



Office of Regulation Review

An economic analysis of copyright reform

A submission to the
Copyright Law Review Committee's
review of the *Copyright Act* (Cth) 1968

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PREFACE

On 3 February 1995 the Minister for Justice, the Hon. Duncan Kerr MP, announced a major review of the Copyright Act (Cth) 1968. The review aims to simplify the Act and enable it to ‘absorb technological change’ (Kerr 1995a). The body responsible for the review, the Copyright Law Review Committee (CLRC), has sought public comment.

The Office of Regulation Review (ORR) — within the Industry Commission — provides advice on the Commonwealth Government’s regulation review policy: it reviews new regulation; and monitors progress and participates in programs for the reform of existing regulations. The ORR also advises Cabinet on regulatory proposals affecting business, liaises with departments and agencies in the development of regulation, and comments publicly on regulatory issues.

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ABBREVIATIONS

ABC.....	Australian Broadcasting Corporation
ABS	Australian Bureau of Statistics
ACA	Australian Consumers' Association
BSAA	Business Software Association of Australia
CCG.....	Copyright Convergence Group
CLRC	Copyright Law Review Committee
CSIRO	Commonwealth Scientific and Industrial Research Organisation
GATT	General Agreement on Tariffs and Trade
IC.....	Industry Commission
IPLA	Intellectual Property Licensing Agency
ORR.....	Office of Regulation Review
OTA.....	Office of Technology Assessment
NII	National Information Infrastructure
PSA	Prices Surveillance Authority
TRIPS	Agreement of Trade-Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods

OVERVIEW

A modern economy relies upon the legal recognition of property rights to facilitate production, specialisation and trade. Copyright, created by statute, is one such form of property. Its purpose is to protect the expression of an idea (when in a material form) from unauthorised copying.

This grant of market power has two conflicting consequences:

- it provides incentives for the production of copyrightable material by facilitating its commercial exploitation; and
- it restricts the dissemination of those ideas.

The key to copyright reform is setting the correct level of market power so that the interests of the producers and those of the consumers are jointly maximised.

Rapid technological change is putting pressure on copyright to adapt

Copyright forms a cornerstone of the developing ‘information age’. As it is primarily concerned with the creation, use and flow of information and information-based products and services, copyright is the area of intellectual property that is most affected by advances in communication and information technologies (OTA 1986, p. 25).

In recent years the *Copyright Act* (Cth) 1968 has been regularly reviewed and amended to address shortcomings exposed by technological developments and to take account of industry’s concerns. This has left the perception that the *Act* has developed in a piecemeal manner and has focused on the minutiae rather than the big picture.

The underlying criticism of the *Copyright Act*, as it now stands, is that it is too focused on specific technologies. That is, copyright protects the expression of ideas when that expression is in particular specified forms. Furthermore, the rights that copyright protection entails similarly also depend upon the form of the expression. This has created an environment where protection may be denied if the expression does not qualify under any of the listed categories — an all too frequent occurrence when new forms of expression (such as multimedia works and other forms of digital expression) are continually emerging. It is well recognised that the traditional approach to copyright is under pressure from new technology-based forms of expression.

Indeed, it is well acknowledged that the *Copyright Act* is unable to protect some new forms of intellectual works (particularly in the digital realm).

Box 1 — *The Economist's* view of copyright problems

‘Copyright law is having particular trouble with adjusting to the new age. It has not been able to come to terms with a unique property of digital information: the ease of making an infinite number of perfect copies, essentially for free. Copy an article, casually post it to a newsgroup, and at a keystroke you may have robbed a company of thousands of sales. For publishers who still see a threat in the photocopier, the Internet looks like the end of the world.

The problem with copyright law is that it is unable to distinguish between abuse and ordinary use. On the Internet, any number of normal activities may inadvertently break the law. The simple act of reading a document on-line often makes a copy of it in a user’s hard disk. Internet providers often keep copies of popular [World Wide] Web sites on their local servers so their subscribers do not jam their long-distance lines. Then there are innumerable deliberate, but essentially innocent violations without a commercial motive: copying an interesting electronic article and e-mailing it to a friend, or putting it on a company LAN.

In the end copyright laws must change to reflect this new digital domain. Publishers need some assurance that their work will not be pirated to the point where they have nothing left to sell, yet a way must be found to avoid criminalising normal use.’

(*The Economist* 1995b, p. 18 Survey).

Proposals for change

The Government has responded to shortcomings of copyright protection by indicating that copyright should be updated to take into account new technologies. This is the focus of the present review by the Copyright Law Review Committee (CLRC).

The Terms of Reference of the CLRC — which were issued by the Minister for Justice — require analysis of ways to strengthen copyright protection. This includes an assessment of the feasibility of simultaneously broadening both the subject matter protected by copyright and the rights attaching to that subject matter. Doing so would mean that the statutory grant of copyright protection would encompass many presently unprotected works. Furthermore, it is likely to cover many forms of expression that have not yet been conceived. Thus, if copyright simplification were to proceed in this way, it would involve a considerable expansion in the scope of copyright.

The ORR's approach to copyright reform

The Office of Regulation Review (ORR) contends that the onus is on those advocating any expansion of copyright protection — or indeed provision of other forms of assistance designed to increase production — to show on a case-by-case basis that:

- there is likely to be an under-production of intellectual works, caused by a lack of incentives for authors and makers;¹
- the industry is unable to increase protection through non-proprietary means;
- a change in copyright law would be expected to substantially increase production in the long term;
- the benefits of increased production would outweigh the costs to consumers; and
- the best way to increase production would be to increase protection. In some cases it could be better to address under production through other means — such as a change in budgetary assistance — or a mix of increased protection and other means.

To date, these points do not seem to have been properly addressed in the debate for change.

The ORR recognises that, in practice, the various impacts on production, producers and consumers of proposed changes in protection (and/or assistance) may not be amenable to quantitative measurement. Nevertheless, a listing of a qualitative nature — if systematic and comprehensive — may be sufficient to gain a good appreciation of the impacts of proposed changes.

Economic theory suggests that the use of any approach with potentially broad application may not be an appropriate manner in which to frame copyright law. As copyright law relies on providing incentives to authors and publishers, that protection should be well targeted. While some form of simplification is required for the sake of certainty and administrative practicability, copyright protection should be focussed on clearly defined categories of works.

Indeed, while a broad approach to copyright reform is appealing for its simplicity, such an approach would have two different consequences:

- some forms of intellectual property would not be any better protected because the rights attaching to those works are poorly enforced; and
- any expansion of copyright protection means that many previously unprotected works, and even forms of expression not yet contemplated, would be protected.

¹ For simplicity and consistency, the ORR makes a distinction between an 'author' who has copyright in 'works' and a 'maker' or 'producer' who has copyright in 'subject matter other than works' (see Chapter 2 for more detailed discussion).

The result is that some forms of intellectual endeavour would remain under-protected while others would be over-protected.

If there is concern about copyright's lack of protection, one method to deter infringement may be to increase the penalties attaching to infringement. However, there are dangers in dramatic increases in *civil* penalties because they are unlikely to result in an optimal level of deterrence. The better approach would be to complement existing civil penalties with an education campaign in order to create an improved environment for compliance. The ORR also suggests that some effort could be made to increase the deterrent effect of *criminal* sanctions for those found guilty of wilful copyright infringement for commercial gain.

While the ORR supports the aim of simplifying the *Copyright Act*, justification for its extension rests upon a proper economic analysis of the incentives facing authors.

Strengthening copyright can only be justified if there are insufficient incentives for authors and producers

The important economic role of copyright is to overcome the problem of 'free-riding' and to balance the interests of producers and consumers by encouraging an appropriate level of production of intellectual works. By suggesting that copyright protection be increased, the proponents of change are suggesting that there are insufficient incentives for the production of new intellectual works.

Rarely is there clear proof of this. Indeed, digital works are part of a booming industry — new magazines and newspapers appear almost daily on the Internet, and multimedia works are flooding the market. Despite the relative ease with which someone can copy these works, and the difficulty of enforcing the piecemeal copyright protection, the works continue to be produced.

Thus, the essential problem with the proposed broad-brush approach to copyright protection is that it is insufficiently targeted. That is, broadening the scope of copyright protection increases returns on works with copyrights that are more easily enforceable — tangible intellectual works or works that have centralised and clear distribution channels — but does little for the return on works where copyright enforcement is difficult. This widens the gulf between enforceable and unenforceable copyright protection.

The costs of copyright extension appear to outweigh the benefits

The ORR considers that a general extension of copyright protection, under the proposed simplification, would have few (if any) tangible benefits and holds the risk of substantial costs:

- it represents an unjustifiable redirection of funds (ie. economic rents) from Australian consumers and secondary producers without commensurate benefits;
- it would be likely to cause an increase in net royalty flows to overseas authors and publishers;
- there is no evidence that it would provide a significant incentive to produce works not already being produced;
- for many authors and distributors, the proposed rights would be unenforceable in a digital realm; and
- the limits of the increased protection are not clear.

If required, how should the CLRC implement increased copyright protection?

If it can be demonstrated to the CLRC that there is a real need to increase copyright protection for some specific forms of intellectual endeavour, then increased copyright protection should be specifically targeted at those forms of intellectual endeavour. That is, copyright protection should be increased in an incremental manner and should continue to be focussed on specific forms of works with specific attendant rights.

In putting forward such an incremental approach, the ORR acknowledges that the *Copyright Act* is inadequate to deal with many new forms of expression and may need reform. However, wholesale abandonment of the notion of protecting tightly defined forms of intellectual works is likely only to increase uncertainty and over-protect certain forms of intellectual property at the expense of users and consumers.

Authors are already seeking increased protection through non-proprietary means

The quest for a financial return has seen authors and distributors seek to protect their intellectual investments through means other than copyright. While this submission sets out some market imperfections and technological and contractual means by which intellectual works are being protected (Chapter 6), the evolving

nature of such protection makes it impossible to do full justice to the scope of non-proprietary based forms of protection:

It may be difficult ... to imagine how entrepreneurs might create technological or contractual “fences” around their works, but create them they do. As in many other cases, the economic incentives facing actual market participants offer greater inducements to creativity than do the idle curiosity or speculation of the academics who study them (Palmer 1989, p. 303).

Just as legislators have been prepared to develop new forms of protection to cope with specific new technologies,² the ORR recommends that, if insufficient incentives exist, works in the digital realm should be protected by new non-proprietary means.

Summing up

While acknowledging the inherent attractiveness of a simplification program, the ORR is not convinced that any resulting extension of copyright protection — the extension of rights attaching to copyright, and the range of works protected — is necessary. Until the need for increased protection is demonstrated and the likely benefits of such an increase are shown to outweigh the costs, simplification of the *Copyright Act* should not include its extension.

Indeed, given the existence of other forms of assistance to this sector — which were increased recently as part of the Government’s ‘Creative Nation’ statement — any ‘across the board’ extension of copyright protection should be accompanied by a review of alternative assistance arrangements.

Where copyright extension is found to be necessary, that increased protection should be targeted by continuing to focus on specific forms of expression.

1 INTRODUCTION

Copyright reform has traditionally been reactive rather than proactive — protecting expressions embodied in specific technologies when they develop. This has always meant that copyright lags behind technological development.

With the advent of a new technology — digital communication — public bodies from various countries are now looking at reforming their copyright system (NII 1994), or have recommended that such inquiries take place (Bangeman 1994,

² *Circuit Layouts Act* (Cth) 1989 and *Plant Variety Act* (Cth) 1987.

Spectrum 1994). Such bodies aim to bring copyright up to date with new digital technologies.

The Minister of Justice has asked that the Copyright Law Review Committee (CLRC) carry out a review of the *Copyright Act* (Cth) 1968, with the aim of simplifying it and making it more technologically neutral (Kerr 1995a). This review is to consider and build upon issues raised in the Copyright Convergence Group's (CCG) report entitled *Highways to Change* (CCG 1994).

