me who use the on-line versions of their stories. Url addresses of material that I made three years ago remain valid. Further, the *Herald* has granted me permission to make its material available to my students with no significant conditions. It has, also, a growing number of web "feature" topics, which mean that, with a single simple Blackboard link to that feature, students can follow a story as it evolves.

The main business concern of the *Herald* on-line (www.nzherald.co.nz) is to maximise the exposure of on-line readers to its advertisers. They seem to understand that pay-per-view access will not do that, and that any reader who wants to follow a story will get a much more accessible product than from the pay-per-view Fairfax site ("stuff": www.stuff.co.nz). Linking to "stuff" is difficult. When I asked for permission to link from the educational intranet that I manage, the response, which took three days by return email, imposed conditions²¹ which simply didn't make it a worthwhile use of my or my students' time. The "stuff" archive has all the characteristics of an anticommon that is tragically underutilised.

Many more readers, including educators, will browse a free²² site like the *Herald's*, and will only go to sites with user-pays archives for specific material. There is a substitution-effect at work here, with convenience rather than price the key driver. Certainly, I can not expect my students, who've paid their fees and are easily deterred from any tasks over and above what they perceive is necessary to pass their course, to pay to view an article that I link to or otherwise recommend. To make matters worse, even the pay-per-view stories are removed after a short period, such as one year (eg *The Age*).

More useful for education is the more formal archiving process. Australia has two rival on-line newspaper archives, Newstore (Fairfax) and Newstext (News Corp). In New Zealand, Newstext does fortunately include both the Fairfax and the APN newspapers, so only one newspaper license has to be bought. Because major tertiary education providers' libraries are more or less obliged to purchase licences for these databases, the content is able to be made available to students on-line via a process of "deep-linking".

Database licence costs accumulate, and can soon become prohibitive to small private or community education providers. And, of course, it is impossible to deep-link from non-licensed websites (ie personal or small organisation sites), many of which make an extremely useful contribution to the public debate of economic and other issues.

Personal and small organisation web-users are extremely "price-elastic" in their use of web material. There is too many free stories out there, whether from a traditional newspaper like the *New Zealand Herald*, major portals like XTRA (www.xtramsn.co.nz), or new internet-only 'newspapers' like *Scoop* (www.scoop.co.nz) with liberal copyright philosophies. Even if all these free news sources were shut down, such users would be reluctant to pay for old news stories.

On the other hand, certain users of information have a markedly inelastic demand for source material. The most obvious such users are libraries (especially educational institutions' libraries),²³ Government Ministries, and the public relations industry. They will pay for licences for the necessary news archives, because they have to as a part of their service to their clients. With marginal costs at near-zero for the suppliers of old news, the copyright holders of news can see an opportunity to make large profits (ie "economic rents") by charging, on a per copy basis, whatever high price this market will bear. For other users, the third-parties, these charges become a form of 'collateral damage'.

There is a clear negative externality problem when one group of corporates uses a cultural 'commodity' to extract rents from other organisations. The market failure doesn't end there. Many of the organisations who pay high prices for access to copyrighted stories are publicly owned. Taxpayers and fee-paying students become, unwittingly, the first-party victims of the monopolisation of stories. With a liberal student-loan system in place, tertiary education has itself become price inelastic; hence ripe for exploitation, not from the authors of our collected stories, but from what in New Zealand is really a foreign-owned print media duopoly.

For me, awareness of the copyright issue came when I was engaged to speak to a Unitec seminar about my use of content in Blackboard. The previous speaker, from the Library, had just informed the group about the (tightening) copyright restrictions to linking to news stories from Blackboard. I had to shorten my presentation because I could not be absolutely sure that all my links were lawful. The idea that disseminating news stories to students via web-based media would involve more restrictive permissions than the familiar fair-use restrictions pertaining to photocopies had never occurred to me.

