

NEW WINE INTO OLD BOTTLES: TECHNOLOGICAL CHANGE AND INTELLECTUAL PROPERTY RIGHTS*

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Technological progress involves conflicting consequences for the owners of intellectual property rights. On the one hand, the scope of these rights is enhanced and new subject matter is protected. On the other hand, the effective exercise of rights is often hampered and sometimes completely undermined. It is therefore timely to take stock of the effect of technological change on the traditional formulation of intellectual property rights. In particular, the following issues need to be considered: (i) the goals of intellectual property protection, (ii) the present scope and duration of protection, (iii) the present challenges, (iv) the legal constraints on change at the national and international levels, and (v) strategies for the future, including the reformulation of existing regimes and the adoption of sui generis schemes.

Keywords: Copyright, intellectual property rights, patents, technological change.

INTRODUCTION — THE PROBLEM STATED

Technological progress involves conflicting consequences for the owners of intellectual property rights. On the one hand, the scope of these rights is enhanced and new claimants for protection come into existence. On the other hand, the effective exercise of existing rights is often hampered and sometimes completely undermined by the opportunities for unauthorised use that are thereby created. This paradox of growth and destruction has long been a vital topic of discussion for those involved in the exploitation and use of intellectual property, but the implications of the paradox stretch far beyond the concerns of these groups. The purpose of the present article is to review the effect that rapid technological change is having on the traditional formulation of intellectual property rights, and to consider what changes or revisions need to be made.

In this regard, it is useful to begin by setting out in full the passage from the Bible from which the title of the article has been derived.

No man putteth a piece of new cloth unto an old garment, for that which is put in to fill it up taketh from the garment, and the rent is made worse.

* This article is derived from a paper which was presented at a seminar held at CIRCIT, Melbourne on 28 November 1990. A longer version of the paper has been published under the same title as a CIRCIT Working Paper.

Neither do men put new wine into old bottles: else the bottles break and the wine runneth out, and the bottles perish: but they put new wine into new bottles, and both are preserved.¹

In an era when the virtues of recycling are constantly urged upon us, the reference to new bottles may seem unnecessarily wasteful. Nevertheless, the meaning of the passage becomes clearer when it is understood that, in biblical times, bottles were made out of skins which, when they were old, became dry and unsuitable for new wine, as they could not swell when the wine fermented. The result was that they burst and the new wine was wasted.² In relation to new technologies and intellectual property rights, therefore, the analogy has some attraction: the older and established regimes are now unmistakably beginning to show increasing strains when faced with the problems posed by technological progress.

In exploring this general theme, it is both useful and necessary to identify and analyze the factors that are relevant to the formulation of future policies in this area. In particular, it is essential to refer to the objectives of intellectual property protection, and to ask how these are affected by the processes of technological change. It is also important to appreciate that the present challenges are not new: the historical evolution of intellectual property rights has always been integrally linked to technological and scientific developments.

I therefore propose to organise my discussion under the following broad headings: (i) the goals of intellectual property protection, (ii) its present scope and duration, (iii) the challenges to the rights secured by this protection, (iv) the legal constraints on change that exist at the national and international levels, and (v) strategies for the future, including the reformulation of existing regimes, the adoption of *sui generis* schemes of protection and the development of a more general right against unfair copying.

THE GOALS OF INTELLECTUAL PROPERTY PROTECTION

The subject matter protected

It is as well, at the outset, to be clear what is presently meant by the term intellectual property. This is a broad term that is used to describe the wide range of rights that are conferred by the legal system in relation to discrete items of information that have resulted from some form of human intellectual activity. The level of such activity may vary enormously, from the initial acts of discovery, invention and creation of new ideas, schemes and principles to the more mundane acts of processing, ordering and revision of what is already known. At the international level, these rights have been defined in very wide and all-embracing terms. Thus, one international convention (of which Australia is a member)³ defines intellectual property as including the rights relating to:

- literary, artistic and scientific works;
- performances of performing artists, phonograms and broadcasts;
- inventions in all fields of human endeavour;
- scientific discoveries;
- industrial designs;
- trade marks, services marks and commercial names and designations;
- protection against unfair competition; and
- all other rights resulting from intellectual activity in the industrial, scientific, literary or artistic fields.

The approach of common law systems, such as in Australia, has generally been somewhat narrower than this. The tradition has been one of pigeon holes: a distinct category has been created for each kind of information that is protected and there has been a reluctance to accord protection on the basis of some broader general principle.⁴ Nonetheless, a wide variety of rights is now protected under Australian law. There are five distinct statutory systems of protection: copyright,⁵ registered designs,⁶ patents,⁷ trade marks,⁸ and a number of *sui generis* regimes in relation to such matters as plant varieties,⁹ performers' rights,¹⁰ integrated circuits¹¹ and certain logos and symbols.¹² At common law and equity, two main categories of subject-matter are protected: the trading goodwill or commercial reputation which is attached to a name, mark or get-up, and trade secrets or confidential information. Each of these categories is itself very broad, encompassing a diverse range of subject-matter, particularly in the areas of copyright and patents. The main thesis of this paper will be that these categories are now overloaded and are being stretched far beyond their original boundaries.

Justifications for intellectual property protection

Information as the subject of intellectual property protection: the problem of scarcity: It is as well to begin by noting that the subject-matter of intellectual property protection — information — has some curious characteristics. Unlike tangible matter, such as land or chattels, it is not possible to possess or occupy information exclusively. Once it passes into the public domain, it is a public good that may be endlessly multiplied without affecting its utility in the hands of its original holder. Thus, a "copy made does not reduce the number of further copies that can be generated, and the use by one person of another's inventive idea does not diminish the amount of the idea available for the rest of the community".¹³ It is also impossible for the producer of information to appropriate all the social benefits that flow from its production, in the same way that can be done with tangible objects such as chattels or land.¹⁴ Thus, once information has passed to another party, it is difficult, if not impossible, to recover any benefits that may flow from subsequent uses of that information by third parties.

Scarcity of resources in relation to human wants is the starting point of the discipline of economics¹⁵ and the scarcity of a particular resource usually forms the basis of any economic justification for the grant of exclusive property rights in that resource.¹⁶ With information, however, this element of scarcity is clearly absent, and the establishment of private property rights in such a resource therefore “artificially creates the symptoms of scarcity; they do not derive from it”.¹⁷ Furthermore, exclusive property rights in information do not necessarily solve the problem of appropriability referred to above: the costs of enforcement and protection of those rights, both private and public, will inevitably be higher than those with respect to tangible objects. Finally, there is an important public aspect to information that should be noted: very little information ever originates entirely with one individual as the unadulterated product of that person’s brain. Most of it is processed from other sources that are already in the public domain. As Pendleton has noted:

In a technologically advanced society no one can meaningfully be said to create information; rather they may innovate and synthesise, but necessarily they must build on existing stocks of knowledge. It follows that, in a limited sense, some aspects of technology are the common heritage of mankind.¹⁸

Justifications for protection: natural property rights: In light of the above, how is intellectual property protection to be justified? One traditional explanation that is to be found in Continental legal systems argues that a person has a natural right to the fruits of her labour and that this should be recognised as her property, whether in tangible or intangible form. In the case of copyright, it has been said that this approach

sees the foundation of the rights of an author in the very nature of things. The laws have no other purpose but to recognise the existence of the author’s rights, and to give them a more precise formulation. These rights are not created by the laws because they have always existed in the legal conscience of men. Copyright is thus a natural right growing out of natural law. The rights of an author in his intellectual product are equated with the property in corporeal things.¹⁹

This approach has exercised great influence in the development of continental intellectual property laws and has also had its adherents in English jurisprudence.²⁰ In the 20th century, at the international level, it is reflected in article 27(2) of the Universal Declaration of Human Rights which provides:

Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.²¹

Natural rights theories, however, have never been particularly fashionable in Anglo-American jurisprudence where property has been more usually viewed as an "institution given the sanction of positive law for a social purpose".²² Such theories, moreover, are highly individualistic in nature and make little, if any, allowance for the interests of society as a whole. For example, if an author or inventor's rights in her work or invention belong to her as a matter of natural law, there is no reason why they should not be enjoyed in perpetuity or be all-embracing in scope. On such an approach, members of the public would have no access, at any time, to the benefits of an author or inventor's work, save on the terms which the latter dictates. It also ignores the point made by Pendleton that few, if any, intellectual creations are ever the unaided product of one person's mind, but rather that they represent the value-added component contributed by the so-called creator to information which is already in existence. This public debt is unacknowledged in natural rights theories, but cannot be ignored.