There is, however, a major difference between the CLRC's present review and recent past reviews of the *Copyright Act*. The present review offers a chance for a fundamental and broad revision of the subjects covered by copyright and the rights attaching to the grant of copyright. This revision is to be in line with the Government's commitment to make the *Act* technologically neutral.

While having attractions, a fundamental review of copyright law brings with it new problems. Chief among these is setting out a coherent set of regulatory objectives in the face of political involvement by the different interests involved — authors, makers, publishers, distributors and consumers.

Copyright-related industries are therefore important not only to those directly involved in those industries, but also to Australia as a whole. Indeed, copyright-related international trade is growing fast, increasing in recent years to an estimated \$740 billion, about 20 per cent of world trade (Dwyer 1995).³ The Australian Copyright Council has calculated that copyright-related industries in 1992-93 contributed 2.9 percent to the total economy (Guldberg 1994, p. 10).⁴ The interests of consumers in Australia (including producers using as inputs material protected by copyright) would be somewhat larger, since Australia is a net importer of copyright material.

In this paper the ORR assesses what reforms to copyright would maximise welfare of the Australian community as a whole. The paper:

- outlines the core concepts underlying copyright law (Chapter 2);
- sets out an economic framework for the justification and analysis of copyright protection (Chapter 3);
- applies the framework to proposals for the simplification of rights attaching to copyright, and to the proposed creation of new categories of copyrightable works (Chapters 4);

³ The copyright-related international trade is not a precise concept. Different definitions can be used, and therefore, various estimates of the size of this trade — and the size of the copyright-related sector of the economy — are imprecise.

⁴ This figure is the ratio of value added to the gross domestic product.

- considers the ramifications of Australia signing the Trade-Related Aspects of Intellectual Property Rights (TRIPS) as part of the General Agreement on Tariffs and Trade (GATT) and how, from there, we should view our international obligations (Chapter 5); and⁵
- discusses means, other than copyright, which encourage the creation of intellectual works (Chapter 6).⁶

⁵ While the Terms of Reference ask the CLRC to report separately on the subject matter of copyright and the rights attaching to those subject matters, the ORR addresses them together as they are inherently related from an economic perspective.

⁶ This paper does not consider specific copyright provisions, such as parallel importation, that have been covered extensively elsewhere — IC (1995b).

2 THE BASICS OF COPYRIGHT LAW

This Chapter outlines the key structure of Australian copyright law as it operates under the *Copyright Act (Cth) 1968*.⁷

At its simplest, copyright protects the expression of ideas, and not the ideas themselves.⁸ This basic tenet seeks to ensure that knowledge, a key building block of social and economic development, is freely available.⁹

The expression protected by copyright must be original.¹⁰ At its simplest, originality requires that the author express an idea.¹¹ By protecting the original expression of the idea, copyright encourages the dissemination of ideas in different forms by protecting expressions through the statutory grant of a proprietary interest.¹² Just as with any other form of property, the owner of a copyright can assign and transfer his or her proprietary interest.

Since copyright seeks to protect expressions of ideas, those expressions must have a material form. Section 10(1) of the *Copyright Act* states that material form is any form that can be reproduced.

The material forms protected by copyright are divided into two broad categories. These are:

- ‘works’ — literary, dramatic, musical or artistic works;¹³ and
- ‘subject matter other than works’ — films, sound recordings, broadcasts and published editions.¹⁴

Broadly speaking, the copyright in works seeks to provide incentives for ‘authors’ who are often individuals, while copyright in other subject matter seeks

⁷ For more detail on the specifics of copyright law, see Ricketson (1984) and McKeough (1992).

⁸ *Donoghue v Allied Newspapers* [1938] Ch 106; *Mono Pumps (NZ) v Karinya Industries* (1984) 4 IPR 505. This axiom is expressly set out in Article 9(2) of the TRIPS Agreement: “Copyright protection shall extend to expressions and not to ideas, procedures, methods of operation or mathematical concepts as such.”

⁹ *International News Service v Associated Press* 248 US 215.

¹⁰ Section 32(1) *Copyright Act (Cth) 1968*. This stands in contrast to the patent system’s requirement of novelty.

¹¹ *University of London Press Ltd v University Tutorial Press Ltd* [1916] 2 Ch 601; see also *Sands & McDougall Pty Ltd v Robinson* (1917) 23 CLR 49.

¹² Section 196 *Copyright Act (Cth) 1968*.

¹³ Part III *Copyright Act (Cth) 1968*.

¹⁴ Part IV *Copyright Act (Cth) 1968*.

to provide incentives for ‘producers’ or ‘makers’, which are generally firms and often make investments which would be relatively large for an individual.

The copyright owner has a number of exclusive rights in relation to his or her work. These include the rights of reproduction, broadcast, transmission, performance, adaption, copying, and others. This means that no one may use all, or a substantial part, of the work in any of these ways without the copyright owner’s permission, unless an exception to infringement applies.

However, the exact rights attaching to copyright are limited and depend on the form in which that copyright is held. For example, the rights differ depending on whether the person owns the copyright of a book, the film script derived from the book, the cinematographic film or its broadcast on television. In addition, not all copyrightable material is protected. For example, some forms of transmission — including cable systems operators — do not have full copyright protection for their transmissions.

3 ECONOMIC ANALYSIS OF THE MARKET FOR THE EXPRESSION OF IDEAS

The justifications advanced for copyright are many and varied. However, two core rationales for copyright are evident: the natural rights approach and the economic approach. The ‘natural rights’ approach (see Box 2) is grounded in European philosophy and serves as a basis for the moral rights of Continental copyright law (Strong 1994). Although judges will sometimes appeal to natural rights, the ‘economic’ approach set out in this Chapter serves as the basis for Anglo-Australian copyright law (PSA 1989, p. 3; Guldberg 1994, p. 1).

Box 2 — The natural rights rationale for copyright

The natural rights rationale embodies two principal views:¹⁵

- that people have an absolute right to all the fruits of their labour. This rationale was enunciated long ago by Willes J in *Millar v Taylor*¹⁶ — “It is not agreeable to the natural justice that a stranger should reap the pecuniary produce of another’s work”; and
- that people deserve the returns from their labour if it is an attempt to do something worthwhile. From this view flows the old copyright adage that something worth copying is worth protecting (Turner 1995, p. 109). This view holds that an individual is entitled, by right, to capture all of the returns from his or her intellectual endeavour. This approach is typified by Lord Halsbury in *Walter v Lane*¹⁷ — reporters who took down verbatim speeches were regarded as authors because they exercised sufficient skill to bring into being an original work.

In practice these two strands of the natural rights rationale tend to become intertwined and hence indistinguishable.

In order to protect these natural rights an author should have a full proprietary interest in his or her works. This view is represented in Article 27(2) of the *Universal Declaration of Human Rights*: “Everyone has the right to the protection of the moral and material interests resulting from scientific, literary or artistic production of which he is the author.”

3.1 A potential market failure

While the problems associated with the production of intellectual works have long been of interest to economists, there exists no single ‘economic theory of

¹⁵ For a discussion of the natural rights theory and its more intricate strands see Hettinger (1989).

¹⁶ (1769) 98 ER 201 at 223.

¹⁷ [1900] AC 539. This case is now of dubious authority because it was decided before the 1911 British *Copyright Act*.

copyright'. Without copyright, it can be argued that authors would fail to produce the socially optimal volume of intellectual works because they would be unable to recoup their costs.¹⁸ Traders would have the incentive to wait and copy the creativity of others rather than devoting resources to intellectual endeavour — sometimes called 'free-riding'. For example, without the proprietary right conferred by copyright, an author of a book would be able to produce and sell only the original book. The first purchaser could then make copies of that book and sell them at the marginal cost of printing and distributing the book.¹⁹ This would not allow the author to recoup the fixed costs associated with the production of the book (equipment and the opportunity cost of lost income or leisure).

The resulting loss for the author will discourage other authors from investing their time and resources in the production of intellectual works. Thus, a market failure exists and without some intervention, insufficient resources would be devoted to creative processes.

Beyond the identification of the core economic issue of free-riding, there exist two main branches in the modern economic analysis of copyright — as a 'second-best' response to market failure, and copyright as one limited means of providing incentive to authors:

One branch ... tracks the complete property aspect of the natural rights rationale [see Box 2], differing most essentially in that it grounds the grant of property rights ultimately in economic analysis rather than in natural rights theory. The other branch ... does not jump to the property structure from the economic analysis; rather, it asks, what degree of protection is necessary in each market (in light of existing imperfections such as first mover advantages) in order to elicit the efficient level of investment in intellectual work in that market? (Hadfield 1992, p. 45)

3.1.1 Copyright as a response to market failure

Copyright is a defence against large-scale free-riders who wish to benefit from the creation and distribution of intellectual works of authorship without bearing a share of the underlying cost of authorship. It seeks to overcome this problem of free-riders through the statutory grant of market power. It is important to stress

¹⁸ The socially optimal volume of production occurs when the interests of consumers and producers of copyrightable material are jointly maximised.

¹⁹ The problem of free-riding increases with the ease with which a work can be copied. Thus, free-riding is exacerbated for the copying of works in the digital realm, where the marginal cost of reproduction is close to zero. For example, because a life-size portrait painting is difficult to replicate (texture, size and appearance), the costs associated with free-riding are much less in comparison to a digital work.

that copyright is simply a grant of market power, and not a monopoly, as it does not exclude independent creation of functionally similar material.²⁰

On one hand, the grant of a proprietary interest creates incentives for the production of intellectual works by enabling a price to be charged for the work. Thus, an author can invest the time and effort required in the production of intellectual works because if there is sufficient demand then he or she can recoup those costs by licensing or assigning the copyrighted works.

Demsetz (1974, p. 32) rationalises the use of a property interest to overcome free-riding by applying externality theory:

‘Internalizing’ [externalities] refers to a process, usually a change in property rights, that enables these effects to bear (in greater degree) on all persons ... A primary function of property rights is that of guiding incentives to achieve a greater internalization of externalities.

On the other hand, the grant of copyright can stifle the dissemination of the ideas contained in the copyrighted material.²¹ Although increased copyright protection may encourage the production of more copyrightable work, some of which might not otherwise be created, it also increases the price of intellectual works for consumers, and so reduces the dissemination and availability of such works. In some cases, those consumers may be producers of further works. Thus, the number of intellectual works in the community may be reduced and the speed at which the works are disseminated reduced. Limiting the diffusion of expressions also limits the diffusion of the ideas underlying those expressions.

3.1.2 Reassessing the existence of market failure

Another economic approach to copyright questions the implicit assumption that a competitive market for creative work will fail. This tests the assertion that free-riding would cause authors to be under-compensated and hence reduce the production of intellectual works.

This approach can most easily be traced to the seminal work by Plant (1934) who questioned the assertion that authors would not earn sufficient returns to justify their endeavour. Drawing on the historical example of American publishing in the nineteenth century, Plant notes that:

From the economic standpoint it is highly significant that, although there was no legislative restraint on the copying of books published abroad, competition remained sufficiently removed from that abstract condition of ‘perfection,’ in which there could

²⁰ This distinguishes copyright from patent law — *Corelli v Gray* (1913) 29 TLR 570.

²¹ This is an interesting point that sets the property right in the expression of ideas apart from rights attaching to real property; rights attaching to real property are the result of scarcity, while the rights attaching to the expression of ideas create scarcity — see the discussion in Krauss (1989, pp. 307-308).

exist no margin between receipts and costs for the remuneration of authors, for 'handsome sums' in fact to be paid (Plant 1934, pp. 172-173).

It would be a mistake to think that in competitive markets no resources are devoted to creativity in the absence of property rights in information. Under conditions of competition and with many gaps in the protection of information, creativity nevertheless continues to occur. As Breyer (1970, p. 351) notes,

To demonstrate that an initial publisher's costs are high, while reproduction costs are low, is not sufficient to establish the need for copyright protection. Rather, one must examine other factors — the probable speed and ferocity of competitive response, the presence of subsidies, the ability of buyers to channel revenue to publishers and authors in the absence of protection — before it can be said that copyright protection is needed.

