

**DRMS, ECONOMICS, COPYRIGHT AND COMPETITION LAW:
THE AUSTRALIAN EXPERIENCE - THE ECONOMIC
IMPLICATIONS OF *STEVENS V SONY***

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ABSTRACT. This paper will examine the Sony Playstation litigation in Australia where Sony claimed the device it used in its Playstation consoles was a technological protection measure ('TPM'). The outcome of the High Court of Australia decision is somewhat different from similar litigation run by Sony in other countries. Section 3 of this paper will examine the economics of TPMs and in particular, the device which Sony claimed in its Australian litigation was a TPM. It will reveal that copyright owners such as Sony already possess strong market incentives to implement TPMs and that the level of competition is inversely related to the incentive to protect works through TPMs. Section 4 of the paper will introduce the competition law landscape in Australia and it will analyse, within the context of Australia's competition laws, the device used by Sony which it claimed was a TPM. It will demonstrate that the use of the device by Sony is arguably conduct in breach of s46 of the *Trade Practices Act 1974*. Section 5 will examine the role of the law in Australia in terms of incentivising the use of TPMs.

1. INTRODUCTION

Almost every paper and judgment written on intellectual property speaks of the delicate balance between the interests of intellectual property owners and intellectual property users. The decisions in the *Sony v Stevens* litigation in Australia explored the tension inherent in this balance and also revealed some of the difficulties faced by maintaining this balance in the digital age. The final conclusion reached by the High Court in 2005 attempted to respect the balance by interpreting a 'technological protection measure' (TPM) such that it would not extend the monopoly rights given to copyright owners under the existing copyright regime. This paper will briefly examine the various judgments made in the *Sony v Stevens* litigation and then discuss the economic implications of the decision. The basic economics underlying the grant of quasi-monopoly rights to intellectual property owners is also well known. This theory asserts that intellectual property owners are given rights to exploit their work in order to provide incentives for innovation and production of intellectual property and to overcome free-riding problems. Without such rights it is feared that this form of production will not take place, or will take place at a sub-optimal level, meaning that authors, musicians and drug companies will not reap the full reward from their efforts and research and therefore produce

The author thanks Stuart Dullard for his invaluable research assistance in the writing of this paper. The author also thanks NL for the friendship and constant support.

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2. THE SONY LITIGATION IN AUSTRALIA

2.1. Sony's Device. The facts were established at trial before Sackville J in the Federal Court (*Kabushiki Kaisha Sony Computer Entertainment v Stevens*, 2002)¹ and were uncontested on appeal. The respondents, Sony, manufacture and distribute computer games on CD-ROM for use with the computer game console PlayStation that they also produce. The games are protected by the *Copyright Act 1968* (Cth) ('the Act') as computer programs (literary works) and cinematograph films (as subject-matter other than works). The PlayStation console loads games using a 'boot ROM' chip located on the motherboard. The boot ROM reads games from the CD which contains an 'access code', which is an encrypted string of characters. The boot ROM performs an electronic check to ascertain whether the game has the correct access code, if the game does not have the correct access code the game will not load. This is known as Sony's 'device' which Sony claimed constituted a 'technological protection measure'.

2.1.1. The Design and Operation of Sony's Device. The access codes on the games vary according to global market regions devised by Sony (*Sony v Stevens* 2002, [65]). The access codes were therefore seen to be designed for two purposes. Firstly, the purpose of regional coding allowed Sony to divide the global market by separating markets into regions, meaning that authentic, non-infringing games purchased in one region will only operate on consoles from the same region. Thus, the purchaser and owner of a PlayStation CD ROM, lawfully acquired, say, in Japan or the United States and brought to Australia, could not play that CD ROM on an unmodified console lawfully acquired, say, in Australia or Europe.

The second design purpose is to render unauthorised copies of games unplayable on the PlayStation unit. This is because copies of games made using CD recording devices such as CD 'burners', do not include the access code, hence, will not be able to be played by the PlayStation console. Sony contended that a 'technological protection measure' existed in the boot ROM, or the access code, or in the combined operation of the two (*Stevens v Kabushiki Kaisha Sony Computer Entertainment*, 2005).²

2.1.2. Mod Chip. The appellant, Mr Stevens sold unauthorised copies of certain games and also sold and installed computer chips ('mod chips') that allowed the PlayStation console to play games without the requisite access code. Mr Stevens

¹(2002) 200 ALR 55; [2002] FCA 906 (26 July 2002).