Rewards and incentives: More popular in common law jurisdictions have been rationales based on the notion of fairness and/or the need to encourage creative intellectual endeavour in the public interest. These are closely linked, but distinct. The first rests on a clear moral foundation, namely that it is unfair that a person should work at creating something and then have the fruits of this work appropriated by another party. In the words of one 18th century English judge:

It is certainly not agreeable to natural justice that a stranger should reap the beneficial produce of another man's work.²³

To similar effect is the following statement of a recent British committee on copyright which began its report with the broad assertion that "Copyright protection finds its justification in fair play".²⁴

Agreeable as these statements are in generating the warm inner glow, they fail to take account of the fact that the rewards conferred by the grant of intellectual property rights are often in inverse proportion to the merit of the creation in question. Thus, the inventor of a new pop-up toaster may receive large earnings from her patent because it fulfils an immediate consumer need, whereas the inventor of a life-saving drug who has the same term of patent protection may find that it is only towards the end of this term that the drug may be marketed profitably because of the developmental costs, health and safety restrictions and difficulties in breaking down customer resistance. Yet there is probably little doubt that the public benefit conferred by the new drug far outstrips that of the new toaster. Again, in the case of literary works, the returns to the pulp novelist who panders to the worst elements of public taste may swamp those of the dedicated poet or novelist who labours all life long to bring to the public her particular artistic vision. Hence, rewards will not usually be commensurate to the worth of the achievement in terms of its value to the wider public. Furthermore, reward is probably

a misnomer here, in that no guarantee of reward is ever held out by the grant of intellectual property rights: at the most, all that is promised is the possibility of reward or, as one American scholar has suggested of the patent system, the opportunity to prospect for that reward.²⁵

The ethical norms of fairness and reward, also need to be balanced by the more overtly economic rationale of incentive. Even though the grant of intellectual property rights does not guarantee a monetary return for laudable work, they offer a prospect of reward which may, in some cases, be extensive. The underlying assumption here is that creators, like all human actors, are rational beings who seek to maximise their welfare. Accordingly, the grant of an exclusive property right in what they create is said to provide the most effective stimulus of all to further acts of creation, leaving the market place as the final arbiter of success. It also provides security for the considerable investments of time, labour, resources and skills which such persons (or their assignees or agents) must make in order to produce and disseminate their creations.

Underlying both the reward and incentive explanations for protection is the assumption that the grant of protection simultaneously promotes a wider public interest. If reward is the true object of protection, it is something due from society as a whole to the creator for the benefit which that person has conferred on society through her work. If incentive is the preferred approach, it is required in order that society may continue to receive the flow of these goods.²⁶ But fundamental to both is the notion that progress in the broadest sense is based on the continuing production of knowledge and information.

Arguments based on fairness and incentive are often made with the fervour of theological conviction, particularly when put forward by proponents of protection for a new species of intellectual creation.²⁷ However, the factual basis for asserting that the grant of intellectual property rights assists in the achievement of these objects is not easy to assess, as comparatively little empirical work has been done on the reasons why people engage in creative activity and on the role of intellectual property protection in promoting this.²⁸ Even in the absence of such evidence, it can be argued that the grant of any exclusive property right inevitably generates negative consequences of some kind. Most important of these is the obvious fact that third parties can no longer use the information which is the subject of the right without the permission of the owner — or, at least, the purposes for which that information may be used are now strictly limited.²⁹

Essentially, the following objections can be raised. First, the need to pay the rights owner a royalty or fee may increase the price of the product or service to which the intellectual property right relates. In more abstract terms, it can be seen as a kind of tax on knowledge and information. Thus, the first British patent law made express reference to the desirability of not granting patents that were “mischievous to the state, by raising prices of commodities at home, or hurt of trade. . .”³⁰ Again, in 1842 T.B. Macaulay said, with respect to the question of copyright in books:

The principle of copyright is this. It is a tax on readers for the purpose of giving a bounty to authors. The tax is an exceedingly bad one; it is a tax on one of the most innocent and salutary of human pleasures; and never let us forget that a tax on innocent pleasures is a premium on vicious pleasures.³¹

The logic of this view for Macaulay, given that he accepted the initial claim of authors to a bounty, was that the term of copyright should not be too long. In other countries, however, the same view has led to the more extreme conclusion that cheap books, and the benefits that flow from this, could be more readily obtained by refusing protection altogether. Thus, for many years, the United States refused to protect foreign works, with the result that English and European writers were freely copied in that country.³² Possibly, too, this had the effect of hindering American authors in their home market as their books were protected by copyright and were therefore often more expensive than the foreign imports. More recently, the developing countries have sought to limit or abolish the protection of foreign intellectual property rights on the basis that their economies need access to cheap technology, for example in the educational and training areas,³³ and fields such as pharmaceuticals and software.³⁴

Second, even if consumers are prepared to pay the prices charged by rights owners, the latter may not meet the demands of the public in sufficient quantities. Thus, education, research and training may suffer and economic progress will be impeded. In a number of instances, this view has led to the imposition of compulsory licences under which third parties may use intellectual property rights without permission but without infringing so long as they pay the rights owner an equitable remuneration for this use. This is particularly true in the area of copyright, but it has also been a continuing irritant in the relationships between developing and developed countries in the area of patents.³⁵

Third, it is sometimes argued that the grant of rights has little positive effect in promoting the investment that is required for the production of new inventions, technical innovations, literary and artistic productions, and the like. It is said that persons engaged in these activities will, in any event, still have the market advantage of lead-time and that this will ensure that they recoup the cost of their investment.³⁶ As against this, in many instances, the party who helps herself to the benefit of other persons' intellectual efforts is saved the expense of research and development and may therefore be able to undercut the product sold by the original creator. The empirical evidence for these assertions (either way) is not extensive and is ambivalent.³⁷ However, it is certainly clear that both corporations and nations place great importance on their intellectual property assets and use them as vital elements in commercial and trade negotiations. In both Australia and New Zealand, this is evidenced by the steady and increasing stream of intellectual property litigation;³⁸ internationally, it is evidenced by the

emergence of trade-related intellectual property rights (TRIPS) as an important component of the Uruguay Round of GATT negotiations (see further below).

Fourth, whilst not monopolies in the strict sense applied by economists, intellectual property rights have the potential to be used to anti-competitive effect, particularly where they are pooled together or used as a lever to obtain other ends. Even as early as 1624, this was expressly acknowledged in the first UK patents law in which the grant of a patent was excluded where this was to the "hurt of trade or generally inconvenient".³⁹ On the other hand, this does not mean that intellectual property rights *per se* are objectionable monopolies, as it will only be in a rare case that the exercise of an individual right will have these effects.⁴⁰ Some degree of discrimination is therefore required to work out the correct balance between the exercise of intellectual property rights and the impact of trade practices controls. Absent such an approach, the tag of monopolist has considerable emotive appeal.

Finally, quite apart from the economic issues raised above, intellectual property rights can be used to suppress free speech and access to information. Inherent in their nature is the fact that they impose distinct limitations over the way in which particular items of information can be used. Viable democracies, as well as thriving economies, depend upon access to information and free expression of ideas and opinions, and intellectual property rights can be used to block the sources of knowledge that are so vital to democratic decision-making and informed expression of political views. In this respect, the copyright system and the action of breach of confidence pose the greatest threats, and both have been invoked on occasion in attempts to prevent the disclosure of information relating to matters of public importance.⁴¹ This constitutional aspect of intellectual property protection is not often raised, but its significance should not be forgotten, however compelling the case for protection may otherwise be.

THE PRESENT SCOPE AND DURATION OF PROTECTION

The striking of a balance

The Anglo-Australian approach: Both the reward and incentive rationales outlined above view the grant of proprietary rights over particular kinds of information as a means of achieving certain desirable economic and social goals. While neither approach discounts the force of any of the objections to protection that can be made, each proceeds on the basis that these costs are outweighed by the benefits that protection confers. In other words, a kind of crude cost-benefit approach is applied. For this reason, protection on the basis of a wide generalisation would be undesirable, as each claimant for protection needs to be carefully assessed on a case by case basis. This, at least, has been the pattern of intellectual property protection in the Anglo-Australian legal tradition. In theory, each kind of right recognised by our laws represents the result

of attempts to strike a balance between the private interest of the creator, on the one hand, and the wider interest of the public, on the other.

Achieving the balance: monopoly protection versus protection against copying or derivation: In achieving the appropriate private-public balance for the rights encompassed by Anglo-Australian intellectual property law, two principal approaches have been adopted. The first has been to grant a monopoly right in the information in question, although the term monopoly here does not mean monopoly in the strict sense used by economists. The effect of this is to accord the holder of this right the sole control or 'occupancy' of the information, on a first-in-time basis. This has the important consequence that, even if the same information is independently created or developed subsequently by a third party, it will infringe the right that has been granted. This is the pattern to be seen in the patent, designs and trade marks systems. By contrast, the second approach, which is central to copyright and breach of confidence, has been based on the notion of copying or derivation, that is, infringement will only occur if the defendant's work is copied or in some way derived from that of the plaintiff. Other approaches that arise on the periphery, but which may well hold out great promise for future development, are to be found in emerging judicial doctrines of unfair competition, unconscionability, and unjust enrichment.

Duration of protection: As a matter of history, it has also been accepted that the protection given should not be indefinite in duration, or, if this is the case, it should be readily revocable in particular circumstances. The term of the protection granted therefore plays an important part in drawing the public-private balance referred to above and is linked closely to the nature of the protection given. Hence, the practice has been to limit the term of monopoly rights such as patents and designs on the basis that these are more sweeping restrictions on third parties and can only be justified for strictly limited periods of time. Copyright-type rights, on the other hand, have attracted far longer terms of protection, presumably on the basis that the imposition on the public is less because of the requirement of copying or derivation. By contrast, whilst indefinite in duration, both statutory and common law trade mark protection are liable to be lost if the mark is not used or becomes otherwise disintituled to protection, for example, by becoming deceptive or generic. Likewise, trade secret protection, although also indefinite in duration, is lost in the event of publication. In each instance, however, it is difficult to be sure that the period of protection accorded achieves the optimal public-private balance discussed above and this remains an ever-vexing question for policy-makers. Although the need for protection may be agreed in the abstract, the scope and duration of that protection require the most careful consideration in each case.