Various 'imperfections' in an unregulated publishing industry could cause the returns for a first publisher to remain high enough to cover the costs of producing the original, thus obviating the need for monopoly protection under the public goods rationale:

- the time advantage of being the first entrant into a market forms a sufficient incentive for creativity — the first mover advantage. This point is stressed by Breyer (1982, p. 396): 'Even if subsequent users of the information, once generated, can obtain it 'free', there may be adequate incentive to provide it without patent or copyright protection. Much depends on whether a producer believes its production will give him a substantial advantage over his competitors.' This advantage may be particularly strong when the information that is being expressed is time-sensitive. While it is true that some intellectual property appreciates in value, the majority is analogous to a depreciating capital asset — its value declines over time;
- when copying is costly (even if less costly than original production);
- when copies of an original work are less than perfect, such as in paintings, the original work retains a value above the marginal cost of a copy;
- when the intellectual work is unusable without support and assistance — technical software, for example — copying the program is of little use and so is unlikely to occur; and
- tacit (or even explicit) collusion in markets with few producers — so that one publisher will not copy another's work in order to gain reciprocal favours — will allow prices to be set above marginal cost. This imperfection is particularly important for those industries in which producers must compete through the strategic choice of how much to produce; first publishers can potentially deter other publishers by producing a large first edition (Plant 1934, pp. 174-175).

There may be factors other than commercial returns that motivate authors and publishers. For example, some intellectual works may continue to be produced even if no copyright exists. This may simply be for the love of writing (ABC

1995) or, as with many academics, a copyright producer's remuneration comes from writing in a public forum. Alternatively, government subsidies may allow authors to recoup their costs. For example, 55% of all spending on research and development is provided for by State and Commonwealth governments (ABS 1995c). A great deal of money is spent on higher education and the production of copyrightable material (IC 1995c). Furthermore, direct subsidies and industry assistance provide the incentives to stimulate production of many intellectual works.²²

Alternatively, holders of copyright may seek to protect their intellectual endeavour through means other than copyright. The two most common forms of non-proprietary protection are contractual and technical devices (see Chapter 5 for further discussion).

3.2 The ORR's framework for an economic analysis of copyright reform

An economic perspective provides a useful insight into how copyright can be reformed. For example, if there is concern about copyright protection being too low, one approach is to increase penalties. However, as discussed in Box 3, from an economic perspective simply increasing penalties might not result in a better enforcement scheme.

In addition, the economic analysis of copyright discussed in section 3.1 suggests that copyright *may be* an appropriate response to free-riding. The issue then becomes determining when copyright is an appropriate response, and how strong that grant of copyright protection should be.

The ORR has two concerns with how this issue is approached.

²² See, for example, the government assistance provided for the production of intellectual works through the Creative Nation statement. For a discussion of alternative forms of subsidy see Priest (1985, pp. 36-43).

Box 3 — Penalties in an environment of low enforcement

Enforcement of the rights attaching to copyright has progressively become harder in a digital world. This has led to the view, particularly among technologists, that:

the traditional tools of law enforcement, indeed the traditional notions of property and of society, simply do not translate into cyberspace. You can try to apply them, but they make no sense. Out on the Electronic Frontier, the rules are different (Brown 1995, p. C5).

Even traditional copyright proponents, such as Leonard (1995, p. 41), acknowledge the problems inherent in enforcement (particularly international enforcement):

In legal theory, there is a remedy for every wrong. In practice, it will often be difficult to enforce rights where infringement occurs overseas. Detecting unauthorised copying is difficult and expensive. There can be adequate laws on the books yet woeful enforcement of them. Ownership of copyright can be difficult to prove in some jurisdictions. Evidence that is admissible, or can be obtained through court process in Australia, may not be admissible or available in another country. Managing lawyers and litigation abroad is expensive and difficult.

Responses to these problems tend to fall within two broad categories:

- technologists suggest that one's intellectual endeavour should be protected by means other than copyright — this issue is explored in Chapter 6; and
- lawyers tend to suggest that rights should be increased to compensate for diminished enforcement. It is quite common to substitute diminished enforcement with stronger obligations, and vice-versa (ORR 1994, p. 2). This is the underlying effect of the CLRC's goal of making the Copyright Act technologically neutral.

In terms of enforcement design, rational deterrence theory indicates that expected penalties should equal the social costs of breaches. Expected penalties are equal to the amount of penalty multiplied by probability of incurring it. If the rights of copyright holders are increased the probability of a successful copyright case also increases.

An argument can be made that criminal penalties are too low and enforcement too ineffective to satisfy the rational deterrence theory. For example, there are only 25 cases of copyright *crime* prosecution on record. Given that the maximum penalty was \$50,000, the penalties have been light, ranging from 120 hours community service where the offender had nine counts of infringement to a levy of \$11,500 (Zampetakis 1995, p. 50).

The trouble with designing a socially efficient copyright enforcement scheme is that enforcement may also be used to benefit an individual rather than society generally. This means that there is a tendency for individuals to seek to maximise civil enforcement rather than set the optimal level. Thus there is a case for setting the civil penalties lower than one may otherwise suggest because, if linked with educational campaigns by copyright bodies, a culture of compliance can be created. Thus, by lowering penalties, an environment can be created that actually results in increased returns for authors (Viscusi and Zeckhauser 1979).

Firstly, excessive policy consideration is given to proposals which, at their heart, focus on capturing the full benefit of an author's endeavours (a natural rights approach),²³ rather than facilitating the optimal level of production and consumption of intellectual works.

The arguments are often couched in terms that suggest benefits to Australia:

Should Australia set in place now a pro-active system that protects the rights and rewards of all parties in the digital media and broadband services content production industry and opens up the wealth of Australian content and cultural expression that already exists, then Australia will become one of the world's leading producers of interactive media and digital media-expressed content. *The challenge is to ensure that Australia's creative industries ... will become world leaders in terms of production quantities, profits and margins* (Perkins 1995, p. 31, emphasis added).

Such claims are based on a misunderstanding about which outcomes would be best for Australia. In this case, what are claimed to be Australia's best interests are really the interests of producers.

Secondly, where a broader approach is involved the ORR is wary of copyright policy prescriptions that are justified simply by balancing the interests of different parties — consumers, authors, distributors and publishers:

The interest-balancing approach correctly recognizes that encouraging authorship now and in the future calls for a measure of protection for producers, with attendant costs to current and future users. However, legal interest-balancing leads to no unique solutions, only acceptable bargaining outcomes. The law can more easily recognize the existence of competing interests than measure relative costs and benefits. Even more to the point, interest-balancing embodies no clear notion of net social gain (Peyton 1986, p. 92).

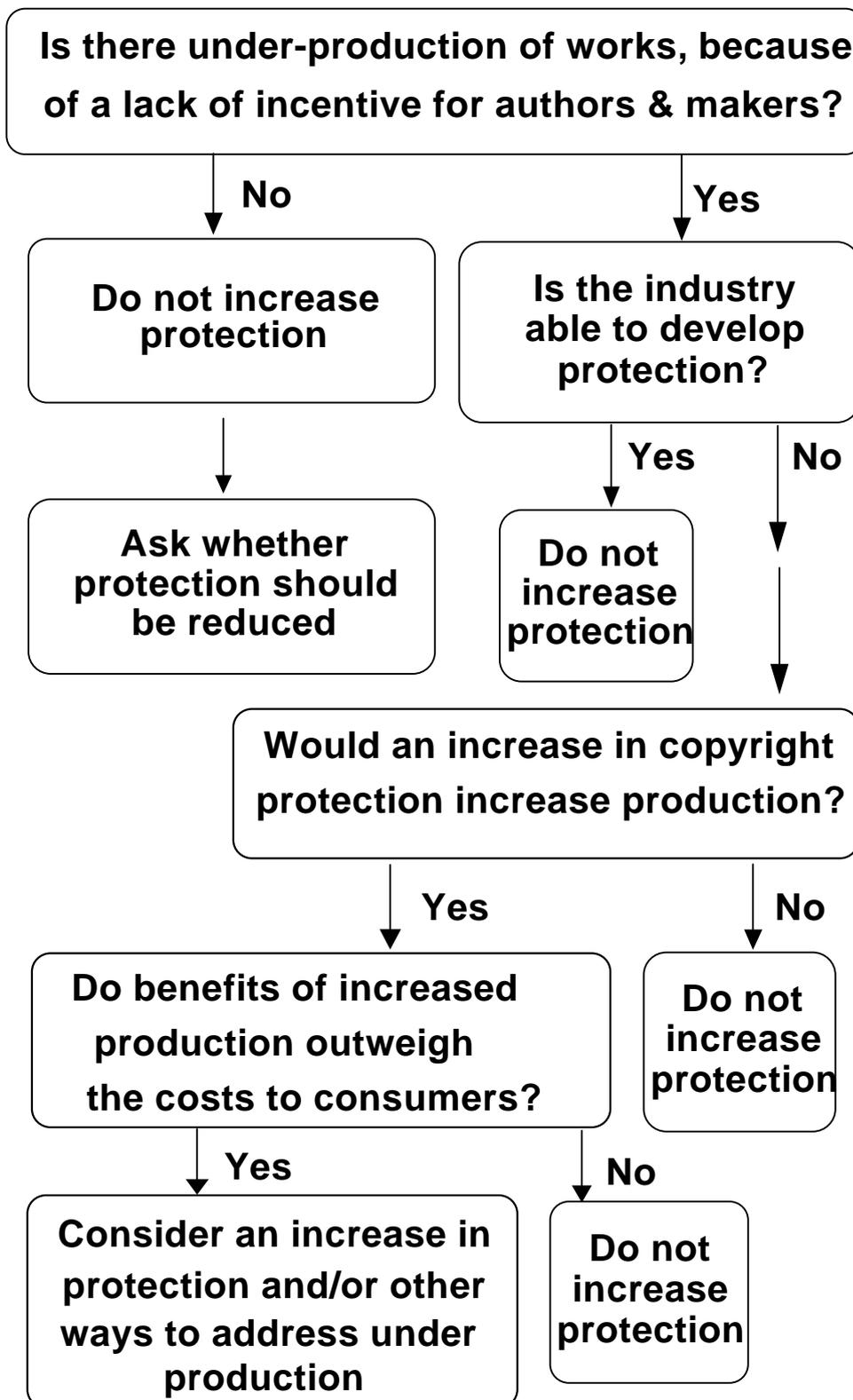
These two approaches are no substitute for sound economic analysis of proposed copyright reforms:

... the [economic] view is that intellectual property rights are justified only by the need to overcome failures of the market economy in producing creative works; unauthorized uses are prohibited only to the extent necessary to promote the correction of market failure and the efficient production of intellectual works (Hadfield 1992, p. 5).

Although economic theory suggests that there will be an optimal level of copyright protection that jointly maximises producer and consumer interests, determining that precise level of protection is near impossible. Given this problem, the procedure set out in the following pages should allow policy makers to gauge whether increases in copyright protection are moving towards the optimal level.

²³ See, for example, Legge (1995).