²(2005) 221 ALR 448; [2005] HCA 58 (6 October 2005) at [21].

was not sued for his part in any acts that might have constituted copyright infringements concerning the selling of unauthorised copies (*Stevens v Sony*, 2005, [20]). Rather, the proceedings alleged that he had contravened s116A, inserted into the Act by the *Copyright Amendment (Digital Agenda) Act 2000* (Cth) ('the Amendment Act') by the act of knowingly selling or distributing a 'circumvention device' that was capable of circumventing a 'technological protection measure' which protected Sony's copyright (*Stevens v Sony*, 2005, [23] and [103]).

2.1.3. Technological Protection Measure. The key provision of the Act considered was s116A which deals with a 'technological protection measure', the definition for which is in s 10(1). Section 116A applies where a work, or other subject-matter is protected by a technological protection measure and a person, without the permission of the owner of the copyright, sells, distributes or promotes a circumvention device where the person knew, or ought reasonably to have known, that the device or service would be used to circumvent, or facilitate the circumvention of, the technological protection measure. Section 10(1) of the Act defines the following terms:

circumvention device means a device (including a computer program) having only a limited commercially significant purpose or use, or no such purpose or use, other than the circumvention, or facilitating the circumvention, of an [sic] technological protection measure.

technological protection measure means a device or product, or a component incorporated into a process, that is designed, in the ordinary course of its operation, to prevent or inhibit the infringement of copyright in a work or other subject-matter by either or both of the following means:

- (1) by ensuring that access to the work or other subject matter is available solely by use of an access code or process (including decryption, unscrambling or other transformation of the work or other subject-matter) with the authority of the owner or exclusive licensee of the copyright;
- (2) through a copy control mechanism.

2.2. First Instance in the Federal Court of Australia: At the first instance in the Federal Court of Australia, Sackville J did not believe that Sony's device fell within the definition of a technological protection measure. This was because Sony's device did not prevent or inhibit a 'specific act' of infringement such as copying the game. Rather, the device only deterred infringement by rendering unauthorised copies unplayable, therefore unsaleable, and as such mere deterrence or discouragement was not enough:

... The definition is intended to be confined to devices or products that utilise technological processes or mechanisms to prevent or curtail specific actions in relation to a work, which actions would otherwise infringe or facilitate infringement of copyright in that work. . . I do not think the definition is concerned with devices or products that do not, by their operations, prevent or curtail specific acts infringing or facilitating the infringement of copyright in a work, but merely have a general deterrent or discouraging effect on those who might be contemplating infringing copyright in a class of works, for example by making unlawful copies of a CD-ROM (*Sony v Stevens*, 2002, [115]).

Two key points can therefore be gleaned from the decision with respect to technological protection measures. Firstly, that the device must by its operation be designed to prevent or inhibit specific acts of infringement. Secondly, that mere deterrence is not enough to constitute inhibition.

To arrive at this conclusion Sackville J consulted extrinsic materials including the two treaties that motivated the *Amending Act*, *WIPO Copyright Treaty* and the *WIPO Performances and Phonograms Treaty*; the Copyright Law Review Committee's report, *Computer Software Protection* (1994) that addressed the use of locking devices on computer programs; the 1997 *Digital Agenda Discussion Paper*; an European Community Directive that was influential in the drafting of s 116A (as noted in the *Explanatory Memorandum* to the *Digital Agenda Bill 1999*) and the report by the House of Representatives Legal and Constitutional Affairs Committee, *Advisory Report on the Copyright Amendment (Digital Agenda) Bill 1999* (1999). This last report identified the two types of technological measures to protect copyright materials, namely access control measures and copy control measures. Sackville J then considered the Attorney-General's second reading speech for the Bill (*Commonwealth Parliamentary Debates*, HR, 1999, p. 9748-9749) which stated that 'the central aim of the bill, therefore, is to ensure that copyright law continues to promote creative endeavour and, at the same time, allows reasonable access to copyright material in the digital environment' suggesting that the reforms were intended to maintain, not extend the balance struck between copyright owners and users. Justice Sackville's conclusion was that there was nothing in the legislative history to support Sony's position that a technological protection measure should be interpreted broadly (*Sony v Stevens*, 2002, [117]-[118]).