Conditions for protection: The public-private balance is also affected by the conditions that are set for the obtaining of each kind of intellectual property right. The gravity of these conditions differs

according to the nature of the right, being stricter in the case of monopoly rights and much less so in the case of copyright-type rights. In the case of patents, for instance, protection is expressly conferred on ideas, but only on ideas that are inventive, new and industrially useful; broad principles, theories and discoveries lie outside the scope of patentability.⁴² Furthermore, one of the conditions for the grant of a patent is that the applicant publishes the invention to the world so that other researchers may be apprised of it.⁴³ Thus, even though such persons may not use the invention without the patentee's permission, they are still able to make use of the information contained in the patent, in the sense that they are free to continue to research around and beyond the field of monopoly that has been conferred on the patentee. A similar balance is to be seen in the operation of the industrial designs system: the exclusive rights granted apply only to the particular shape or ornamentation of an article and nothing more.⁴⁴ They do not confer rights over the manufacture or sale of the article itself and third parties therefore remain free to make and sell it as they wish (unless, of course, the article is also the subject of a patent). Furthermore, like a patent, design protection is of relatively short duration,⁴⁵ so that after this time the design becomes free for all to use or develop as they wish.

Copyright protection, by contrast, is less rigid and more readily obtainable. The threshold requirements for protection are easily satisfied in most cases. First, the work must be reduced to a material form, a requirement that is now very liberally interpreted.⁴⁶ Secondly, the connecting factors of personal status and/or place of first publication are usually very easy to meet, in the light of Australia's international copyright obligations.⁴⁷ Thirdly, the requirement of originality for the subsistence of copyright in works is nothing like the requirement of inventiveness in the case of a patent or novelty or originality in the case of a design. Essentially, all that it means is that the work in question has not been copied or derived from elsewhere and that it displays a minimal amount of skill, labour or effort on the part of the alleged author. Unlike some foreign copyright laws, there is no requirement of intellectual creation that automatically excludes some subject-matter that is protected under Australian law. Thus, a wide range of miscellaneous material has been swept into the maw of copyright protection in Australia, including such mundane subject-matter as railway timetables,⁴⁸ football coupons⁴⁹ and lists of numbers for use in a game of bingo.⁵⁰ There is also a time-honoured principle (perhaps not as strictly observed in practice) that the ideas in a work are free for all to use once it is published to the world at large, but that the author has the right to prevent others from appropriating the particular form of expression which she has adopted to convey those ideas.⁵¹ The clear object of the rule is to achieve a balance between the interests of the author (through providing both the prospect of reward and an incentive to continue further work) and the wider interests of the public in the advancement of education, research and culture. It is less certain that this object is achieved as a matter of practice.

Each of the other intellectual property regimes, whether statutory or not, have threshold conditions for protection that differ according to the subject-matter in question. Under the registered trade mark system, the private-public balance is struck in a unique fashion: exclusive rights are granted for indefinite periods with respect to the use of particular marks or symbols, but this is made conditional on demonstration that the marks are distinctive or capable of being distinctive of the would-be registrant and that the grant of rights will not deprive other traders or persons of the right to use words or symbols which are part of the public domain, as, for example, in the case of surnames and descriptive or geographical words or symbols.⁵² The private-public balance is less clear in the common law and equitable actions that protect goodwill and confidences — perhaps because these actions have been developed on an *ad hoc* basis and the underlying principles are therefore less easy to discern. Nevertheless, in the action of passing off, the courts have been aware of similar considerations to those that arise under the trade marks law where names and symbols are concerned. They have also sought, with uneven results, to ensure that the rights of traders with respect to the get-up or packaging of their goods or services do not extend to rights over the goods or services themselves.⁵³ With the protection of secrets under the action of breach of confidence, there are also definite limits on the scope of this action: information ceases to be protected once it becomes sufficiently public, protection is not available unless the information is sufficiently delineated by the plaintiff, and, in recent years, the courts have evolved a flexible and wide-ranging defence which permits disclosure of confidential information where this can be justified as being in the public interest.⁵⁴

A static or a moving picture? Viewed from afar, the present structure of intellectual property presents a fairly clear picture. Each regime of protection can be said to represent a balance (however approximate) between private and public interest that has been drawn by the legislature or the courts, as the case may be. Even if there is disagreement with the way in which the balance has been set, there is still the appearance of certainty, and this is surely reassuring to rights owners and third parties alike.

However, the above is a deceptive picture, particularly if it is assumed from this that intellectual property rights are relatively static legal institutions. This is certainly not the case today; nor has it been so historically. All that is different today is that the speed with which change occurs has accelerated, and it is no longer possible to take a snap-shot of the intellectual property landscape that will remain relatively unaltered and unchallenged for a reasonable period of time. The dynamics of change, however, remain no different from what they have always been. In particular, technological change has always played a central role in stretching the scope of present rights and bringing new ones into existence, and it is to this we must now turn.

THE CHALLENGES TO THE STATUS QUO

The twin effects of technological development

The relationship between intellectual property protection and technological and scientific development has always been a close one. This occurs in two ways. First, human creative intelligence continues to manifest itself in new forms of subject matter in respect of which it is always possible to advance the reward-incentive theses as justifying the need to recognise a new proprietary interest. Originally, it was the invention of printing — a revolutionary new technology — that led to claims for protection of their copies by the publishers of books in the 16th century.⁵⁵ Over the following centuries, protection was gradually extended to a range of analogous subject matter, such as engravings, paintings, sculptures, plays and musical compositions, and, in this century alone, it has been applied to a more disparate group of productions which have come into existence as the direct result of technological development, for example, sound recordings, cinematograph films, TV and sound broadcasts,⁵⁶ and computer programs.⁵⁷ Outside the strict copyright arena, protection has been recently given in Australia to such subject matter as live performances,⁵⁸ integrated circuits,⁵⁹ plant and seed varieties⁶⁰ and trade marks for services.⁶¹

In each case, technological progress has brought into existence a new kind of intellectual creation or species of information, and the debates over the desirability of protection have followed a similar pattern. On the one hand, the proponents have emphasised the moral case for rewarding the persons involved in these activities as well as the practical need to provide them with material encouragement and security for their enterprises. On the other hand, opponents have pointed to the costs which protection for such items will impose upon the public, for example, the prices which may be charged to consumers. They have also argued that their creators will, in any case, reap their material reward in the market place if they compete efficiently and that therefore there is no need for any additional protection.⁶² These conflicting views point clearly to the need for some established framework or methodology which can be used to test the arguments for and against protection.

The second impact of technological change is to be found in the effect which this has had on the scope and exercise of existing rights. Nowhere is this better illustrated than in the case of copyright. Until quite recently, the basic right to make copies could only be infringed by the printing press or by hand: today, works may be reproduced by a wide variety of means, including reprographic reproduction, storage in a computer data bank, and the taping off-air of broadcast performances. Likewise, the right of public performance; was once confined to live performance: now a performance can be just as readily disseminated by means of a

sound recording, cinematograph film, broadcast, cable system or satellite. Whilst each of these can be viewed simply as different manifestations of the fundamental rights of reproduction and performance, they nevertheless constitute a very considerable potential expansion in the content of those rights. At the same time, if it is accepted that these new modes of reproduction and performance fall within the traditional formulation of these rights, they are often difficult, if not impossible, to monitor and enforce, with the result that copyright owners have little effective recourse against such activities as unauthorised home-taping, computer storage and retrieval, photocopying, or mass rental or hire. Furthermore, strong public interest justifications can frequently be advanced for these unauthorised uses, particularly in the areas of education and research.

What should be the public-private balance in such cases? Should the copyright owner be deprived of the benefit of these extensions of her rights on the ground that they are, in any event, unexpected windfalls which she has done nothing to deserve? On the other hand, why should the public now be allowed to use the copyright owner's material in these new ways, whereas previously for older uses they could only have done so with her permission? In particular, why should activities that are of general public value be subsidised by copyright owners rather than by the public as a whole? This kind of debate is a continuing theme in any study of intellectual property rights, although it appears to be raised most often in the context of copyright. For our present purposes, it has led to two significant consequences that merit further comment: a move towards the collectivisation of rights and the gradual transformation of these rights from exclusive rights of use and control into simple entitlements to remuneration.

The collectivisation of rights

Perhaps the biggest impact of technological change has been the growing awareness of rights owners that their rights become almost impossible to police if they seek to do this on an individual basis. In the case of copyright, this can be readily seen in the organisations of copyright owners that have emerged in a number of areas to enforce, on a collective basis, the rights of their members. The oldest of these is the Australian Performing Right Association, which was founded in 1926, but others have come into existence more recently in the areas of print and recording copyright. Furthermore, recent amendments to the *Copyright Act* follow European precedents in this area and are predicated on the basis that there will be authorised collecting societies representing owners for the receipt and distribution of royalties from the new compulsory licence and levy schemes.⁶³ This legislative recognition that the rights of individual owners will be worthless unless they are administered on a collective basis is a considerable step away from the classical 19th century conception of an individual's right and ability to contract on his or her

behalf. Although copyright has so far been the principal arena for collective activity, there is no reason why the same should not occur in the case of other rights, such as trade marks, designs and patents, particularly where there is concern about the activities of pirates.