Box 4 — Determining the need for copyright protection



The procedure seeks to set a series of threshold tests to be undertaken on a case by case basis, in order to minimise unnecessary copyright protection. The sequence is set out in Box 4. This approach aims to set property rules in such a way that they have a positive incentive effect — information is created which, but for the property rights, would not have been created. Two points need to be made about the terms and assumptions used in Box 4:

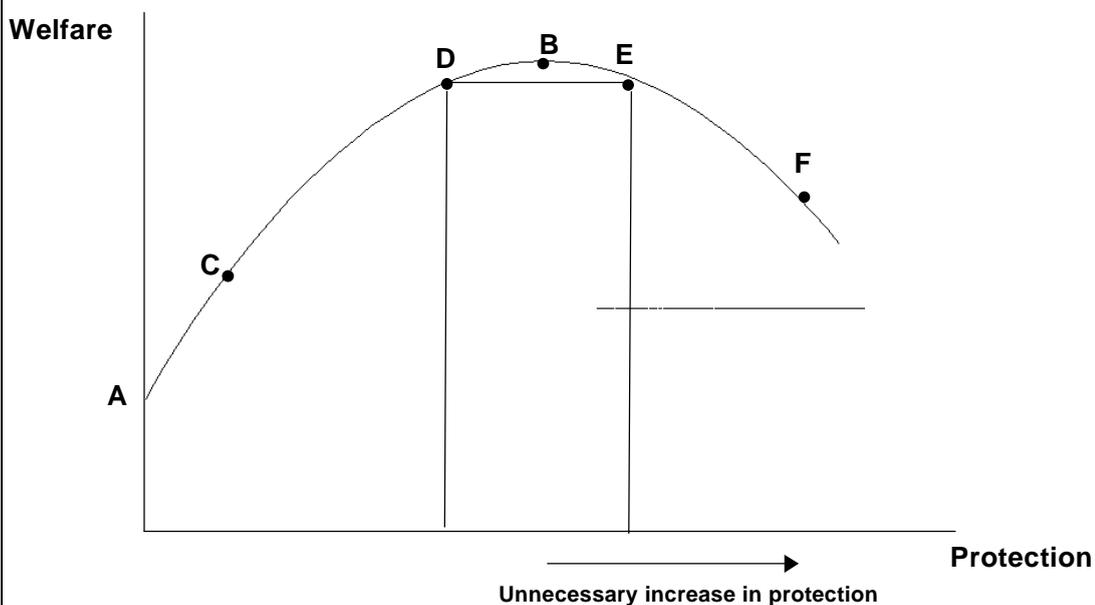
- first, ‘protection’ means the ability of the holder of a work to restrict access to a work — for copying, use, viewing, etc — and so charge for access. When used on its own, it means protection that may derive from property rights, contractual rights or technological solutions — the second and third of these avenues are discussed in Chapter 6; and
- second, the ORR assumes that social welfare is maximised when the interests of producers *and* consumers are jointly maximised. Where increased protection results in increased production of copyrightable works, in the short and long terms, and the industry cannot develop such protection, copyright should only be increased where the benefits of increased production outweigh the costs to consumers. Boxes 4 and 5 illustrate these points. In addition, it is important to assess whether there are other more effective ways to address under-production, such as changes in budgetary assistance to producers, that could be provided instead of (or in addition to) enhanced copyright protection.



If the process in Box 4 suggests that copyright should be increased, then the issue arises of how that should be done.

Ultimately, determining the optimal level of protection²⁴ — whether this be through the proprietary grant of copyright, the banning of copying equipment, or other means — is an empirical question, albeit a complex one.²⁵ Following the steps outlined in Box 4, and adopting a cautious incremental approach, should allow the Government eventually to set a level closer to the optimal level of copyright protection than otherwise.

Box 6 — Incrementally establishing a level of protection



Multimedia

Box 6 illustrates a danger in increasing protection. For example, some multimedia producers believe that in some respects multimedia is at point C, and thus, should be provided with further protection (CCG 1994, pp. 65-66). However, as this submission argues, this is by no means clear across the spectrum of products to which broad copyright protection would extend. Indeed, it would appear that copyright protection for some multimedia products — including important inputs to multimedia — may already be at point F where protection is excessive.

²⁴ The works protected, the rights attaching to those works and the duration of the rights.

²⁵ See the recommendations made by the CCG (1994, p. 54).

While reducing the duration of copyright is subject to various constraints imposed by Australia's obligations under binding international trade agreements, it remains important to consider whether the current duration for various works is appropriate both from the perspective of national and international economic welfare.²⁶

If the duration is too long, then governments should explore whether there is scope to reduce the duration, under the auspices of rules determined by existing international trade agreements and/or explore the freedom which those agreements provide for allowing more generous fair dealing provisions. In addition, governments could seek reductions in the duration of protection in future multilateral trade negotiations (see Chapter 5).

Box 7: Is copyright protection too lengthy?

There may be areas in which copyright protection provides insufficient constraints on freeriding to support appropriate levels of investment. Where such cases can be identified, they should be addressed on their merits and copyright extended where the benefits of doing so outweigh the costs.

When considered from an economic perspective, the appropriate period over which to offer copyright protection is the least necessary to bring about investment to produce works. In their initial investment decisions, very few firms would consider income streams arising over thirty years after their investment. Accordingly copyright protection for longer than this — which is generally available — would appear excessive. While there may be some community sympathy with the very long duration of copyright when it comes to individual authors, this is unlikely to be the case for art forms which typically represent (often substantial) investments by firms. Such areas would include films and software.

Two conclusions can be drawn from this analysis. Firstly, it would be possible to improve the attractiveness of investment in multi-media — with little risk for economic welfare — by reducing the duration of copyright protection for products which require large investments such as films. Secondly, a general increase in copyright protection could harm the interests of multimedia producers by restricting their access to inputs.

²⁶ For further discussion see Landes and Posner (1989), who have carried out an economic analysis of the optimal duration of copyright.

Box 8: Is more protection always good for producers?

Traditionally the 'balance' to be achieved in the protection of intellectual property has been taken to be a balance between producers and consumers with the optimum arrangement maximising the sum of the satisfaction or surplus enjoyed by producers and consumers. But the interests of consumers and producers actually coincide in important respects. This is because consumers have an interest in ensuring that producers have sufficient incentive to create new works, otherwise insufficient material will be created and consumers will be amongst those who suffer.

In a similar way — and somewhat paradoxically — copyright which is too strong can hurt the producers of copyrightable material. This is because those producing copyrightable material also consume it. This is particularly the case in multimedia.

Much multimedia involves the re-editing, re-arrangement and/or 'repackaging' of material which has already been copyrighted. For this reason increasing copyright protection may actually work against the interests of multimedia producers. On the other hand, reducing the length of copyright protection where it is clearly excessive from an economic perspective, offers the prospect of improving the viability of local multimedia production and enhancing economic welfare.

Works in digital form

The CCG suggested that protection for many works in the digital realm is less than optimal. This means that society is somewhere on the curve between A and B. The difficulty is determining whether we are at a point like:

- C — with much more protection needed to reach the socially optimal point (B); or
- D — with little additional protection needed to reach the socially optimal point (B); or
- B — the correct level of copyright protection already exists;
- E — where further protection makes the outcome worse; or
- F — where the level of protection is excessive, providing unnecessarily high returns for producers and authors and imposing high costs on consumers.

The risk in increasing protection is that policy will be formulated on the basis that society is at point C, when society may really be near F, where the risk of adverse consequences from increasing protection are larger. By contrast, if society is at point B, the adverse consequences of increasing protection to E are much smaller.

A better approach would be to make incremental increases in protection for types of works, and then to repeat the questions put in Box 4. This iterative approach

may be relatively time-consuming, but it provides the opportunity to approach, rather than overshoot, the desired level of protection and also overcomes any problems that may arise if protection is too strong and government attempts to remove it — see Chapter 4 and Appendix B.

Assistance to producers

It is also relevant to note that the Federal Government recently increased industry assistance to authors and makers of works. For example, as part of the Federal Government's 'Creative Nation' policy, five initiatives were announced to assist the multimedia sector, costing \$84 million over a four year period. Other initiatives to assist authors and makers included additional assistance for artists and the arts, and film, television and radio.²⁷

In this context, should governments decide to provide additional assistance to producers and makers of copyright by strengthening copyright protection — by simultaneously broadening both the subject matter protected by copyright and the rights attaching to that subject matter — this extension of protection should be accompanied by a review of alternative assistance arrangements.

²⁷ Keating, P. 1994, *Creative Nation: Commonwealth Cultural Policy*, Commonwealth of Australia, October.

4 THE SIMPLIFICATION OF COPYRIGHT

Copyright law is framed so that certain types of intellectual works (the subject matter) are protected by certain privileges (the rights). An assessment of the effect of changes to the *Copyright Act* needs to look at changes to both of these elements.

This Chapter argues that copyright simplification, while a laudable and worthwhile aim, may result in an expansion of copyright protection. As it is the total incentive for authors that must be considered in any cost-benefit analysis, this Chapter considers the possible simplification and expansion of both the subject matter and rights of copyright.

4.1 What is simplification, and for whom is the *Copyright Act* being simplified?

While simplification is a current focus of regulatory review generally,²⁸ it is not always clear what simplification is, and for whom it is being carried out.

There are different aspects of simplification:

- the law can be simplified so as to reduce compliance costs, make it more certain, remove ambiguities, etc; and
- it can focus on ensuring that the law is drafted in a ‘plain English’ manner.²⁹ This approach has as its core the idea that the ideal draft is the one that the legislative audience will find the easiest to understand and use. This approach focuses on simplifying the presentation of the law, irrespective of the complexity of the substantive law.

These aspects are at times complementary and at times in conflict. For example, simplification of the content of the law will tend to make the expression of the law easier. Alternatively, if simplification is carried out solely for the sake of ease of understanding, then some precision and certainty can be lost, or the original meaning altered by the attempt to use plain language.³⁰

²⁸ For example, current reviews akin to the CLRC’s review include the Corporations Law Simplification Program and the Tax Law Simplification Program.

²⁹ For a thorough overview of ‘plain English’ see the Law Reform Commission of Victoria (1987a; 1987b).

³⁰ This is an on-going debate in the letters to the *Law Society Journal*, particularly in reference to its monthly column ‘Plain Language’ — see, for example, Caldwell (1993 p. 6).

As its first priority, the ORR believes that the CLRC's reform of the *Copyright Act* should be targeted at 'getting the law right'. That is, the CLRC should ensure that copyright law comes as close as possible to providing the optimal level of rights and incentives for authors and publishers.

Once the appropriate level of copyright protection has been determined then the CLRC should seek to make it conform to the principles of good drafting and plain English. To do this, the CLRC should have a clear understanding of who reads and uses copyright laws. Copyright simplification can be targeted at a number of groups:

- copyright lawyers;
- administrators dealing with copyright (librarians, broadcasters, publishers, etc);
- holders of copyright; or
- end-users.

Although drafting specifically for these different groups may not lead to diametrically opposed outcomes, depending on which group is targeted a different style of drafting will be preferred and a different form of copyright may ensue.

The ORR recommends that copyright simplification should be targeted at those administrators who are required to deal with copyright law. These are people who may reasonably be expected to read the *Act* and implement programs consistent with it. They are the people who will put into place compliance programs for end-users. Because of their continuing work with copyright law, these people do not require the *Act* to be drafted in absolutely lay terms that ignore the history of copyright law and jurisprudence.

Consistent with the other simplification programs presently taking place, the ORR supports the use of flow diagrams to aid users of the *Act* in finding information that they may require.

4.2 What does economic theory suggest about simplification?

As noted, the economic rationale for copyright rests on the premise that authors would otherwise lack sufficient economic incentive to produce the optimal number of works (see Chapter 3). Works by Breyer (1970) and Besen (1986) suggest that:

... the desirability of copyright protection will vary from one type of ‘writing’ to another. One must know facts about the particular industry involved before one can weigh the various costs and benefits associated with copyright protection (Breyer 1970, p. 351).

This approach suggests that copyright should be targeted at specific categories of works (industry or market-based). This point is also made by O’Hare (1985, p. 411):

Whether the establishment of copyright ... is economically efficient depends very much on the characteristics of the market in which creations are traded.

Of course, there has to be some simplification in determining what constitutes a market or industry: the issue becomes one of determining how simple the classification should be. The trick is to create classes of intellectual property that share common characteristics and forms of distribution.

This category-based approach suggests that copyright should consist of a body of rules that specify particular types of works that are protected and the rights that attach to those works. Copyright protection should be targeted at those most in need, and as such, should be rule-based rather than standard-based.

By broadening the categories of protection and the rights attaching to those categories of expression, the Terms of Reference for the CLRC appear to support a move in the direction opposite to that suggested by economic theory. The ORR suggests that the CLRC assess the continuing need for the present categories that the *Copyright Act* protects, and the rights that attach to those categories. Where there is an identified lack of incentive (see Chapter 3), there may be a case to create a new category or strengthen the existing rights. The key point is that these new categories or expanded rights should be tightly defined, so that unforeseen effects are minimised and the incentives are closely targeted at those who truly need them.