2.3. ACCC Amicus Curiae. The Australian Competition and Consumer Commission ('ACCC') submitted that Sony's device could not be regarded as a technological protection measure because it was not designed, in the ordinary course of its operation, to prevent or inhibit the infringement of copyright (*Sony v Stevens*, 2002, [90]). In arriving at this conclusion the ACCC submitted that an objective test should be employed in order to ascertain the purpose of the design (*Sony v Stevens*, 2002, [90]-[91]). Further, that in order for s116A to be enlivened that the exclusive purpose of the device must be to prevent or inhibit infringement (*Kabushiki Kaisha Sony Computer Entertainment v Stevens*, 2003).³ The ACCC argued that the device was designed to act as regional access codes for the applicants' products, effectively dividing the market for PlayStation games into separate regions, a fact that the ACCC commented as being detrimental to consumer welfare (ACCC Press Release, 2002). This conclusion was said to be supported by the fact that the protective devices did not discriminate between infringing copies and non-infringing copies, such as PlayStation games purchased overseas or back up copies made pursuant to s47C of the Act (*Sony v Stevens*, 2002, [90]).

2.4. Full Court of the Federal Court of Australia. Sony appealed to the Full Court of the Federal Court of Australia and the appeal was heard by French J, Lindgren J and Finkelstein J. French J found that Sony's device was a technological protection measure. However, his approach to the interpretation of a technological protection measure focused on the ordinary meaning of the provisions. In conducting this analysis His Honour found that the words 'designed to prevent or inhibit

³(2003) 200 ALR 96 at [69] (per Lindgren J).

the infringement in the ordinary course of its operation' did not qualify or limit the words 'prevent or inhibit' (*Sony v Stevens*, 2003, [17]). French J found that the words 'prevent' and 'inhibit' overlapped and that, based upon their dictionary meanings, they were wide enough so as to include deterrence or discouragement (*Sony v Stevens*, 2003, [17]).

French J raised the point that not only copying, but also selling unauthorised copies of games amounted to infringements under s 38 of the Act. The effect of Sony's device rendered copied games as unplayable and therefore unsaleable, which discouraged this type of infringement (*Sony v Stevens*, 2003, [20]). This approach focused on the *effect* of the device rather than the purpose or intention of the *design* of the device.

Justice Lindgren (with whom Finkelstein J agreed) examined the legislative history of the Amendment Act, but came to the opposite conclusion to Sackville J with respect to the interpretation of a technological protection measure. Finding that the extrinsic materials conveyed that a broad approach was intended by Parliament (*Sony v Stevens*, 2003, [138]-[139], see also Finkelstein J [189]).

... the extrinsic materials ... show an intention that the opening words coupled with para (a) of the definition of 'technological protection measure' were intended to embrace that inhibition, in the sense of deterrence or discouragement of infringement, which results from a denial of access to, and therefore prevention of use of, a program copied in infringement of copyright. (*Sony v Stevens*, 2003, [138])

With regard to the design and effect of the device, Lindgren J also favoured the 'practical effect argument' where the effect of the device inhibits infringement by 'ensuring that access to the program is not available except by use of the Boot ROM or access code' (*Sony v Stevens*, 2003, [139]).