Rights of remuneration rather than exclusive use

The most far-reaching consequence of technological change is the transformation that is occurring in the legal character of the rights in question. Although the possibility of individual action is still preserved by the *Copyright Act* in each of the cases mentioned above, the ultimate effect must be that the rights in question are transformed in character from rights of exclusion to rights to remuneration. The practical answer may be that there is no other option, if copyright owners are to receive compensation for the use of their property. However, the legal consequences are profound, particularly as they may run counter to Australia's international obligations, such as those under the *Berne Convention for the Protection of Literary and Artistic Works* (see further below).

The rights of individual creators and the changing character of creative activity

Two further aspects of intellectual property protection are thrown sharply into relief by the phenomenon of technological change. The first concerns one of the most difficult areas in intellectual property law, namely the issue of ownership. In traditional theory, it sufficed to look simply at the creator as the first owner. But most intellectual creation today is carried on at the behest of others — employers (whether private or public) or pursuant to some form of sponsorship or commission — and the work is often done in large teams. The legal position of employee creators with respect to their creations has not always been clear, but some fundamental issues of policy are raised here. How free are former employees to use in their subsequent occupations what they have made, created or learnt in the course of their employment? What effects do sponsorship and contractual arrangements have with respect to the disclosure and dissemination of knowledge? The latter is a question of particular importance in the higher education sector where many universities and research institutes are now required or impelled to enter into arrangements with outside commercial undertakings. In a small country such as Australia, a further dimension is added by the fact that a high proportion of rights owners are foreigners, and their economic and political interests may well differ considerably from those of local creators and enterprises. None of these matters can be ignored in any comprehensive study of intellectual property and its underlying policies.

The second matter is more intimately involved with the person of the creator and involves what are traditionally known as personal or moral

rights. These rights are largely non-economic in character, and their origins are to be found in Continental copyright law, principally that of France and Germany. Nonetheless, conceptually they have a relevance across the whole spectrum of creative activity where the creator is an identifiable human actor. Essentially, moral rights are concerned with the right of a creator (a) to be personally identified with her creation, and (b) to have some degree of control over the way in which that creation is used and presented to the world. These rights obviously take their strongest form in relation to literary and artistic works, where the work can be regarded as an emanation of the author's self and therefore inherently worthy of respect. But the same can be as true of other creations, for example, inventions, designs, even trade marks. To the extent that these involve and represent human creative activity, there is present an equally human desire to have this involvement publicly acknowledged and to ensure that the creation is not unreasonably distorted or changed in its use or presentation. There is a clear philosophical basis to this kind of thinking to be found in Continental jurisdictions, and it has found some recognition at the international level.⁶⁴ To date, it has found little resonance in Anglo-Australian law, although as a matter of good manners it is often to be found in individual creators.⁶⁵ Nonetheless, it is still a relevant factor to take into account in considering the need for, and the scope of, intellectual property rights in the wake of rapid technological change.

The international dimensions of technological change

It almost goes without saying that the implications of technological change run far beyond our national borders. Nonetheless, the point is worthy of a little elaboration for the purposes of our present discussion. No market for new products is ever limited to one country and the prospects for piracy of these products in other countries are therefore enormous. In this context, the arguments for and against protection simply become magnified into disputes between nations rather than between rights owners and consumers. Theft and piracy of their property is the emotive catch cry of the more developed countries, whose products are copied freely abroad in the developing nations, while the plea of the latter is for easier and cheaper access to the fruits of this new technology. Although a free-rider itself in the 19th century, in the latter part of the 20th century the United States has set the pace in seeking both international protection of its new technologies and the suppression of piracy. Inevitably Australia has been caught in the backwash of these developments and they have had, and will continue to have, a considerable impact on our future policy-making.

The most significant of these international developments is to be found in the current GATT negotiations concerning "trade related intellectual property rights" (TRIPS). These negotiations can be seen as a direct consequence of technological development and the desire of technologically advanced nations, such as the United States, to achieve

protection and enforcement of their intellectual property rights abroad, particularly in the areas of computer software, semi-conductor chips, films and sound recordings. Concerns over the huge losses that were sustained by US manufacturers, led that country, in the mid-1980s, to bring TRIPS into its international trade negotiations, both at the bilateral and multilateral levels. TRIPS have therefore become an important component of the current Uruguay Round of GATT negotiations, and will doubtless continue to be so, along with communications and other services.⁶⁶

This has had the effect of removing international negotiations over intellectual property rights from the more rarefied fora of the established intellectual property conventions and the World Intellectual Property Organisation into the cut and thrust of trade negotiations. One distinguished German commentator has warned that once intellectual property rights are seen as just another counter in the game of international trade negotiations this inevitably diminishes the traditional proprietary formulation of these rights.⁶⁷ To the legal purist, this is extremely worrying; to policy-makers, it does no more than reinforce their view that intellectual property rights are simply policy vehicles for achieving desirable economic and social goals.

CONSTRAINTS ON CHANGE

Before discussing strategies for meeting these challenges, it is necessary to refer briefly to several significant constraints on the freedom of Australian policy-makers. At worst, these provide clear obstacles to particular courses of action; at best, they place careful boundaries around the way in which a particular course of action is pursued.

Domestic constraints

Australia's federal system means that some heads of intellectual property protection are matters for the Commonwealth while other matters are left for the States and Territories. Essentially, this division occurs in the following way: concurrent (and pre-emptive⁶⁸) powers to make laws with respect to patents, copyrights, designs and trade marks are given to the Commonwealth Parliament under section 51(xviii) of the Commonwealth *Constitution*, while matters that are protected at common law or in equity, such as passing off, breach of confidence and other economic torts, are left to the State and Territorial courts.⁶⁹ As the Commonwealth Parliament has passed laws with respect to all the matters listed in section 51(xviii), a large part of the field of intellectual property is therefore the subject of Australia-wide legislation. In consequence, state and territorial differences can only arise within the limited areas that are left to the common law and equity where, in any event, developments tend to be reasonably uniform.

This relatively straightforward position has now been affected by a number of changes over the past 25 years. In particular, there has been a steady movement to expand the existing categories of rights referred to in section 51(xviii). Some of these developments have been noted above, including the protection of other subject matter under Part IV of the *Copyright Act 1968* and the protection of service marks under the *Trade Marks Act 1955*. Other examples are the protection of petty patents under the *Patents Act 1952* and of performers' rights under the *Copyright Act*. More significant has been the enactment of specific legislation to grant *sui generis* protection to new subject matter such as plant varieties,⁷⁰ circuit layouts⁷¹ and symbols and logos.⁷² The question which arises with each of these extensions of statutory protection is whether they are valid exercises of the powers of the Commonwealth Parliament under section 51(xviii) of the *Constitution*. Do service marks, for example, fall within the scope of the trade marks power, or broadcasts within the scope of the copyright power? More generally, how are the ambits of these powers to be determined: by reference to how they were understood at the time the *Constitution* was enacted, or in accordance with a more dynamic interpretation that takes account of intervening technological, social and economic change?

These matters have been largely untested in Australian law to date,⁷³ but they pose potential limits on the protection of new subject matter by the Commonwealth, particularly if this is done pursuant to *sui generis* legislation. Of course, the powers under section 51(xviii) are not the only relevant ones, and others may quite properly be called in aid, including the posts and telegraphs power (section 51(v)), the external affairs power (section 51(xxix)) and the incidental power (section 51(xxxix)). Nonetheless, uncertainty remains in a number of instances and, for this reason, the Constitutional Commission in 1987 recommended that section 51(xviii) should be reframed so as to allow the Commonwealth Parliament to legislate generally with respect to intellectual property.⁷⁴ This would certainly remove the uncertainties that presently exist and would clarify the basis for grants of protection to new subject matter such as computer software and electronic databases. It would also give the Commonwealth power to legislate in those areas which are currently left to the states and territories, such as trade secrets and passing off, but which fall within the generally accepted concept of intellectual property.⁷⁵ Given the glacial rate of constitutional change in Australia, it is unlikely that such an amendment will occur within even the remotely foreseeable future.

International constraints

Australia's international obligations may also have a limiting effect. Australia is party to a number of multilateral conventions dealing with intellectual property rights. Of these, the *Paris Convention for the Protection of Industrial Property 1883* (the Paris Convention) and the

Berne Convention for the Protection of Literary and Artistic Works 1886 (the Berne Convention) are the oldest and most important. Both relate to the protection of intellectual property rights belonging to foreign nationals in Australia. Broadly, the Paris Convention is concerned with the traditional categories of industrial property rights — patents, designs, trade marks and trade names, and the suppression of unfair competition — while the Berne Convention is concerned with the protection of literary and artistic works. Both are predicated on the principles of national treatment and independence of protection.⁷⁶ Under the first of these, protection is extended to the productions of foreign nationals on the same basis and to the same extent to which it is extended under domestic law to Australian nationals. Under the second, this protection is independent of the protection that may be enjoyed by that production in its country of origin.