4.3 Simplification of the rights attaching to copyright

The Terms of Reference call upon the CLRC to ‘inquire into and report on ... the feasibility of subsuming the existing exclusive rights comprising copyright in works and other subject matter, in two broad rights, namely, the right of distribution and the right of transmission.’

The value that is placed on a particular item of property is determined by the rights that accompany its ownership. While copyright is personal property,³¹ it is reasonable to think of property rights as involving not physical possession but

³¹ Section 196 *Copyright Act* (Cth) 1968.

instead the prerogatives and obligations pertaining to the use of a particular resource (Demsetz 1969).

It would be a major expansion of copyright protection to move from narrow rights — defined by the nature of the copyrightable expression — to broad rights such as transmission. This point is emphasised by Van Caenegem (1995, pp. 10-11):

Since the essence of a broad transmission right is the power of the copyright owner to license remote access to a digitized work or subject matter via some electronic means, the effect of such a reform on the dissemination and communication function of copyright law may be considerable. The transmission right would go beyond the present copyright law, under which the copyright owner has no statutory right to deny access to prohibited works, but only controls the reproduction of works. In terms of the idea expression dichotomy, a broad transmission right would cause potential difficulties: if a user no longer can gain access to a work without the consent of the copyright owner, she is not in a position to freely derive facts and ideas from it. A copyright owner would thus be in a position to interdict the taking of ideas and facts, not simply the mode of expression. In terms of the existing structural limitations on the exclusive rights, this would also constitute a considerable extension of the rights of the copyright owner; it would move much closer to an exploitation right and therefore constitute a departure from the limited rights structure of the present Act. A fine balance inherent in having technology specific rights under copyright law would be threatened, and the copyright owners 'monopoly' extended. Control over access to copyright works may tend to inhibit rather than encourage the wide dissemination of facts and ideas and 'acceptable' imitation, and contradict a main policy aim underlying copyright.

The proponents of broad rights suggest that simplifying the rights attaching to copyrightable material is intended to make the *Copyright Act* more comprehensible. Unfortunately, in the short term, simplification could have the opposite effect. The abandonment of the jurisprudence surrounding the present rights attaching to copyright would mean that litigation could rise dramatically as the various interested parties — authors, distributors and consumers — seek favourable judicial interpretations of the revised *Act*. Thus, until a new body of jurisprudence emerges, the *Act* would become even more incomprehensible to those who are unable to keep pace with recent rulings dealing with relatively abstract rights.

If the rights attaching to copyright were simplified and broadened, the ORR suggests that it would be appropriate to extend the defences against infringement, such as fair dealing and educational use. This extension may be required to protect the interests of particular users of copyright. However, just as the CLRC needs to take care in setting the optimal level of protection for authors, there is a need to ensure that defences against infringement are also assessed on a cost-benefit basis. The costs and benefits of defences are made clear in the Association of American University Presses' quotation contained in Box 9

Box 9 — Fair use: a sword that cuts both ways

'In the educational setting in particular, fair use is critical to enabling scholars and researchers to do their work, and appropriate fair use of copyrighted works supports the larger missions of the institutions of which we, university presses, are a part.

Determining what constitutes fair use in the electronic environment will obviously be difficult given the technical capabilities that the networks offer. We are concerned that too liberal an interpretation of fair use could undermine the scholarly legitimization function of university presses. Even in the print environment, scholars are continually confronted with the possibilities of their work being cited out of context or being reproduced in other works without their permission. Scholars care deeply about these issues, as any university press copyright manager can tell you. The possibilities for the abuse of fair use in the electronic environment are obviously much greater.

Similarly, we believe that a broadening of fair use could lead to the undermining of the entire system of scholarly publishing, especially in the area of journals publishing and with regard to the licensing of subsidiary rights. The management of subsidiary rights in the journals arena is a time-consuming and expensive task. The effective management of subsidiary rights to scholarly works ensures the widest possible distribution of those materials, however, by making such works readily available to other scholars, research libraries, and teachers. Without the exclusive right to derive income derived from subsidiary rights sales, the management of such rights would become prohibitively expensive, thus limiting the further distribution of those materials.

Conversely, however, a more strict interpretation of fair use that limits scholars' access to the materials that form the basis of their research would not be in the academic community's best interests. The present guidelines regarding the citation and inclusion of copyrighted materials under fair use contribute to the wider dissemination of scholarly research and often to additional sales as well. We do not believe that the elimination of fair use would be in anyone's best interests.' (Freeman 1993).

In addition to an incentive effect, increasing educational and fair use defences against infringement may increase social welfare by reducing transaction costs. Box 10 illustrates this point.³²

³² Thanks to Louise Sylvan (Chief Executive of the Australian Consumers' Association) for this example.

Box 10 — The ACA and copyright compliance

The Australian Consumers' Association (ACA) publishes *Choice*. As *Choice* is a useful educational resource, the ACA frequently receives requests from members of the public asking if they may copy articles.³³ The ACA contacts the authors of the articles, the copyright holders, to seek their permission. This is not a difficult process for the ACA if the article was recently published. However, if the article is relatively old, and written by multiple authors, the task of seeking copyright approval becomes time-consuming and costly. The cost of this process has meant that the ACA cannot always afford to spend time tracing authors. Thus, the members of the public who have taken the effort to ensure that they comply with the *Copyright Act* are denied access to a valuable educational resource.

Expansion of the educational and fair use defences against infringement may be a solution to this stalemate. Intuitively, considered expansion of the educational and fair use defences will:

- not harm the authors — who, if difficult to contact, receive no royalty payments under the present circumstances;
- reduce the costs borne by the publisher — the ACA will no-longer need to fulfil what, for them, is a burdensome process; and
- provide easier public access to a valuable educational resource.

4.4 Simplifying the subject matter of copyright

Recent years have seen accelerating technological convergence — the break down in the boundaries between broadcasting, telecommunications, computing and publishing. Thus, once clearly defined notions such as electronic transmissions have moved beyond the traditional categories of broadcasting and cable transmission to other activities such as the dissemination of copyright materials through computer networks, from computer databases and dial-up services (*The Australian* 1994, p. 32; Cookes 1995b, p. 35).

As *APRA v Telstra Corporation*³⁴ demonstrated, new forms of goods and services can create problems for traditional copyright categories. This section focuses on the emerging multimedia industry and explores some problems that are raised as policy reforms attempt to fit new digital products into traditional categories of works.

In response to these problems the CLRC is considering the simplification of the subject matter of copyright. This section concludes by looking at the historical

³³ Large institutional bodies will approach the Copyright Agency Limited (CAL) for a more expansive licence to copy material.

³⁴ (1994) 27 IPR 357.

basis for copyright's protection of specific technological forms of intellectual works, and considers whether such a change is warranted.

4.4.1 *Problems associated with the traditional subject matter of copyright — the case of multimedia*

The term 'multimedia' encompasses an amorphous range of products and services. While a plethora of definitions exist, none of which does justice to the continually evolving sector, Perkins (1994, p. 14) provides a good working definition:

A 'multimedia work' is a work consisting of text, visual images (which may be still or moving) and sound (including music, ordinary speech and dramatic performance) stored in digital form and may include software to search, retrieve and manipulate a work (see Perkins 1994, pp. 13-14).

Multimedia is a good example of the conflicting interests involved when dealing with copyright. While it is convenient to think of all authors as interested in strengthening copyright, this is not so. Divergent interests arise because the lowering of copyright protection for some works may increase returns to later copyright holders who use the first works as an input into a new work.³⁵ For example, those parties involved in the multimedia industry would like to increase their legal protection by having multimedia recognised as a copyrightable work, and correspondingly, would like to see a reduction in the strength of the copyrights attached to the inputs to multimedia works (texts, photos, sound recordings and pictures). This approach seeks to make it easier to produce multimedia works, and harder to copy them.

Does the law protect multimedia works?

It is unclear whether multimedia works are currently protected by copyright.

Depending on the nature of the multimedia work, it may be granted copyright protection if:

- it is largely *textual*, or a compilation of text and pictures. In this case it may constitute a compilation and so can be protected as a literary work. However, as most multimedia works tend to be a combination of recordings and films, as well as text and pictures, they will not be protected as literary works;
- it can be categorised as a *computer program*. The High Court decision in *Autodesk v Dyason*³⁶ established that a computer program includes the set of instructions plus any data associated with the set of instructions.

³⁵ For a discussion of this observation see Posner (1992, pp. 41-42).

³⁶ (1990) 18 IPR 109.

Protection of the multimedia product would be strongest where it is based on a specially commissioned program, and where it is difficult to draw a line between the program and the data. Possible protection is weaker where a multimedia product is created using a standard third-party multimedia authoring program; and

- it falls within the s10(1) definition of *cinematograph*. The problem for multimedia is that it may not be ‘embodied in an article or thing’ (Leonard 1994, p. 123).

Even though the multimedia work itself may not receive explicit copyright protection, protection may be achieved in an indirect way. Piecemeal protection may exist because the constituent elements of the multimedia work (pictures, sound, movies and text) remain separately protected by copyright law even though they may be used in a newly compiled work. Thus, certain uses of a multimedia product may constitute an infringement of the copyright in the work’s constituent elements. As such, the owner and any exclusive licensee of the copyright in these elements could commence proceedings for infringement of copyright. The weakness inherent in this approach is that a person who has only licensed the constituent elements on a non-exclusive basis is reliant on the owner of the constituent elements to have the incentive to seek legal redress.³⁷

Criticism of this piecemeal approach to protection is at the heart of the call for making the *Copyright Act* technologically neutral. For example, Leonard (1994, p. 110) suggests that, ‘It is clearly unsatisfactory for protection to be afforded on an effectively ad hoc basis, depending on the nature and content of the product produced.’

If multimedia works are not protected, should they be?

As the previous section discussed, even though copyright *may* not vest in the multimedia work itself, copyright protection remains in the underlying elements of the multimedia work. Thus, copying the multimedia work will nevertheless be a breach of copyright. As far as the illegal copier is concerned, it should not matter who is bringing the action if an action is nonetheless being brought.

The problem with this partial-protection argument is that holders of copyright in the constituent elements of the multimedia work may lack sufficient incentive to pursue a claim for breach of copyright because:

- their works comprise only a small part of a larger work, thus compensation might be relatively small vis-a-vis the total value of the multimedia works;

³⁷ This would not be a problem if the author of the multimedia work owns the copyright in the constituent elements or is the exclusive licensee.

- holders of multimedia copyright have a strong incentive to defend and there is a likelihood of lengthy litigation and high legal costs. Thus, there is a risk that compensation will not fully reimburse a copyright holder for such costs; and
- inputs into multimedia can be easily modified, making it harder to prove a breach of copyright.

For this reason, the CCG (1994, p. 63) argued that, 'If copyright protection is lacking for such [multimedia] works, this is clearly a deficiency in the Act which should be remedied.'

Advocates of making multimedia works a separate subject of copyright would endorse the observation that:

The whole [of a multimedia product] ... is greater than the sum of parts. In creating the product, the producer has undoubtedly added economic value as well as exercising his creativity. The product has distribution and other exploitation rights which are worth considerably more than that of the individual elements going to make up the program (Turner 1995, p. 107).

To conclude, however, from these correct observations, that multimedia works should be protected through copyright, confuses natural rights arguments with the economic rationale.³⁸

In economic terms, copyright exists to provide the incentive to create works when the lack of a proprietary interest would otherwise lead to an undersupply of those works. However, in the case of multimedia there is no evidence that the lack of specific multimedia protection is causing an undersupply of multimedia material; far from it, multimedia is booming.³⁹

Evidence to support the view that explicit copyright protection is not needed comes from the Cutler & Company (1994) consultancy for the Department of Industry, Science and Technology, the CSIRO and the Broadband Services Expert Group. While canvassing issues such as licensing schemes and a transmission right, Cutler and Company were silent on the need for specific protection for multimedia works. In a similar vein, Desmond (1995, p. 53) notes the incentive for authors is very high because the cost of many multimedia productions is low and the potential profits high. This reinforces the judgement

³⁸ For example, the Spicer Committee (1959) reported (in the context of sound recordings) that a great deal of artistic and technical skill was required, thus implying that a degree of aesthetic creativity is being rewarded, rather than a commercial project protected (McKeough 1992, p. 83).