2.5. High Court of Australia. All judgments adopted a purposive approach (*Stevens v Sony*, 2005, [31]-[32], McHugh J [124]; Kirby J [168]) and analysed extrinsic materials to determine the intent of Parliament in enacting the *Amendment Act*. The joint judgment of Gleeson CJ, Gummow, Hayne and Heydon JJ focused on the specifics of the legislation, stating that there is no rule of statutory interpretation that negates the need to pay close attention to the Act (*Stevens v Sony*, 2005, [30]). McHugh J also adopted a purposive construction stating that a statutory provision must not be interpreted by reference to its literal meaning alone, but also by reference to the purpose and context of the provision (*Stevens v Sony*, 2005, [124]). Kirby J agreed that interpretation must be with reference and with a close examination of the statutory text within the context and structure of the Act and by 'identification of the purposes suggested by that text; and by the use of the statutory history, including available background materials that cast light on the meaning of the text.' (*Stevens v Sony*, 2005, [168]) Kirby J also considered the legislation within the constitutional and legal setting where competing legal interests must be upheld by the law, including free expression and the right of property owners to enjoy their property (*Stevens v Sony*, 2005, [168], [215]-[218]). The court was unanimous in finding that the Amendment Act represented a compromise of competing legal interests of copyright owners and users (*Stevens v Sony*, 2005, [32], [127], [199]). There was therefore no clear intention of Parliament to

enact a broad definition of a technological protection measure as found by Lindgren and Finkelstein JJ.

This conclusion was further confirmed by examining the United States legislation (*Stevens v Sony*, 2005, [17]-[18])⁴ where a broader construction of technological protection measure was employed. It was noted that the legislation from the US was enacted prior to the Australian Amendment Act and that the International Intellectual Property Alliance made a submission to the House of Representatives Standing Committee on Legal and Constitutional Affairs in favour of adopting legislation in terms such as those as the in the US (*Stevens v Sony*, 2005, [18]). The joint judgment and Kirby J observed that the broad US approach was open to the legislature, but they instead opted to take a distinctive, ‘tight’ approach to the drafting (*Stevens v Sony*, 2005, [18], [202]).

The judgments were unanimous in favouring Sackville J’s construction of a technological protection measure (*Stevens v Sony*, 2005, [38], [107], [133] and [210]). They therefore endorsed an interpretation that requires a technological protection measure to prevent or curtail a specific act of infringement, such as unauthorised reproduction. This result was said to be consistent with the ‘fundamental notion of copyright.’ (*Stevens v Sony*, 2005, [39]) The alternative, as submitted by Sony would unduly extend a technological protection measure so as to cover access to the material (*Stevens v Sony*, 2005, [46], [140]). This result was rejected by the Court as it would run contrary to the permitted purposes set forth in s116A(7) (*Stevens v Sony*, 2005, [40]-[43], [142], [210]). It would over-extend the quasi-monopoly rights granted to copyright owners (*Stevens v Sony*, 2005, [47], [142], [211]). Furthermore, though not in issue in this matter, there are criminal sanctions associated with circumventing a technological measure under s132(5A) which weigh against a broad definition (*Stevens v Sony*, 2005, [45], [226]).

In reaching his decision, McHugh J looked to what the device or process was ‘designed’ or intended to do in the ordinary course of operation. He found that a device is designed to inhibit copyright infringement if the device makes the ‘doing of an act of infringement – not impossible – but more difficult than it would be if the device did not operate.’ (*Stevens v Sony*, 2005, [139]) Similarly, Kirby J thought that Sony’s submission would lead to a situation whereby devices designed to control access to the material with no explicit link to the prevention of copying or reproduction would be caught by s116A (*Stevens v Sony*, 2005, [205], [209]) and that ‘Sony’s device was not designed primarily to achieve a particular non-copyright purpose.’ (*Stevens v Sony*, 2005, [104], cf [108]).

Kirby J found another reason to give further force to a narrow approach. Sony’s broad interpretation would have led to a situation whereby the ordinary property rights would have been limited. Within this context Kirby J found that for a fundamental freedom such as the right to deal with ones own property to be limited there would need to be “a clear and plain intention to extinguish such rights” (*Stevens v Sony*, 2005, [217]).

2.6. Competition Law and Policy and Intellectual Property Rights. This brings about the wider issue concerning intellectual property rights and the inherent tension between the copyright regime and competition policy. The Intellectual

⁴The relevant legislation is *Digital Millennium Copyright Act* 1998, which introduced 17 UCS §1201 containing the operative provisions with respect to circumvention and protection measures.