The principles of national treatment and independence of protection are the twin pillars of protection under both Conventions and represent a generous approach to the position of foreigners who are, in effect, assimilated to Australian nationals. National treatment is sometimes referred to as formal reciprocity, but this is possibly misleading: in reality, national treatment is the opposite to the principle of reciprocity, under which protection of foreigners is only accorded to the same extent to which protection is given to Australian nationals in those countries. In international law terms, national treatment is a principle of enlightened self-interest that was adopted in many international trade negotiations in the late 19th century as a means of breaking deadlocks that occurred between countries with vastly differing systems and levels of protection.⁷⁷ While it means that it is possible for a national of country A to obtain protection in country B for a production that is unprotected in country A, it is presumed that these differences will even out in time and that country A will eventually move its protection to a similar level to that in country B. In the early days of both the Paris and Berne Conventions, national treatment was the means by which foreign nationals could be ensured of entry into the national intellectual property systems of other member countries. Even if this protection was less than in their own countries, they were nonetheless at no disadvantage in relation to the nationals of those countries, and some protection was obviously better than no protection at all.

In time, both Conventions have come to embody certain agreed minimum standards that all member countries agree to apply to foreign claimants, in addition to whatever level of protection would otherwise be accorded under the principle of national treatment. In this respect, the Berne Convention is far more advanced, as it now contains quite detailed prescriptions as to the categories of subject matter protected,⁷⁸ the exclusive rights to be accorded,⁷⁹ exceptions that may be made to these rights,⁸⁰ and their duration.⁸¹ By contrast, the Paris Convention contains relatively few specific stipulations as to these kinds of matters, and the protection of foreign claimants therefore is determined very

largely by the same law that applies to local claimants.⁸² However, the increasing number of specific obligations as to the level of protection to be accorded to foreigners under either Convention has had a considerable impact on the shape of our domestic laws, as few governments will be willing to extend benefits to foreigners that they would not be prepared also to accord to locals.⁸³ In copyright, for example, this has meant the abolition of formalities,⁸⁴ the extension of the term of protection to the life of the author plus 50 years,⁸⁵ and the recognition of new rights and new categories of works.⁸⁶

The principle of national treatment and the specific substantive requirements of these Conventions place significant limitations on the freedom of action of domestic policy-makers who are confronted with new claimants for protection. This problem is most intense in the area of copyright and can arise in several ways. First, if a particular subject matter is protected under national law as a literary or artistic work (the province of the Berne Convention), it must be accorded the level of protection that is required for all literary and artistic works under that Convention. In the case of computer programs, for example, if these are protected as literary works (as is presently the case),⁸⁷ this means that they must be accorded a minimum term of protection for the life of the author plus 50 years, as well all the other benefits that are generally conferred on literary works under the Convention. On this approach, there is no latitude to create a special copyright-style protection for programs that meets the particular needs of their makers as well as the legitimate concerns of consumers and other third parties: programs must be treated in the same way as the more traditional categories of literary works such as novels, text books, plays and the like.⁸⁸

The second problem arises in the area of new rights. The Berne Convention already requires protection of a number of substantive rights, such as those of reproduction,⁸⁹ public performance,⁹⁰ broadcasting⁹¹ and moral rights.⁹² However, if national law accords a new right to local authors that is not specified in the Convention, this must be extended to foreign authors under the principle of national treatment. Examples of such rights that are on the agenda of many national policy-makers include distribution, rental and public lending rights. Australia, in fact, has accorded new rights to Australian copyright owners in several instances in recent years, but without extending national treatment to foreign owners. One is the case of the public lending right, where a right to remuneration has been given to local authors of books held in public libraries. However, this was done at first through administrative arrangements and then through separate legislation which sought to isolate the new right from the rights that are generally conferred upon authors under the copyright law.⁹³ The other, which is more controversial, is the blank tape levy scheme which has recently been added to the *Copyright Act 1968* as a means of remunerating the copyright owners of works and sound recordings for the private and

domestic copying of their works and recordings on to blank cassettes.⁹⁴ Under this scheme, the owners of foreign works and sound recordings are only eligible to claim remuneration in Australia if their own country makes provision for 'adequate payments' to Australian copyright owners for the same kind of use.⁹⁵ As this provision is based on substantive reciprocity, it runs directly counter to the requirement to accord national treatment to these foreign copyright owners under the Berne Convention.⁹⁶

A third limitation concerns the restrictions that are allowable under national laws in so far as they are extended to foreign claimants. The Berne Convention is comparatively illiberal with respect to the restrictions that are permitted to the rights of copyright owners. Historically, it was an authors' charter that sought to elevate the protection of literary and artistic endeavour to the level of a universal copyright code. Accordingly, while certain limitations for the purpose of news reporting and for educational and similar uses are conceded in the Convention,⁹⁷ these are fairly narrowly drawn and this places constraints on national legislators who may be well aware of other legitimate claims for free access to copyright material. In certain limited cases, the Convention also contemplates the possibility (but no more) of compulsory licences in respect of certain uses of copyright works.⁹⁸ Apart from these, copyright protection for claimants under the Convention is expected to be unfettered and absolute. As the provision of compulsory licence schemes and other devices such as the blank tape levy are often the only practical means of meeting the threats posed to copyright owners by technological change, Australia's obligations under the Berne Convention can place very severe limitations on the form of legislative response to these problems, to say nothing of the need to balance the conflicting private interests of copyright and the wider interests of the public. As noted above, in many instances, all that can be achieved for rights owners is the right to receive some compensation for unauthorised uses of their works. However, such solutions will often be at variance with the provisions of the *Berne Convention* which are predicated on the notion that these rights should be exclusive rights of control and nothing less.

BOTTLING THE NEW WINE: FUTURE RESPONSES AND STRATEGIES

In the light of the constraints on change outlined above, how are the future challenges posed by technological progress to be met? To extend the metaphor used in the title of the article, do we now require new bottles or would it be sufficient simply to refurbish those which we presently have? As noted above, there is an absence of convincing empirical evidence on the success or otherwise of our present intellectual property laws in achieving their stated goals. Investigations of these issues are clearly required, not only as regards new claimants for protection,

but for all existing categories of rights. As a starting point, I would be reluctant to advocate any change until this sort of 'hard' information is obtained. Having said this, it would be remiss to conclude without a review of the various options for change that are available and that should be considered in the light of the information that may be thrown up by empirical investigations.

Reformulation of existing regimes versus sui generis solutions

The pressure from the advocates of increased protection is commonly towards the expansion of existing regimes. The latter are usually well understood and it is generally easier from a legislative point of view to add something to an existing system than to create something entirely new. Nonetheless, however malleable these systems may be, a breaking point must come at some stage. In the case of copyright, this is to be seen in the blanket protection of computer programs that occurred under the 1984 amendments to the *Copyright Act 1968*. Generous as the broad church of copyright has always been, the inclusion of software seems quite out of character with the traditional categories of literary and artistic works protected under that head.

Sui generis solutions, on the other hand, can offer protective regimes that are more closely tailored to the needs of the claimant for protection; they can also take closer account of the interests of third parties. Thus, the activity of reverse engineering might well be regarded as legitimate within the general computer industry, but there is presently no scope for this under copyright if programs are protected as literary or artistic works.

As a general principle, I would argue that protection for new categories of subject matter should be closely linked to the needs of those industries and should go no further than what is required to ensure their existence and future development. If this fits readily within the limits of an existing intellectual property right, there is no problem; if it does not, these boundaries should not be extended unnaturally to accommodate the new genus.

Despite the constitutional and international constraints discussed above, *sui generis* solutions are not impossible in Australia in certain circumstances. First, it is arguable that some new subject matter could be given a copyright-style protection under Part IV of the *Copyright Act 1968* without being caught by Australia's obligations under the Berne Convention. The latter applies only to literary and artistic works and so long as the new subject matter is protected other than as a literary or artistic work it should be free of the full rigours of Berne. The analogy here would be to other 'non-works' that are already protected under Part IV, such as films, sound recordings, broadcasts and published editions of works. So long as such protection can still be regarded as a proper exercise of the Commonwealth's copyright power under section 51(xviii) of the *Constitution*, it would avoid the risk of constitutional

invalidity. There has been no challenge to date of the Commonwealth's grant of copyright protection to recordings, films or published editions, and there is no reason why such subject matter as programs and electronic databases should not be added to this Part of the Act.