³⁹ The evidence is anecdotal, but clear — Cutler and Company (1994, pp. 15-16); Lim (1994, p. 119); multimedia-ready computers outsell all others (Phillips 1995, p. 12); see also the eagerness of the Australian Broadcasting Corporation to become involved — Bradley (1995, p. 10).

that there are sufficient incentives for production so that explicit copyright protection is not needed.

Although regulation may be implemented in support of an industry, Brenner (1994) summarises the potential for copyright (and other claimed beneficial regulations) actually to stifle the development of a new industry such as multimedia, and so harm consumer and multi-media producer interests:

In sorting out these legal and regulatory questions, we can take a cue from the computer industry. While computer software writers have resorted to the courts to protect computer programs, the history of computers — the third part of multimedia — has not been one of intense regulatory oversight or government-mandated standards. The heavy helping hand of Washington has not significantly intruded in the computer industry, and the result has been a continuing story of cheaper, more powerful, and more versatile computing. Law and regulation are not always the culprits in preventing advances in technology in the media. But copyright law and regulation of entry in this area could stand as real stumbling blocks, given the complexities of rights and the pathways that in the past have been highly regulated. Relaxation of the usual legal throttles could let market forces, which have done a splendid job in bringing low cost, high quality computing to the world, help us to find our way to the multimedia grail as well.

4.4.2 Copyright's historical focus on specific subject matters

The concept of copyright is deeply rooted in the technology of print. It only began to assume importance when the invention of printing made the multiplication of copies of a work appreciably quicker and cheaper than manual copying methods.

Copyright law initially operated upon the basis that property rights could be physically controlled by control of the presses (see Appendix A). That is, copyright operated as an intellectual property gatekeeper — by limiting access to the presses it acted as a barrier to entry to those wishing to disseminate ideas. As numerous copies were made in one place — on huge and relatively expensive presses — it was reasonably feasible for human oversight to identify the source, number, and often the destination of printed materials. So, at that time in history, the print-shop was the practical point to apply control, whether for profit or against heresy, or both (see Appendix A).

The evolution of technology has increasingly strained the ability of copyright laws to restrict the flow of ideas and protect the property owners' returns. First came cheaper presses, then photographic devices, cinematography, television, photocopying, and then broadband appliances of all types. Although these technologies make infringements harder to police (and even harder to define), these developments were simply mild disturbances to the idea that expression could be limited. The later mechanisms (transmitters, record pressing plants, film duplicating machinery, etc) had features similar to the press in that they could be

easily located.⁴⁰ The development of digital transmission is a break with this mechanistic focus.

While property rights used to deal with tangible property, digital technologies are inherently intangible because:

- while the physical incarnation of a digital bit may be in tangible form at some instant, it is inherently volatile and elusive; and
- the problem is compounded because in a digital realm there is no such thing as an ‘original’ because all ‘copies’ are identical to originals.

The idea of mass digital transmission makes it near impossible to find the control locus for the purposes of auditing, and so makes the concept of copyright in the digital domain close to redundant.

4.4.3 Getting the subject matter of copyright correct

While the previous section demonstrated copyright’s traditional application to specific forms of intellectual work, the argument is being put that:

... now we have got used to talking about broadly-based rights — and I think consensus is now building for a ‘right of communication to the public’, in relation to all major categories of copyright material — we need to develop concepts of broadly based subject matter (Leonard 1994, p. 112).

This approach involves a leap of faith.

As noted, copyright law has tended to respond to technology rather than anticipate it:

The application of copyright to new types of subject matter follows the Anglo-Australian tradition of response to particular technological developments (McKeough 1992, p. 14).

Government policy to make the *Copyright Act* technology-neutral would be a break with this traditional pattern of development.

If there were broad rights, a strong argument could be made that the subject matter should be restrained rather than broadened.⁴¹ Following the line of economic analysis initially advanced by Plant (1934), one would assume that the technical form of the intellectual work will embody different incentives for production. Thus, one would want to keep the *Act* technologically specific so that

⁴⁰ For modes of reproduction where such an easy locus did not exist, the concept of copyright was not applied. Copyright, until the modern age, remained a specific protection applied to (or with) a specific technology.

⁴¹ The complementary argument can also be made — if the subject matter of copyright is expansive the rights attaching to those works should be restrained (McCabe 1989, p. 122).

the rights established by copyright would be directed at specific instances of insufficient incentive.

Acknowledging that new technologies are allowing intellectual works to be expressed in new forms, there may be a need to update the *Copyright Act*. There are two alternative policy routes to its amendment, each with its own advantages and disadvantages:

- firstly, incremental improvement of the *Act* to include new subject matter when deemed necessary. In this case, the *Act* may develop too slowly, so that protection of worthwhile classes is delayed, but protection is less likely to be excessive;⁴² and
- secondly, the broadening of the subject matter to capture new classes of works that may develop with new technological developments. In this case protection is easier to establish, but is more likely to be excessive.

The problem is one of over- versus under-inclusiveness.

Clearly, the need for copyright, and its consequent benefit, arises on a case-by-case basis. This view is consistent with the ‘serendipity approach’ — meaning that one should only protect that for which there is an explicit need. This approach was adopted by the IC (1995a) in advocating change of design law in its report entitled *Vehicle and Recreational Marine Craft Repair and Insurance Industries*.

The serendipity approach is best achieved through an incremental approach to copyright reform and extension (see Chapter 4). This more cautious approach is preferred because it is better that protection for various forms of works be introduced on a case-by-case basis, where the effects of reform can be determined more easily, rather than one-off wholesale changes that mask the costs or benefits of individual reforms.

The problem with the alternative route is that once protection is afforded to one industry it can be difficult to remove that protection if it is later found to be excessive or unwarranted.⁴³ As the chairman of the US Senate Judiciary Committee, Senator Orrin Hatch noted, copyright protection rises, and never falls: ‘... the entire history of our copyright laws has been a history of ever-increasing protection (cited in Stutchbury 1995, p. 21)’.

Even if the Government decided to reduce the protection of copyright by explicitly removing subject matter from the *Copyright Act*, there may be a

⁴² There may also be an administrative cost associated with cases that are brought to trial in an attempt to protect new classes of works in by resort to the traditional classes of works.

⁴³ Again, copyright is analogous to tariff protection.

constitutional challenge — see Appendix B. If such a constitutional challenge were successful, any attempt to reduce the scope of copyright protection could be very costly for the Commonwealth. For this reason, the ORR favours a cautious approach when considering proposals for expansion of the works protected by copyright.

This approach leads the ORR to oppose the introduction of potentially very broad categories of works.

One such broad category that has recently been proposed is the ‘audio-visual work’. Support for the introduction of an audio-visual work has come from two government-sponsored inquiries:

- the CCG (1994, p. 63) favoured the introduction of a new broad category of ‘audio-visual work’, intended to replace the cinematograph film category; and
- in its report on computer software protection the CLRC (1995, pp. 19 281-282) recommended the consideration of a category entitled audio-visual work that would encompass multi-media materials and cinematograph films.⁴⁴

Leonard (1994, p. 111) suggests that this subject should ‘include products consisting wholly or partially of images which may or may not be capable of being shown as a moving film’.

There is an alluring simplicity in the creation of a category that will absorb old categories and cater for new categories of works (such as multimedia). However, the category is potentially very expansive and is prone to capture works that are not yet contemplated and which may not need protection. This is a regulatory setting which maximises the present and future benefits for copyright holders while ignoring the potentially high costs for consumers, secondary producers and the Australian economy.⁴⁵

Although the incremental technology-specific approach has been criticised by some as ‘back-filling’ (Conway 1994), this criticism assumes that change can overcome uncertainty; it cannot. A fundamental revision of the *Copyright Act* would have the effect of dramatically *increasing* uncertainty. While this may be seen to be a short-term phenomenon, uncertainty could also be experienced over the longer term. This is because a flattening of the classes, with a concurrent

⁴⁴ In essence, the CLRC has been provided the opportunity to endorse its own recommendation. The ORR considers this far from optimal policy scrutiny as it all but guarantees support for the creation on a new copyright category — an ‘audio-visual work’.

⁴⁵ Secondary producers are those producers who will include copyrightable material as an input into a totally new creation.

flattening of the rights attaching to copyrighted material, will do away with much of copyright jurisprudence.

The ORR suggests that the CLRC assess the continuing need for the present categories that the *Copyright Act* protects, and create new categories where there is an identified and rectifiable lack of incentive (see Chapter 3). The key point is that these new categories should be tightly defined so that unforeseen effects are minimised and the incentives are closely targeted at those who truly need them.

5 THE NEW INTERNATIONAL DIMENSION OF COPYRIGHT PROTECTION

In the last year, major impetus for the reform of intellectual property has come from the need to comply with Australia's obligations under GATT and TRIPS.⁴⁶ Under the Trade in Intellectual Property Rights (TRIPS) Agreement (Part II, Section 1, Article 9), Australia agreed to comply with Articles 1-21 and the Appendix of the Berne Convention (1971), except for the article dealing with moral rights (Article 6bis). The TRIPS agreement creates comprehensive rules to protect intellectual property, including extension of the period of copyright protection to 50 years for performance/producer phonograms. The *Copyright (World Trade Organization Amendments) Act* (Cth) 1994 satisfied these requirements.⁴⁷

Taking Australia's obligations under the TRIPS agreement as given, the issue is whether Australia should go further than those changes required by the TRIPS — as proposed, for example, by the Australian Copyright Council (1994, p.1). A number of factors need to be considered, but a key question is the likely impact on national income in Australia, which in turn depends on the effects on foreign transactions and domestic economic activity.

Australia has a substantial and consistent net deficit in royalty transactions related to copyright.⁴⁸ As Chart 1 shows, the difference between inflows and outflows — the annual net flow — has been around \$1.2 billion in recent years. In 1993-94, payments of royalties to overseas holders of copyright totalled \$1732 million, while royalties earned from overseas totalled \$380 million.

⁴⁶ This has resulted in the passing of the *Trade Marks Act* (Cth) 1994, the *Copyright (World Trade Organization Amendments) Bill* (Cth) 1994 and the *Patents (World Trade Organization Amendments) Act* (Cth) 1994.