In order to make copyright permissions technologically neutral, the new New Zealand situation, applying from 1 October 2003 when Copyright Licensing Ltd (www.copyright.co.nz) lost the right to cover newspapers when the "newspaper barons" set up their own licence, making it illegal to make class handouts of news stories. Only one copy could be made, which could be either projected to students, or handed from student to student. The new scheme is proving particularly problematic because of the high fees currently charged, described by one copyright expert as "exorbitant".²⁴

The tightening of the copyright screws re newspaper articles in New Zealand came in 2002 when Newspaper Publishers Association (www.npa.co.nz) "launched its own copyright agency", the Print Media Copyright Agency (Mediawatch 2002), which seems to be following two different models:

CEDRICK ALLEN (chairman of Porter Novelli and former president of the Public Relations institute): In Australia, there are no secondary charges but the charges to the press clipping bureaus and to the public relations agency are therefore much higher than they are here. And in the United Kingdom they have a system of secondary charges, but the initial charges, the initial copyright charges to the press clippings bureau is very much lower than it is here. So what they're doing is saying we're going to impose a really high charge to the press clipping bureau - which in itself would be acceptable - but we are also going to put on a really high charge for secondary users. They're just double-dipping, and seems to me a very complex way of attempting to gain more money.

There are a number of issues arising:

- Who should receive the economic rents that arise from the copying of news stories at zero marginal cost: authors, publishers, users, or intellectual property lawyers?
- Should news stories be free, either to all users or to exceptional users (such as students) who are in no position to profit from their use of such stories?²⁵
- If they are not free, how should they be priced?
- How great are the transaction or compliance costs associated with the privatisation of news archives, especially with respect to users such as myself, a teacher of Economic Principles?
- What are the opportunity costs of not placing first-choice material on my students' intranet.

On economic rent. A consumer of copyrighted material who profits (in a monetary or a non-monetary sense) from the free use of a good that has a zero marginal cost is labelled as a "pirate" or a "free-rider". Are producers who sell copies created at zero marginal cost at the price that their customers with the deepest pockets will bear any less guilty of piracy? After all, both parties are squabbling over a "free lunch".²⁶ Under a liberal system of governance, the government is supposed to take the side of the consumer, in accordance with both the normative principles of economic freedom and the positive principle of economic efficiency (maximisation of consumer welfare). Under a mercantilist order, the government sides with the influential producers. If the

government adopts a middle position, the absence of clear property rights can be expected to favour the "newspaper barons" lawyers. Parker (2002) says we need a popular "rhetoric of the commons" that will oppose and expose the democratically flawed processes that create intellectual property laws that favour anyone other than the public.

On pricing. If we consider the best strategy from the point of view of a monopoly supplier, there should be two prices, one for inelastic institutional users, and a much lower price to elastic independent users. This is what we teach in *Economic Principles*, in the section on price elasticity. In practice though the casual demand is negligible, given the availability of free substitutes. Hence the single high price, given the near zero revenues from price elastic news consumers.

On transaction cost and opportunity cost. Users such as myself will simply not bother using copyrighted material to facilitate the education of our students if it's just too inconvenient. Instead we move to "second best" - free substitutes to the copyrighted news archives - or to "third best", we just don't bother with that particular story. Thus the information anticommons will be neglected, an important newly recognised form of market failure.

New Zealand does not yet have its version of the American 1998 Digital Millennium Copyright Act (DMCA). It will come probably next year, following the publication of a working paper and a follow-up position paper (MED 2001, 2002) and a Cabinet Paper (MED 2003). Indications are that the tightening enforcement and interpretation of the 1994 Act will be reflected in the new Bill, given that New Zealand is a proactive member of multilateral institutions in general and the WTO in particular. New Zealand law will fall into line with the WIPO Treaty and TRIPS agreements being negotiated under the auspices of the WTO.

Submissions of particular interest for this article are those by the New Zealand Vice Chancellors Committee (which oversees the governance of universities), and the diametrically opposed positions of two large American disputants (Mediawatch 2001): the Electronic Frontier Foundation (2001) and Microsoft. The NZVCC submission (MED 2004) strongly "recommends that the Copyright Act be amended to permit educational institutions to copy materials into electronic format, in line with the present provisions of the Act relating to copying for educational purposes. The NZVCC also recommends that the universities be afforded the right to provide access to digitised materials for their users via an intranet server that is accessible only to authenticated students and staff of the university, both on-site and externally".