It is also possible to support *sui generis* schemes constitutionally if Australia has entered an international treaty providing for such protection.⁹⁹ This has been the approach taken with respect to plant variety rights, where Australia has adopted legislation to give effect to its obligations under the *International Convention for the Protection of New Plant Varieties*.¹⁰⁰ It is less clear that this is so in the case of the recent *Circuit Layouts Act 1989*. Protection under this Act is specifically excluded from the scope of artistic copyright protection,¹⁰¹ presumably to avoid any flow-on effects from the Berne Convention. On the other hand, Australia is not yet a party to any treaty governing this subject matter, although one was formulated in April 1989 in Washington and the legislation was passed with adherence to such a treaty clearly in mind.¹⁰² Possibly the legislation can be supported as an exercise of the designs power under section 51(xviii).¹⁰³

The lesson to be drawn from the above instances is that *sui generis* schemes are still feasible in Australia, provided that care is taken in their formulation. This is not to deny that such schemes may have drawbacks: if too specific, they may exclude new forms of technology that are correctly regarded by their creators as being part and parcel of the original subject matter protected. Computer programs and integrated circuits are good examples of this, as current developments in these areas may be rapidly outstripping the present legal definitions of these terms.¹⁰⁴ Electronic databases are another, as they may lack the necessary elements for protection as compilations under the *Copyright Act 1968*, yet otherwise be deserving of protection. On the other hand, it is possible to construct broad statutory formulae that can be effective in accommodating new technological developments in some areas. This has certainly been true of the courts' interpretation of the concept of invention under the patents law and has remained unaffected by the passing of a new *Patents Act* in 1990.¹⁰⁵ Thus, patent law has been able to encompass the bewildering developments that have occurred in such areas as biotechnology, without causing great stress on the basic legal concepts involved.

Special exceptions, defences, compulsory licences and levies

For many years, courts and legislature alike have responded to the challenges discussed above by the creation of special exceptions that seek to make greater allowance for the rights of third parties and the general public. In many instances, access to material protected by intellectual property rights has been allowed by special exceptions or defences that permit such use free of charge or subject to payment of a royalty under a compulsory licence. Most exceptions to liability are to be found in

copyright, but there are exemptions in other areas which have often caused controversy or uncertainty. These include the grant of compulsory licences for the non-working of patents,¹⁰⁶ relaxations in the laws governing the parallel importation of books and trade marked goods,¹⁰⁷ the availability of public interest justifications in the area of trade secrets¹⁰⁸ and the feasibility of reverse engineering in the case of circuit layouts.¹⁰⁹

Some of these exceptions embody a clear policy-decision that the interests of rights owners should be subordinated to a wider public interest, for example, the needs of educationalists and researchers, the desire of consumers for cheaper products, the disclosure of iniquity, trade practices considerations, and so on. Others reflect purely practical considerations, embodying a recognition that the uses in question are essentially *de minimus* and entail little or no harm to the rights owner. By contrast, the background to other exceptions is to be found in the self-interest of a particular group that has seen itself threatened by the existence and exercise of the intellectual property right in question and has, through the use of appropriate pressure, been able to secure some measure of relief. This is certainly the case with the provisions governing the use of musical and literary works by record manufacturers under the *Copyright Act 1968*.¹¹⁰ Finally, there are those exceptions which are simply a recognition that the use in question will occur in any event and which therefore represent an attempt to regularise, and to compensate for, this use.

Viewed in an overall fashion, these exceptions present a picture that is far from coherent; each bears the hallmark of an *ad hoc* solution and compromise designed to meet a particular problem. In an age of rapid technological change, we need to think more clearly about the way in which exceptions to protection are designed, particularly where this takes the form of an attempt to provide rights owners with compensation for uses that are otherwise impossible to police. In many cases, these *ad hoc* solutions have achieved justice and balance in the immediate circumstances then arising. On the other hand, they have often led to long term distortions. As seen above, this is happening in the area of copyright as rights become increasingly collectivised and less exclusive in character. Rather than adopt piecemeal solutions of this kind, therefore, it might be better to look for approaches that are more far-reaching.

Development of a general law of unfair misappropriation

The most radical solution to the issues raised in this article would be to remove the categories of protection that presently exist and make protection available to all manifestations of intellectual creativity without the need to fit them within a particular set of pre-conditions or qualifying criteria. Under this approach, the decision to grant protection would be made on a case by case basis, subject to some general unifying

and underlying principle. In light of the many conflicting interests and values involved, it can hardly be suggested that this general principle would entail recognition of an exclusive property right in every intellectual creation that comes into existence. However, some guidance may be derived from judicial doctrines of unfair competition and misappropriation that have evolved in other parts of the law and in other jurisdictions. These have also been advocated by a number of commentators.¹¹¹

The following proposition might serve as a suitable starting point for discussion (although I claim no particular originality for it): protection should be available for all manifestations of intellectual activity, however and wherever occurring, where a third party has appropriated, without justification, the fruits of this activity to her own benefit. The rights of the third party, and the broader public, could be preserved by a qualification that liability would not arise where this party had significantly added to or reworked the plaintiff's information so as to give it a new and different character. In some instances, too, justification might be found to exist where the unauthorised use has not unreasonably interfered with the plaintiff's exploitation of her intellectual property and/or where the moral rights of the original creator have been respected. In this way, the public domain would be opened up and existing stocks of information would be made more readily available for development and reworking. On the other hand, there would be liability for blatant and unfair copying where third parties seek to exploit the work of others whilst adding nothing significant of their own. In this way, incentive would still be retained for creators and investors to commit their time and resources to the development of new kinds of information.

It is unlikely that such a general scheme will ever be adopted in this country, at least in the short and medium term. Not only does it appear to strike at the heart of the traditional formulation of most intellectual property rights, but implementation would also involve formidable obstacles of a constitutional and international kind (see above). Furthermore, the High Court of Australia has recently refused to accept the development of a general action of unfair competition, stating that such a rejection:

involves no more than a recognition of the fact that the existence of such an action is inconsistent with the established limits of the traditional and statutory causes of action which are available to a trader in respect of damage caused or threatened by a competitor. Those limits, which define the boundary between the area of legal or equitable restraint and protection and the area of untrammelled competition, increasingly reflect what the responsible Parliament or Parliaments have determined to be the appropriate balance between competing claims and policies. Neither legal principle nor social utility requires or warrants the obliteration of that boundary by the importation of a cause of action whose main characteristic is the scope it allows, under high-sounding generalizations, for judicial indulgence of idiosyncratic notions of what is fair in the marketplace.¹¹²

However, it should be noted that hints of such an approach are to be found in more recent judicial decisions in the area of passing off, and it might also be said that many decisions in copyright are based on unfair competition considerations rather than requirements of originality or literary and artistic creation.¹¹³ Furthermore, the potential for such a right of action as a supplementary form of protection to those presently in existence should not be overlooked. In many of the problem areas posed by technological change, the development of a general action of unfair copying could play a vital role in providing protection without causing undue prejudice to third party rights. More importantly, it would allow the integrity of existing regimes of protection to be preserved, without the distortions that are presently occurring. To pick up the wine bottle metaphor again, it might be possible to retain the old bottles but to provide an overflow tank underneath for some, at least, of the new excess wine.

NOTES AND REFERENCES

1. *Matthew*, chapter IX, verses 16 and 17.
2. This explanation (which seems perfectly reasonable) is to be found in an old family bible of uncertain date, (but probably around 1880): *The Annotated Paragraph Bible*, The Religious Tract Society, London (1880-?), p. 1073, note 17.
3. Article 2(viii) of the *Convention establishing the World Intellectual Property Organisation*, adopted at Stockholm, 14 July 1967. Australia has been a member since the inception of the Convention.
4. This reluctance to afford general protection to such matters was well summed up by Dixon J. (as he then was) of the Australian High Court in the famous case of *Victoria Park Racing and Recreation Grounds Co. Ltd. v. Taylor* (1937) 58 CLR 479 at 509:
 [The courts] have not in British jurisdictions thrown the protection of an injunction around all the intangible elements of value, that is, value in exchange, which may flow from the exercise by an individual of his powers or resources whether in the organisation of a business or undertaking or the use of ingenuity, knowledge, skill or labour. This is sufficiently evidenced by the history of the law of copyright and by the fact that the exclusive right to invention, trade marks, designs, trade name and reputation are dealt with in English law as special heads of protected interests and not under a wide generalisation.
5. *Copyright Act 1968* (Cth.)(as amended).
6. *Designs Act 1906* (Cth.)(as amended).
7. *Patents Act 1952* (Cth.)(as amended).
8. *Trade Marks Act 1955* (Cth.)(as amended).
9. *Plant Variety Rights Act 1987* (Cth.).
10. *Copyright Act 1968*, Part XI A (added by *Copyright Amendment Act 1989*).
11. *Circuits Layouts Act 1989*.
12. For example, the *Olympic Insignia Protection Act 1987* (Cth.); the *Advance Australia Logo Protection Act 1984* (Cth.).
13. B.V. Hindley, 'The economic theory of patents, copyright and registered industrial designs', *Background Study to the Report on Intellectual and Industrial Property*, Economic Council of Canada, 1971, p. 1. See further, W.M. Landes and R. Posner, 'An economic analysis of copyright law', *Journal of Legal Studies*, 18, 1989, p. 325.
14. See further the discussion of this point by W. Bishop, 'Negligent misrepresentation through economists' eyes', *Law Quarterly Review*, 360, 96, 1980, pp. 363-9.