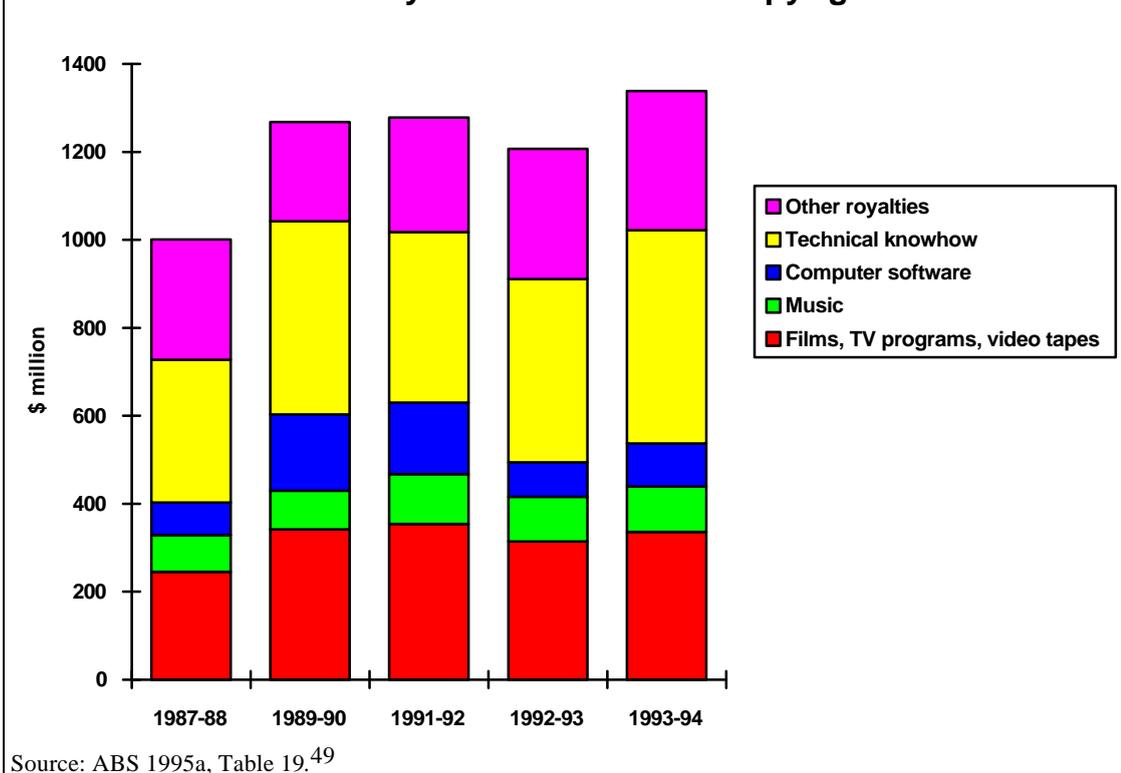
⁴⁷ The Copyright Act:

- introduced a right for copyright owners in relation to rental of sound recordings and computer programs;
- extended the term of protection (from 20 to 50 years) for performers against unauthorised sound recordings of their performances;
- granted performers protection in relation to commercial exploitation of existing unauthorised recordings made in the preceding 50 years; and
- extended copyright-owner initiated Customs seizure under s135 of the *Act* from published editions of printed works to allow the interception unauthorised imports of all copyright materials.

⁴⁸ See also Guldberg (1994, pp. 17-21); PSA (1990, pp. 147-148); PSA (1989, p. 21).

Given that Australia is a substantial net importer of copyrightable material, the extension of copyright protection via the TRIPS is likely to increase the net outflow of royalties. Any additional *unilateral* extension of copyright by Australia would have the effect of further increasing royalty flows to overseas copyright holders, but without improving the protection overseas (and royalty income) of Australian holders of copyright. In effect, it would increase the price paid by Australians for imported copyright material, but not increase the price paid for Australia's exports of copyright material.

Chart 1 — Net flow of royalties to overseas copyright owners



Against this decline in net external income would need to be balanced the benefits from any increased supply of works in Australia — whether from increased domestic production or foreign sources — that might result from the expansion of copyright protection domestically. This is ultimately an empirical question, although analysis in preceding chapters suggests that the domestic

⁴⁹ Excludes the years 1988-89 and 1990-91 as no relevant data was collected. Royalties from 'publications' are not included in the chart because of missing data and their low volume (a deficit in the range of \$9m to \$5m). Guldberg (1994, p. 20) suggests that the (relatively) strong year in 1987-88 can be attributed to the revenues from the Australian film *Crocodile Dundee*.

production effects may not be substantial and in some areas may even be negative.⁵⁰

It is commonly argued that, to be ‘competitive’, Australia should be at the forefront of technical and regulatory change (or at least comparable to the leaders).⁵¹ With respect to copyright law, Kerr (1995b, p. 28) has indicated that:

Australia will maintain a strong copyright system and will pioneer the development of copyright legislation in the new communications environment. ... There are a number of Australian initiatives which represent a ... ‘world’s best practice’ approach to copyright regulation in this rapidly developing area.

The above consideration suggests, however, that there are likely to be significant costs for Australia in adopting such a strategy for copyright, if ‘best practice’ is taken to involve unilateral extensions of Australia’s copyright protection. This will be particularly the case if other countries do not follow suit. Moreover, a commitment to maintain what may be seen as world best practice in this area may require periodic legislative reform. This would generate uncertainty as courts and practitioners attempted to grapple with new concepts and paradigms on a regular basis.

The ORR considers that extending copyright protection further, as the proposed changes do, is likely to reduce Australia’s national income. The ORR, therefore, urges the CLRC to consider carefully the potential economic impact of a substantial expansion of copyright protection. Indeed, in the absence of additional information about the overall economic impact of enhanced protection, the ORR considers that Australia should not extend copyright beyond what is required by TRIPS.

⁵⁰ It also follows that, without offsetting concessions, it may not have been in Australia’s interests to expand copyright protection to the level required under the GATT/TRIPS Agreement.

⁵¹ International Trade Strategies (1995, p. 10).

6 THE GROWTH IN NON-PROPRIETARY MEANS OF PROTECTION

The CCG (1994, p. 24) acknowledged the difficulty that copyright law has in dealing with new forms of intellectual endeavour when it stated that:

... it is no longer possible to adequately protect copyright owners or to facilitate the development of industries based around the exploitation of copyright material under the existing Act.

While the CCG's response has been to attempt to make copyright more effective, the marketplace has turned in the other direction, and is increasingly using protective mechanisms other than copyright. This movement by the market prompted Stutchbury (1995, p. 20, emphasis added) to comment that

The bigger issue is whether the traditional concept of copyright can — *or even ought to* — apply in an age where digitisation has dramatically reduced the cost of duplicating information-based goods and services.

This raises the question of why there is a need to rely on copyright to protect and develop creative endeavour when other means can achieve the same outcomes.

This Chapter explores means other than copyright which can, and are, used in conjunction with, or in place of, copyright protection.

6.1 Contractual arrangements

Contract law is a fundamental legal building block upon which much trade and commerce rests. This is particularly so for those new intellectual works which may fall outside of the *Copyright Act*. For example, Perkins (1994, p. 15) notes that 'Regulation of multimedia works in their holistic, unitary sense, for the moment in this country, must remain a matter of contract with minimal assistance from legislation.'

Article 40 of the *Agreement of Trade-Related Aspects of Intellectual Property Rights, Including Trade in Counterfeit Goods* (TRIPS) makes specific provision for the use of contractual provisions to restrict trade for the use of fostering the production of intellectual property:

1. Members agree that some licensing practices or conditions pertaining to intellectual property rights which restrain competition may have adverse effects on trade and may impede the transfer and dissemination of technology.
2. Nothing in this Agreement shall prevent Members from specifying in their national legislation licensing practices or conditions that may in particular cases constitute an

abuse of intellectual property rights having an adverse effect on competition in the relevant market.’

6.1.1 *Contracts of adhesion*

Contractual solutions have long been recognised as potential alternatives to copyright.

One way electronic publisher/vendors like West have attempted to prevent what you want to do is by contract, not copyright. That is, to gain access to their service you have to sign a contract promising not to take anything from their service and put it in a database, redistribute it, etc.⁵²

As Box 11 demonstrates, the Australian Bureau of Statistics (ABS 1995b, emphasis in original) adopts this method of protection in its contracts for the supply of data. This approach seeks to protect both copyrightable material (the expression of the data) and non-copyrightable material (the data itself).

Box 11 — Conditions of sale for ABS products — Copyright

- ‘• **The Commonwealth holds the copyright of ABS products.** The client agrees not to copy or otherwise reproduce the product or any information contained within it for the benefit of third parties, other than allowed by these Conditions of Sale, without the prior written consent of the Commonwealth.
- Where such consent is sought the Commonwealth reserves the right to set an appropriate charge or require a revenue sharing arrangement.
- The Client is permitted to quote selected statistical data contained in the products, providing that:
 - the ABS is cited as the source of the data used;
 - the terminology used is that used by the ABS for describing data; and
 - any analysis or transformation of the data is not attributed to the ABS.
- In respect of any data in computer readable form, or software, the Commonwealth authorises the Client to use the data or software on a non-transferable and non-exclusive basis. Copying of data or software for purposes other than back-up is **prohibited.**’ (ABS 1995b)

This contractual arrangement is only effective, however, for information that has a limited initial distribution because, as the distribution increases, the transaction costs of formulating contracts rise and the potential for undetected breaches

⁵² Rosenberg, as quoted in Hayden (1995).

increases. In this way, contracts of adhesion mirror cartels, effective when small, but unworkable on a larger scale (see Landes and Posner 1989, p. 330).

6.1.2 Intellectual property tie-ins

In order for the production and distribution of information goods to be economically viable, there must be some mechanism for recovering costs. Yet pricing information goods is notoriously difficult. The first copy of an information good will often be very costly to produce, while subsequent copies may cost next to nothing. The combination of high fixed costs and negligible marginal costs creates difficulties for conventional forms of pricing. For example, standard economic theory argues that it is desirable to price goods at marginal cost. But if the cost of (re)production is zero, marginal cost pricing will not recover costs.

Conventional markets for information address this problem by the use of intellectual property tie-ins. Tie-ins are licensing terms that stipulate the supply of a good or service on the condition that the licensee will acquire other goods or services from the licensor.⁵³ Thus, an intellectual property tie-in is a licence term that deals with intellectual property (the tying good) on the condition that another good or service (the tied good) is also purchased (Palmer 1989, pp. 289- 291 and Thorpe 1995). For example, common tie-ins bundle the information good with a good that is costly to reproduce: printed books, documentation, user support, a special kind of viewer, etc.

It is possible to argue that advertising is itself a tie-in. Advertising is a traditional means by which goods susceptible to free riding, such as television and radio broadcasts, have proved viable. There is no reason why this form of production incentive should not develop into other mediums. This is precisely what is occurring (IPLA 1995). For example, a number of newspapers and magazines containing advertising are distributed free over the Internet.

The digital approach to bundling is to establish digital libraries. Digital libraries involve the provision of information only when bundled with special services such as delivery, search, customisation, and so on, which add ‘user-specific value’ to the information. For example, a prospective house purchaser might want to retrieve cross-tabulated data on the incidence of burglaries and insurance premiums for different locations, along with police and local views. Such a search would require querying several disparate databases and merging the results.

As this example illustrates, the value added to the user depends on the organisation of the information, not simply the raw data. Similarly, the resource

⁵³ Tie-ins may also be referred to as tying arrangements.

cost to the provider depends on the expense of organising and customising the information. Since this reflects a non-negligible marginal cost, the charging mechanism can approach the desired economic result. As a side benefit, the fact that information may be organised differently for different users reduces the incentive for unauthorised copying and redistribution.

At an abstract level the pricing problems can be posed as follows: The objective is to construct a payment scheme that depends only on observable characteristics of users and that maximises overall benefits subject to the constraint of covering costs. Of course, it is necessary to build into this optimisation problem the fact that the users' choices of information services will depend on the nature of the pricing scheme that they face; economists refer to this constraint as the 'incentive compatibility' constraint.

Intellectual property tie-ins are a suitable mechanism for monitoring the initial use of copyrightable material but are inadequate to deal with multiple uses of the same material. To solve this problem people are turning to technical solutions.

6.2 Technical solutions

Faith in law will not be an effective strategy for high-tech companies. Law adapts by continuous increments and at a pace second only to geology. Technology advances in lunging jerks, like the punctuation of biological evolution grotesquely accelerated. Real-world conditions will continue to change at a blinding pace, and the law will lag further behind, more profoundly confused. This mismatch may prove impossible to overcome (Barlow 1993).

New technologies are a double-edged sword for copyright protection. On the one hand, some new technologies may drastically reduce the cost of copying intellectual property. On the other hand, some new technologies can monitor and charge for use, or halt the copying or use of intellectual property.

While much of the debate surrounding the need to update the *Copyright Act* focuses on the increased ability to copy intellectual material, too little debate focuses on the use of technology to protect intellectual work.⁵⁴ Technical solutions can be hardware-based and/or software-based.

While many are not practical, there are some important exceptions.