Copyright is a difficult topic to research because of its cross-discipline nature. There are four principal bodies of literature, relating to the following disciplines: education, law, communications and economics. The more substantial critical literatures about copyright in general are from law and communications. Neoclassical economics as a discipline remains too firmly wedded to the private property assumption - and too uncomfortable with the public domain concept - to establish a substantial critical literature. The emerging economic attack is coming from historical rather than mainstream economics. Even the Marxian economic critique of copyright is underdone (Boyle 1997); a surprise given its obvious "surplus value" line of attack. Newspaper and other "barons" who stand between creators and consumers, can be said to appropriate surplus-value by limiting the exposure of the works of those who actually create news stories and works of art.

I have found little empirical research on the extent that news corporations do expand their profits from their proprietization of their archives. In other areas - such as digital music - a number of recent news stories are reporting research (eg *New Scientist* 2004) that suggests recording companies may actually increase their sales by allowing free music downloads or sharing. Evidently, the users are "sampling" rather than "pirating". A similar analogy occurs when people read friends' magazines

and newspapers rather than buying their own. A process is underway through which markets are being enlarged as more people get to know more about what they like.

CONCLUSION

Copyright, as it is evolving internationally, is becoming more restrictive. As technology is rapidly creating increased means for the public to freely access the information commons, copyright laws are enclosing the digital information commons.

On balance so far, the new freedoms that the Internet in particular has given us outweigh the new exclusions that the intellectual property industry has brought about. Yet those freedoms are tempered by the legal grey zones that have been created, leaving users who have no plans to exploit the works of others confused.

Free and convenient access to news stories pertinent to the study of economics is of course only a small part of the wider problem. Many of our students will have copied or downloaded music or software in uncaring (and often unknowing) contravention of intellectual property laws that are justified on the grounds that creators will only be creative if they can profit from each sale of their creations.

The most common public response to over-embracing copyright laws will be to ignore them. It's very bad public relations for large corporates to be seen to be bullying any ordinary user who is clearly not a "pirate". Pirates profit from the appropriation and disposal of stolen property. Users of

news archives do not. Students who expect educational content to be easily accessible to them via web-based technology are not smugglers.

Academic users are employees of an educational institution. Such institutions are particularly concerned to be seen to be law-abiding. Academic users are generally too time-poor to chase after individual items of material that are, in themselves, not worth the time spent on securing their access. While always teaching and writing to the best of their abilities, students and teachers would both be better off if the economic ideal of "perfect [public] knowledge" was more closely approximated to. That ideal can never be even close to being achieved so long as knowledge is appropriated for the private enrichment of a small class of knowledge proprietors.

Nobody is worse off if I allow my students to access printable news stories using purpose-designed educational software that has the potential to make economics more enjoyable and relevant. If news content on the web is clearly labelled by author and publisher, and can be regarded as permanent, then linking *replaces* copying, and the incentives to reproduce material in ways that do not disclose authorship and ownership are minimised. Newspapers are more likely to make additional (marginal) revenues by allowing me to freely share their stories with my students, than by making it not worth my while to use their materials.

News organisations profit from selling newspapers which readers want to read and which advertisers want to advertise in. News stories are a part of the information commons; they are not private bargaining chips through which an oligopolist industry extracts rents from educational and other institutions.

Copyright is important as a means of establishing authorship, and preventing misrepresentation of published writing. Copyright should not be used to prevent the growth of the World Wide Web as a

global public information resource which, through permanent hypertext links, has the potential to make copying redundant. Copyright should not be used to expunge the discussion of news stories from the classroom. Copyright should not be allowed to create a new layer of costs on the users of knowledge. After all, knowledge is our most important resource. The monopolisation of knowledge could put an end to modern economic growth. All businesses have a right to make a fair profit; they do not have a right to extract economic rents by fencing the public domain. That would be both bad law and bad economics.