15. "[E]conomics is the science of rational choice in a world — our world — in which resources are limited in relation to human wants.", R. Posner, *Economic Analysis of Law*, 3rd ed., 1985, p. 3.
16. More correctly, the result of the transaction in question should be that sufficient gains are generated to the beneficiaries of the transaction that they could, hypothetically, compensate the losers from change so as to render the latter fully indifferent to it but still have sufficient gains left over for themselves: M. Trebilcock, *Economic Analysis of Law*, 1990. This is the concept of Kaldor-Hicks efficiency, which should be contrasted with Pareto efficiency, as to which see generally: Trebilcock, *op. cit.*; B. Ackerman, *Economic Foundations of Property*, 1975, pp. xi-xiv; R.A. Posner, *op. cit.*, pp. 11-15; and B.V. Hindley, *op. cit.*, pp. 1-2. Note also that there are a number of qualifications that need to be made in relation to these statements, e.g., the rights that are the subject of the transaction should be readily transferable with minimal costs, they should be readily appropriable, and there should be perfect information in the market place.
17. Hindley, *op. cit.*, p. 1.
18. M. Pendleton, 'Intellectual property, information-based society and a new international economic order: the policy options?', Opinion, 1985, 2 *EIPR* 31.
19. J.R. Kase, *Copyright Thought in Continental Europe*, 1971, p. 8. See further F. Machlup and E. Penrose, 'The patent controversy in the nineteenth century', *Journal of Economic History*, 10, 1950, pp. 11-17; and H.M. Spector, 'An outline of a theory justifying intellectual property and intellectual property rights', *European Intellectual Property Review*, 8, 1989, p. 270.
20. As can be seen in the great case of 'Literary Property' in the 18th century: *Millar v. Taylor* (1769) 4 Burr. 2303, 98 ER 201.
21. To the same effect, see the all-embracing definition of intellectual property in *Convention establishing the World Intellectual Property Organisation 1967, op. cit.*, art. 2 (viii).
22. Machlup and Penrose, *op. cit.*, p. 15.
23. *Millar v. Taylor* (1769) 4 Burr. 2303, 98 ER 201. To similar effect, see *Walter v. Lane* [1900] AC 539 (Lord Halsbury LC); *Hogg v. Scott* (1874) LR 18 Eq. 444 at 458 (Hall V-C); and *Macmillan & Co. v. Cooper* (1924) 93 LJPC 113, 119 (PC, Ind.). See also *International News Service v. Associated Press* (1918) 248 US 215, 239-241 (Pitney J.).
24. *Copyright and Designs Law: Report of the Committee to Consider the Law on Copyright and Designs*, Cmnd 6732, HMSO, London, 1977, (the "Whitford Committee"), p. 3.
25. E.W. Kitch, 'The nature and functions of the patent system', *Journal of Law and Economics*, 20, 1978, p. 265.
26. Not all creators are eager for reward: Benjamin Franklin declined the offer of a patent for his stove, saying that "as we enjoy great advantages from the Inventions of others, we should be glad of an Opportunity to serve others by any invention of ours, and this we should do freely and generously." Quoted by the Science Council of Canada, *Innovation and Intellectual Property Rights in Canada*, Discussion Paper, 1990, p. 13.
27. See, for example, the arguments put forward in favour of granting copyright protection to works of architecture and to sound recordings before the 1909 Board of Trade Committee on copyright (*Report*, Cd. 4976, 9-10, 26) and in relation to cinematographic films and broadcasts before the Gregory Committee on copyright (*Report*, Cmnd. 8662, ch. 6). More recently, consider the arguments in Australia concerning the need to protect computer programs: J.McL. Emmerson, 'Computer software: detailed inquiry needed before legislation', *Law Institute Journal*, 58, 1984, p. 514. Note also the critical views of D. Vaver in 'Intellectual property today: of myths and paradoxes', *Canadian Bar Review*, 69, 1990, p. 98.
28. See, for example, Hindley, *op. cit.*, and B.C. McDonald, *Copyright in Context: The Challenge of Change*, 1971. For a review of the Australian patent system, see *Supporting Papers for Economic Effects of the Australian Patent System*, Industrial Property Advisory Committee, Australian Government Publishing Service (AGPS), Canberra,

1982. And for an iconoclastic approach that suggests that adversity, rather than the prospect of reward, may operate as a necessary stimulus for individual inventors, see S. Macdonald, 'Human qualities necessary for invention: independent inventors and the stimulus of adversity', *Prometheus*, 7, 1989, p. 333.
29. I have in mind here the fact that, while the information cannot be used for the purpose for which the right holder has obtained protection, it may be possible for third parties to use the information for another purpose. For example, where X publishes a book on cooking, third parties cannot reproduce the particular form in which X's recipes are presented; on the other hand, they will be free to make the dishes described in the recipes or to use them as the basis for designing new recipes which they may then publish themselves. Again, if Y has a patent for new widget, X will be able to use this information for the purpose of making a different kind of widget so long as he does not make something which is substantially the same as that of Y. In other words, intellectual property rights do not usually completely block the further use of information once the latter is disclosed.
 30. *Statute of Monopolies*, 21 Jac. I, c.3 (1624), s. VI.
 31. *House of Commons Debates*, 5 February 1842, p. 350. Macaulay's point was a more subtle one, however, as his speech goes on to show. He was not so much concerned at the cost of the tax on readers as such, as with the fact that it provided authors with little or nothing more in the way of bounty:
 I admit, however, the necessity of giving a bounty to genius and learning. In order to give such a bounty, I willingly submit even to this severe and burdensome tax. Nay, I am ready to increase the tax if it can be shown that by so doing I should proportionately increase the bounty. My complaint is, that my hon. and learned Friend doubles, quadruples, the tax, and makes scarcely any perceptible addition to the bounty.
 32. For a detailed account of this with respect to the unremunerated use of British books by American publishers during the 19th century, see J.J. Barnes, *Authors, Publishers and Politicians: The Quest for an Anglo-American Copyright Agreement 1815-1854*, Routledge & Kegan Paul, London, 1974. On the piracy of books on the continent of Europe at the same time, see S. Ricketson, *The Berne Convention for the Protection of Literary and Artistic Works: 1886-1986*, Centre for Commercial Law Studies and Kluwer, London, 1987, ch. 1.
 33. See, for example, *The Paris Act of the Berne Convention for the Protection of Literary and Artistic Works, 1971*, Appendix; see further, S. Ricketson, *The Berne Convention*, *op. cit.*, p. 623 ff.
 34. See generally, E. Armitage, 'The Paris Convention: background to the diplomatic convention', [1980] EIPR 83; S. Greif, 'The compulsory working of patents: economic possibilities and limits with special reference to the developing countries', *Law and State*, 26, 1982, p. 75.
 35. *Ibid.*
 36. A provocative argument along these lines (although not taken to its limits) is to be found in S. Breyer, 'The uneasy case for copyright: a study of copyright in books, photocopies and computer programs', *Harvard Law Review*, 84, 1970, p. 281. See also the reply to this by W.B. Tyerman, 'The economic rationale for copyright protection for published books: a reply to Professor Breyer', *UCLA Law Review*, 18, 1971, p. 1100 and Breyer's rejoinder in *UCLA Law Review*, 20 1971-1972, p. 75.
 37. In Australia, the most extensive examinations have been undertaken into the patent system: see generally, T.D. Mandeville, D.M. Lamberton and E.J. Bishop, *Economic Effects of the Patent System: A Commissioned Report to the Industrial Property Advisory Committee*, AGPS, Canberra, 1982 and supporting papers. See further the following reports by the Wollongong University Centre for Technology and Social Change: *Technology Strategies in Australian Industry*, AGPS, Canberra, 1990; and *Strategic Alliances in the Internationalisation of Australian Industry*, AGPS, Canberra, 1990.
 38. In this respect, it is worth noting that between 1982 and 1 September 1991, the specialist series of reports published by CCH Australia Pty. Ltd. had published reports of 837