⁵⁴ Some commentators are now starting to focus on how income can be generated by technology-based remedies — see McIntosh (1995, p. 37)

6.2.1 Controlling access

Encryption

At its most basic form, encryption is the scrambling of data using mathematical principles that can be followed in reverse to unscramble the data. Encryption technologies can be used to deny access to the work in a useable form. Authorisation is in the form of possession of an appropriate password or key required to decrypt the information and restore it to its manipulable format.

Encryption is a reality in digital industries such as pay television:

Scrambling is essential if broadcasters are to recapture some of the large investment that will be needed to persuade the public to acquire all that hardware. Only by coding the signal will television companies be able to make sure that people pay for what they watch (*The Economist* 1995a, p. 16).

Work is presently under way to extend the application of encryption techniques to protect the copyright of information products on two-way digital networks (digital telephone and computer networks):

This method is not a copy protection scheme. Instead, copies are permitted, but each copy's use requires authorization for access. ... The authorization and usage measurement capabilities ... can be used to license information products in a variety of ways. It can be used to enforce site licenses by preventing access off-site and limiting the number of concurrent uses. It can also be used to limit duration of use, analogous to returning a book to a library, by disabling the use of a product after a period of time. It can be used to implement an electronic subscription by providing an unending duration of the use of the product on one machine. It can also be used to meter and charge for each use of a product (Griswold 1993).

While everyone agrees that 'encryption in some form is likely to be necessary in commercialized networks used for electronic publishing' (Perritt 1994, fn 4), it has its disadvantages and limitations:

- private key encryption systems require pre-established relationships and exchange of private keys in advance of any encrypted communication; and
- public key systems require the establishment and policing of a new set of institutions to maintain the public keys and ensure that they are genuine.⁵⁵

Despite these problems, encryption has strong support in many quarters:

Anything digital can be copied a million times without diminishing the thing being copied ... The people who wrote the software that gets stolen know this even more clearly than the thieves. Yet the price of trying to lock up intellectual property can be too high. Copyright and patent law between them could strangle the development of new software, and increase still further the power of behemoths like Microsoft. The instinctive reaction

⁵⁵ See Lisi (1994).

of most CFP [*Computers, Freedom and Privacy* conference] delegates would be to protect software with cryptography, and leave the law out of it (Brown 1995, p. C5).

The Minister for Justice has acknowledged the potential for encryption to serve as a useful device for collecting returns for authors (essentially what copyright does). To this end, he has referred the issue of cryptography to Standards Australia so as to assist in the development of encryption techniques (Kerr 1995b, p. 30).

Rendering or viewing software

Rendering or viewing software requires:

- a proprietary or unique file format that can only be read by certain software and that is developed or controlled by the information provider; and
- software that incorporates a control measure to prevent the viewing or use of a work without authorisation from the information provider and manipulation functions to permit the user to view or use the work (IPLA 1995).

Rendering or viewing software can be written to deny access to the work if the user enters unauthorised identification or an improper password. Rendering software can also be written to deny access if the work is not an authorised copy.⁵⁶

6.2.2 Controlling use

Digital tape is an example of where policy-makers have turned to technical solutions in preference to copyright. Digital tape promises CD-like data storage and quality, but with the added benefit of cheap reusable recording. It allows the possibility of near perfect copies of sound recordings to be made. Rather than relying on copyright, the law requires that a chip be added to each recorder that implements serial copy management. This chip allows each tape to be copied only once to another digital tape. While the copy of the original could itself be copied once more, the process of copying a copy may lead to a degradation in sound quality as tape errors emerge.

6.2.3 Monitoring use

Technical devices that monitor usage and then implement pricing accordingly are a feasible method of extracting income from creative endeavours.⁵⁷

⁵⁶ This requires that sufficient information regarding authorised use is included in header information and that it is sealed with a digital signature.

⁵⁷ Such schemes mirror, in the information realm, the IC's proposal (1994c, p. 15) to monitor and price road usage by electronic tracking and pricing.

Ideas to extract an income from the digital transmission of information are numerous — for example:

The idea of tagging information to see who uses it and how is immediately ruled out as an invasion of privacy. It might be possible to force users to have a smart card which automatically debits their accounts each time information is accessed electronically (Head 1993, p. 4).

The theory is becoming more realistic. As software becomes more reliant on networking capabilities, there is the possibility that piracy may be determined and corrected by the software itself. The embryonic elements of such a self-enforcement regime are already in place:

... a Windows 95 utility ... automatically gathered information on what hardware and software was on the machine, compiled a list of both Microsoft's and competitors' software by name, and forwarded that information to Microsoft via MSN [Microsoft Network] during the online session (Cooke 1995a, p. 15).

The next logical step is that the software on the machine can be compared with a database listing the software licensed to that particular user and then a message sent back to the computer disabling unlicensed software packages. In essence this constitutes a more advanced form of software copy-protection.

Another form of intellectual property monitoring is already being tested. The Intellectual Property Licensing Agency (IPLA) is the Internet equivalent of traditional copyright collection agencies:

IPLA licenses all types of intellectual property capable of being delivered electronically. This includes articles, books, poems, recipes, graphics, drawings, software, photographs, video, database searches, voice, musical recordings, games etc.

The principle is very simple. An author joins IPLA. The author will then register each work that appears on the Internet. IPLA supplies a program that operates as a front end to the viewing of the work. The program contacts IPLA and logs a request. This is all done within a second or two over the Internet.

IPLA monitors the Internet for misappropriation of work licensed to IPLA. IPLA will also negotiate with Internet providers for the payment of blanket licence fees to IPLA. Additional sources of income will be 'pay per view' and paid sponsorships.

IPLA will then distribute those fees to its authors. The distribution is based on a formula which takes into consideration the "intellectual weight" of the work. Each work is assigned a 'weight'. Each unique viewing of the work is given this weight. Additional factors, such as repeated viewing by the same viewer, are taken into consideration. (IPLA 1995)

These approaches run counter to many preconceived ideas about the protection of digital material because, rather than reducing the returns to copyright producers,

a technical system that monitors information usage could actually increase the flow of royalties to smaller participants.⁵⁸

It is important to note that technical devices could eventually provide makers with markets power that exceeds that provided by copyright. This could result in less dissemination of such works, with consumption costs exceeding production gains. Therefore, the ORR's support for technical solutions is limited to those solutions that provide an optimal level of protection for works.

⁵⁸ See the views of Dreier as quoted in Meredith (1993, p. 16).

APPENDIX A — AN OUTLINE OF COPYRIGHT'S HISTORICAL BASIS

Australia's present system of copyright protection derives from English legislation.

The press pre-dated the idea of a 'copy right'. It was not until the printing press reached a stage of development where it threatened the sovereign's hegemony that there was a recognition that there could be a property right in text. In 1557, in an effort to stop seditious and heretical ideas from being circulated in their realm, Queen Mary of England limited the right of printing to members of the Stationers' Guild. The Guild was given the right to search for and seize anything printed contrary to statute or proclamation with draconian measures for violators (Grossman 1977).

By 1565, the Guild created a system of copy rights for their members, thereby both privatising the state function of censorship and simultaneously creating a novel monopolistic business practice.

The system of privileges was abolished with the Cromwellian Revolution. Privileges had derived their authority from the Crown and, along with the King's authority, were set at nought. They were replaced by a series of ordinances. These prohibited printing a book unless it was first licensed. Printing was prohibited without the consent of the owner.

In 1662 the *Licensing Act* was passed. This prohibited the printing of any book unless first licensed and entered into the register of the Stationers' Guild. It also prescribed regulations as to printing and outlawed books suspected of containing matters hostile to the Church or Government. It further prohibited any person from printing or importing, without the consent of the owner, any book which any person had the sole right to print. The penalty for piracy was forfeiture of the books and a fine to be paid half to the King and half to the owner.

The *Act* of 1662 was continued by several *Acts* of parliament but expired in 1679. The system had fallen into disrepute because the power of the members of the Stationers' Guild to claim copyright in perpetuity had led to high prices and a lack of availability of books. The Stationers' control of the book trade broke down and book piracy flourished. Because of this breakdown, Parliament was regularly petitioned for a new licensing *Act*.

The next major development was the Statute of Anne (passed in 1709 and in force in 1710).⁵⁹ While this was not the first English statute to deal with copyright, it was the first to be adopted by Parliament (as opposed to royal decree) and the first to be unconnected with censorship. The *Act*, as the Preamble makes clear, was adopted for the encouragement of learning but simultaneously sought to balance the demands of the Stationers' Guild, the demands of authors and their assigns, and the public interest in the supply of cheap books.⁶⁰

As Patterson (1966, p. 13) noted:

The Act was a compromise between the demands of the publishers and what Parliament considered the public interest ... the legal monopoly which the printers had in perpetuity was broken but they were still left in a strong position. The character of the Act is that of a Trade Regulation, but the law nevertheless recognised that the source of the copyright is the work created by the author.

While the exact statutory provisions of copyright law have changed over time, the Statute of Anne established the general framework upon which successive reform of copyright has been built.

⁵⁹ This is reproduced in Davies (1994, pp. 179-183).

⁶⁰ The Statute of Queen Anne, 1709, Chapter XIX, Section IV.

APPENDIX B — A POSSIBLE CONSTITUTIONAL RESTRAINT ON THE ABOLITION OF COPYRIGHT

Section 51(xxxi) of the Constitution provides that the Commonwealth Parliament may make laws ‘with respect to ... the acquisition of property on just terms from any State or person for any purpose in respect of which the Parliament has power to make laws.’

It is quite clear that some classes of statutory rights are able to be extinguished without raising the acquisition of property.⁶¹ However, it is also quite clear that the concept of property in s51(xxxi) is broad, and is not limited to particular legal categories of property. Thus s51(xxxi) could apply to copyright.

The orthodox position has been that the mere extinction of a proprietary right does not constitute ‘acquisition of property’. An acquisition only occurs when the deprivation of one person resulted in another person acquiring a proprietary right. However, while acknowledging the orthodox rule as correct, a majority of the High Court in *Mutual Pools and Staff Pty Ltd v Commonwealth*,⁶² *Health Insurance Commission v Peverill*⁶³ and *Georgiadis v Australian and Overseas Telecommunications Corporation*⁶⁴ (all except Dawson and Toohey JJ) held that the extinctions of rights in those cases were capable of constituting ‘acquisitions of property’ for s51(xxxi) purposes, even though they did not have the result of vesting any property rights in any person.

The work of limiting the potential reach of s51(xxxi) is performed by theories which exclude some acquisitions of property from the scope of s51(xxxi). The theories arise in cases where some form of acquisition was clearly within Commonwealth power but the whole point of the acquisition would be defeated by a requirement of ‘just terms’. One such Commonwealth power is s51(xviii), the ‘power to make laws ... with respect to copyrights, patents of inventions and designs, and trade marks’. Because s51(xxxi) limits the other powers by means of a rule of construction, it is subject to any contrary intention that is manifested in the terms or the subject matter of another power.⁶⁵

⁶¹ *Minister for Primary Industries and Energy v Davey* (1994) 119 ALR 108.

⁶² (1994) 119 ALR 675.

⁶³ (1994) 119 ALR 655.

⁶⁴ (1994) 119 ALR 629.

⁶⁵ See *Mutual Pools* per Mason CJ and Deane and Gaudron JJ.

In *Nintendo* a majority of the High Court recognised the power of the Commonwealth to create a new class of intellectual property, hence acquiring someone's property, as one not limited by the requirement of acquisition on just terms. This was because the whole point of the intellectual property power is the creation of enforceable intellectual property rights which, by their very nature, affect other property.

It is important to note, however, that the *Nintendo* judgement goes only to the acquisition of property upon the creation a new form of intellectual property. The judgement does not explicitly deal with the acquisition of property inherent in the abolition of a form of intellectual property. Therefore the judgement in *Nintendo* leaves open the possibility of a legal challenge if the scope of the *Copyright Act* is reduced.

Until the issue is tested before the High Court, it remains unclear whether the Commonwealth can remove the proprietary grant of copyright protection without compensating the prior copyright owner on just terms.

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