NOTES

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² "The notion of a network appeals to those who are wary of hierarchical or linear models [of writing].... It has a plurality of connections that increase the possible interactions between the components of the network. There is no central executive authority that oversees the system'. This may explain why certain hypertext theorists are so enamoured (perhaps naively) of what they believe technology promises: namely, a democratisation of access to information, knowledge and the academy." (Snyder 1996, with embedded quote from Pagels 1989)

³ Academic referencing and footnoting can be understood as proto-hypertext.

⁴ In New Zealand, we are in the midst of a huge public debate about access to and ownership of our foreshores and seabeds. The words "public domain" were controversially dropped from the proposed legislation.

⁵ Appropriation by purchase of domain names that rightfully belong to another party is, on the other hand, a loss to that rightful owner, although it is not technically theft.

⁶ The first person I know of to claim the "anti-commonist" label was Hardin (1968).

⁷ Term favoured by Bollier (2002b) and the authors of the 2004 "Oxford Report"

⁸ Sowerby (1999) and Rankin (1999) presented the respective cases for a private and a public "knowledge economy" in the same issue of the *New Zealand Herald*.

⁹ All we need now is an "anti-tragedy of the anticommons".

¹⁰ In New Zealand, Mediawatch (2001) reports that two of the key public submissions in response to the Government's working paper on proposals to revise the 1994 Copyright Act are from the United States' commonist organisation EFF (www.eff.org) and the anti-commonist Microsoft Inc (see Microsoft 2003 for more recent submission). We might note that Microsoft, automatically "corrected" my spelling when I typed "commonist".

¹¹ Boyle (2003) notes Thomas Jefferson and James Maddison in addition to Adam Smith.

¹² This is implicit in Boyle's (1997) statement: "In the United States copyright has been described as the most technically perfect example of 'industry capture' of the legislative process."

¹³ Some government material is subject to substantial copyright constraints, for no obvious purpose. Presumably it has something to do with tight copyright laws representing a form of partnership between the government and the big business sectors. Example is www.acenet.edu/legal.cfm, the copyright statement associated with American Council on Education (2000).

¹⁴ To knowledge we can add good institutions, including the legal and political apparatus that, among other things, upholds the sanctity of private property.

¹⁵ Known generally as the "Coase Theorem"

¹⁶ "Software" comes in digital and non-digital forms. Thus, the most valuable part of a book or newspaper article is its software; ie the words, not the paper.

¹⁷ I even spotted one article (Rankin 2002b) for sale, by the publisher, on the Internet.

¹⁸ www.fairfaxnz.co.nz, owners of, among others, the *Sydney Morning Herald* and *The Age*; www.apn.com.au

¹⁹ www.newscorp.com/operations/newspapers.html, owners of, among others, the *Australian Herald* and the *Adelaide Advertiser*

²⁰ When the present mayor of Auckland, John Banks, did not like a story in the *Herald*, he often resorted to calling it the "Irish-owned *Herald*". Let me hasten to add that 99.99% of New Zealanders are in no way anti-Irish. In April 2003 the *New Zealand Herald* was also on occasions dubbed the "*Baghdad Herald*", mainly on account of its use of copy from

the even more "Irish-owned" British daily, the *Independent*, along with an editorial line that supported the independent stance of the centre-left New Zealand Government re the war in Iraq.

²¹ Linking to menus rather than versions that students can print, no frames, no expectation that links will remain live. From my experience, most web-based educational software is designed to use frames because they are user-friendly for most students.

²² Advertiser-funded, but not intrusively so.

²³ Hence the increased interest in enforcing copyright on educational users. An example is the 1997 Canadian Copyright Act (Chartrand)

²⁴ Both terms "newspaper barons" and "exorbitant" from of Unitec's senior librarians and library copyright expert.

²⁵ In the United States (ALA 2002), exemptions in the 2002 TEACH Act were made only to "non-profit" educational institutions", thereby creating two different rules for institutions teaching, say, business degrees. In just one suburb of Auckland, Unitec would be classed as "non-profit" by US criteria, whereas the competition down the road (Auckland Institute of Studies) would not.

²⁶ Mokyr (1990) notes that all economic growth arising from technological revolutions can be labelled a "free lunch". So of course can "God's gifts", otherwise known as natural resources (Rankin 2004).

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