- judicial and administrative proceedings relating to intellectual property rights: see *Australian Intellectual and Industrial Property Law*, CCH Australia Pty. Ltd., Sydney, 1983-.
39. *Statute of Monopolies 1624*, s. VI.
 40. See further N.R. Norman, 'Patent law revision: some economic considerations', *Australian Business Law Review*, 12, 1983, p. 226.
 41. See, for example, *Commonwealth of Australia v. John Fairfax & Sons Ltd* (1981) 55 ALJR 45; *Attorney-General (UK) v. Wellington Newspapers Ltd.* [1988] 1 NZLR 129 (HC), 161 (CA); *Attorney-General v. Guardian Newspapers Ltd. (No.2)* [1988] 2 WLR 776 (HL); *Salinger v. Random House Inc.* (1987) 811 F.2d 90 (CA2); *Morang v. Le Sueur* (1911) 45 SCR 95 and *Lindsey v. Le Sueur* (1913) 29 OLR 648, aff'ing (1913) 27 OLR 588. See also P. Laval, 'Fair use or foul?', (1989) 36 Jo. Cop. Soc. USA 167; D. Vaver, 'Intellectual property today: of myths and paradoxes', *Canadian Bar Review*, 69, 1990, pp. 98, 109-113; C. Harvey and L. Vincent, 'Historians' rights', *Manitoba Law Journal*, 10, 1980, 281; J. Conforti, 'Copyright and freedom of expression', *Intellectual Property Journal (Canada)*, 5, 1989, p. 103.
 42. See generally, *Patents Act 1990*, s. 18.
 43. *Ibid.*, ss. 53-8.
 44. See generally, *Designs Act 1906*, ss. 4, 17.
 45. 16 years: *Designs Act 1906*, s. 27A.
 46. See now the definition of 'material form' in the *Copyright Act 1968*, s. 10(1).
 47. *Copyright Act*, s. 31.
 48. *Leslie v. J. Young & Sons* [1894] AC 335 (HL); *H. Blacklock & Co. Ltd. v. C. Arthur Pearson Ltd.* [1915] 2 Ch. 376.
 49. *Ladbroke (Football) Ltd. v. William Hill (Football) Ltd.* [1964] 1 All ER 465 (H.L.).
 50. *Mirror Newspapers Ltd. v. Queensland Newspapers Pty Ltd.* [1982] Qd. R. 305.
 51. See generally *Baker v. Selden* (1879) 101 US 99; *Hollinrake v. Truswell* [1894] 3 Ch. 420; *L.B. (Plastics) Ltd. v. Swish Products Ltd.* [1979] FSR 145.
 52. See generally *Trade Marks Act 1955*, ss. 24-26, 28, 33.
 53. See, for example, *Parkdale Custom Built Furniture Pty. Ltd. v. Puxu Pty. Ltd.* (1982) 56 ALJR 715.
 54. See generally *Attorney-General (UK) v. Heinemann Publishers Australia Pty. Ltd.* (1987) 10 IPR 153.
 55. See generally, S. Ricketson, *The Law of Intellectual Property*, Law Book Co., Sydney, 1984, ch. 4. The claims for protection of books finally culminated in the first modern copyright Act, the Statute of Anne 1709 (8 Anne c.19).
 56. See now Part IV, *Copyright Act 1968* (Cth.).
 57. *Copyright Amendment Act 1984*.
 58. This protection is, in fact, accorded under the *Copyright Act 1968*, Part XIA (inserted by the *Copyright Amendment Act 1989*).
 59. *Circuit Layouts Act 1989*.
 60. *Plant Variety Rights Act 1987*. Legislation to the same effect was also passed in New Zealand in the same year: *Plant Variety Rights Act 1987*, as to which see also C. Brown, 'Protecting plant varieties: developments in New Zealand', *Victoria University of Wellington Law Review*, 18, 1988, p. 83.
 61. *Trade Marks Amendment Act 1978* (Cth.).
 62. In the case of plant variety rights, see the debates in the Australian Parliament that occurred in 1982: *Weekly Hansard Senate*, 14, 14-15 September 1982, pp. 891-989, 979-988.
 63. In particular, see *Copyright Act 1968*, ss. 135P-135S (copying of broadcasts for educational purposes), 135ZZB-135ZE (photocopying) and 135ZZU-ZZV (blank tape levy).
 64. See, for example, *Berne Convention for the Protection of Literary and Artistic Works 1886-1971*, art. 6bis (the moral rights of authors); *Paris Convention for the Protection of Industrial Property 1883-1967*, art. 4ter (right of inventor to be mentioned as such in patent).
 65. Professor Vaver quotes the example of P.G. Wodehouse who publicly acknowledged

- that the suggestion for the main character in *Love Among the Chickens* came from another person and even gave that person a third share in the royalties from the first edition: Vaver, *op.cit.*, p. 117, note 56. See further D. Jasen, *P.G. Wodehouse: A Portrait of a Master*, 1981, rev. ed., p. 37. Again, at the end of *Doctor Faustus* (1947), Thomas Mann inserted an author's note expressly attributing to Arnold Schönberg the twelve-note or row system described in chapter 22 of the book, stating that this was "in truth. . .the intellectual property" of the latter.
66. For general background on these developments, see F.-K. Beier and G. Schriker (eds), *GATT or WIPO? New Ways in the International Protection of Intellectual Property*, IIC Studies in Industrial Property and Copyright Law No. 11, 1989. For an account of the losses through piracy to US manufacturers, see G.M. Hoffman, G.T. Marcou and C. Murray, 'Commercial piracy of intellectual property', (1989) 71 JPTOS 556. Though deferred for a period at a ministerial meeting in Brussels in December 1990, as at the time of revising this article (September 1991) the TRIPS negotiations were again under way and were expected to be concluded by the end of October 1991. The basis for these negotiations is a draft text dated 22 November 1990. This is based essentially upon the provisions and standards of the major intellectual property conventions (Paris, Berne and Rome) and would not involve any substantial change to Australian law if adopted.
 67. H. Ullrich, 'GATT: industrial property protection, fair trade and development', in Beier and Schriker, *op. cit.*, pp. 127-59.
 68. *Constitution*, s. 109.
 69. This situation is now modified to some extent by cross-vesting legislation which confers jurisdiction on federal courts to deal with matters within the competence of State and Territorial courts: see *Jurisdiction of Courts (Cross-Vesting) Act 1987* (Cth.).
 70. *Plant Varieties Rights Act 1987*.
 71. *Circuit Layouts Act 1989*.
 72. For example, the *Olympic Insignia Protection Act 1987* (Cth.); the *Advance Australia Logo Protection Act 1984* (Cth.).
 73. The trade marks power is a significant exception: see *Attorney-General (NSW) v. Brewery Employees Union of NSW* (1908) 6 CLR 469 where it was held, by a majority, that this not extend to the protection of workers' marks.
 74. Constitutional Commission, *Advisory Committee on the Distribution of Powers*, Report, 6 June 1987, AGPS, Canberra, 1987, ch. 14.
 75. See art. 2(viii), *WIPO Convention*.
 76. See generally *Berne Convention*, art. 5; and *Paris Convention*, art. 2.
 77. See generally, S. Ricketson, *The Berne Convention*, *op. cit.*, ch. 1.
 78. See generally articles 2 and 2bis.
 79. See, for example, articles 6bis, 8, 9, 11, 11bis, 12, 13 and 14.
 80. Articles 9, 10 and 10bis.
 81. Article 7.
 82. Articles of the *Paris Convention* that contain specific prescriptions include articles 4ter, 5, 5ter, 5quater, 6bis, 6ter, 9 and 10.
 83. An exception is to be found in the case of the United States which still requires compliance with formalities as a condition for bringing infringement proceedings for breach of copyright in the case of American plaintiffs but not in the case of foreigners (because of the requirements of the Berne Convention): see *Copyright Act 1976*, s. 411(a) (added by the *Berne Convention Implementation Act 1988*).
 84. *Berne Convention*, art. 5(2).
 85. Article 7 (1).
 86. See generally articles 2, 6bis, 9, 11, 11bis, 13 and 14.
 87. *Copyright Amendment Act 1984* (Cth.).
 88. See further on this general point, D. Vaver, 'The national treatment requirements of the Berne and Universal Copyright Conventions: part one', (1986) 17 IIC 577; 'Part two', (1986) 17 IIC 715.
 89. Article 9(1).
 90. Article 11(1).

91. Article 11bis(1).
92. Article 6bis.
93. *Public Lending Right Act 1985*.
94. See generally, *Copyright Act 1968*, Part VC.
95. Section 135ZZZB.
96. In addition, the constitutional validity of this legislation under the Australian *Constitution* is soon to be challenged in the High Court of Australia. For a report of some preliminary proceedings, see *Australian Tape Manufacturers Association Ltd. v. Commonwealth of Australia* [1989] AIPC 90-696.
97. Notably in articles 9, 10 and 10bis.
98. For example, article 13(1) (recording of musical works) and article 11bis(3) (broadcasting of works).
99. See generally *Constitution*, s. 51(xxix).
100. *Plant Variety Rights Act 1987* (Cth.), s. 5(b). Section 5(a) also hangs the validity of the Act on the patents power under section 51(xviii) of the Commonwealth *Constitution* in so far as this is necessary.
101. *Circuit Layouts Act 1989*, Schedule.
102. *Second Reading Speech of the Attorney General*, reproduced in [1990] AIPC 34, 240.
103. Although integrated circuits are also expressly excluded from the operation of the *Designs Act 1906: Circuit Layouts Act 1989*, Schedule.
104. A good example is provided by the recent Federal Court decision in *Dyason v. Autodesk Inc.* [1990] AIPC 90-697.
105. *Patents Act 1990*, Schedule 1, which retains the definition which stems originally from the English *Statute of Monopolies 1624* ('any manner of new manufacture').
106. *Patents Act 1990*, ch. 12.
107. See, for example, *Copyright Amendment Bill 1991* (dealing with imported books).
108. *Attorney-General (UK) v Heinemann Publishers Australia Pty. Ltd.* (1987) 10 IPR 153.
109. *Circuit Layouts Act 1989*, s. 23.
110. See generally *Copyright Act 1968*, ss. 54-64.
111. In particular, see M. Pendleton, 'Character merchandising and the proper scope of intellectual property', *Intellectual Property Journal*, 1990, p. 242; R. Grant Hammond, 'Quantum physics, econometric models and property rights to information', *McGill Law Journal*, 27, 1981, p. 53.
112. *Moorgate Tobacco Co. Ltd. v. Philip Morris Ltd.* (1984) AIPC 90-141 at 39,003.
113. See for example, the decision of the Full Federal Court of Australia to protect the Crocodile Dundee persona of Paul Hogan against unauthorised uses in advertisements: *Pacific Dunlop v. Hogan* [1989] AIPC 90-578. In the case of copyright, see further the cases cited in S. Ricketson, 'Reaping without sowing. . .', *University of New South Wales Law Journal*, Special Issue, 1984, p. 1.