Property Competition Review Committee (IPCRC) that reported in 2000 took an opposing view, stating that the two ideologies are complementary:

The intellectual property system serves to promote innovation, which is a key form of competition. Competition policy, by keeping markets open and effective, preserves the primary source of pressure to innovate and to diffuse innovations (IPCRC, 2000, p. 215).⁵

This statement by the IPCRC does not reveal the full economic reality of how the IP regime facilitates greater innovation. The economic justification for the quasi-monopoly rights afforded to intellectual property owners is that such grants are necessary in order to allow owners to commercially exploit their output in exchange for disclosure. The consequence of such is that in granting such rights is that this curtails competition in the product market for the good produced with IP protection. The implication of this anti-competitive market is that it allows IP owners to price goods higher than marginal cost, yielding monopoly rents. There is therefore an associated economic cost borne by consumers as the monopoly rights granted result in a wealth transfer from IP users to owners.

At first glance it seems that the different decisions of the Federal Court turned on the issue as to whether deterrence amounts to inhibiting. However, the definition of a TPM turns on more than an interpretation of whether deterrence is synonymous with inhibition. This is plainly revealed by the analysis conducted by the High Court. What was at stake was whether a TPM could operate so as to further extend the quasi-monopolistic intellectual property rights afforded to copyright owners. The High Court was careful in maintaining the existing balance and not over-extend the quasi-monopoly rights granted to copyright owners (*Stevens v Sony*, 2005, [47], [142], [211]).

3. THE ECONOMICS OF TPMS

The theory behind TPM legislation is to protect copyrighted works from infringement by outlawing circumvention devices. However, the following will argue that legislation concerning TPMS, such as s 116A, in providing civil and criminal sanctions (s 132) for circumventing TPMS, *inter alia*, incentivises the use of such measures. In certain markets, such as the markets for game systems and games that Sony's PlayStation and PlayStation games are players, market forces seem to trivialise legal responses in terms of market incentives. To analyse this, the decision making process of producers, or firms must be examined. The following utilises standard neo-classical microeconomic analysis.

It is first assumed that firms act to maximise profits. The effect of TPMS on a firm's profit will depend on two factors. Firstly, how TPMS will affect sales and, secondly, the cost of implementing TPMS. In his economic analysis of TPMS, Professor John Rothchild (Rothchild, 2005) distinguishes two effects on sales and how it will depend on how the introduction of TPMS will affect the demand for the good in two respects:

⁵The IPCRC was a specialist review that came about as a result of the Independent Committee of Inquiry into National Competition Policy under the stewardship of Professor Hilmer in 1992 that recommended that a discrete analysis of competition policy as it pertained to IP be undertaken.

- (1) Lost Demand – The introduction of TPMs will either reduce the consumer’s utility from the purchase by limiting its scope for use or resale, or alternatively, the consumer will be indifferent. The result will be that a certain amount of sales will be lost.
- (2) Recovered Demand – The introduction of a TPM will reduce the secondary and black market for the goods thereby inducing consumers to purchase the good from the producer (Rothchild, 2005, p. 518).

The cost of the TPM will also have a bearing on the decision of the firm. This is because there will be a cost in either developing or licensing the TPM and consequently incorporating it into the finished product. Either the firm can internalise the cost or pass the cost on to the consumer. The former will reduce profit by increasing costs, as will the latter, provided the good is not a Giffen good (a good where the quantity sold increases with price).

The result of such is that TPMs will be preferred by firms when the profit gained from the increased volume of sales outstrips the lost sales and cost of implementation. This will largely depend on the relative size of the Lost and Recovered Demand. The size of these changes will depend on market characteristics (Rothchild 2005, p. 530). As copyright gives rise to quasi-monopolistic market power it is useful to state the economic features of a monopoly and to consider the situation with Sony’s PlayStation.

A monopoly is said to exist where a firm offers for sale a good for which there is no close substitute. This results in a near horizontal demand curve which gives rise to monopolist market power, meaning that the firm can raise price above marginal cost, yielding ‘monopoly rents’ without the threat of new market entrants competing for market share. The protection against new market entrants occurs due to barriers to entry into the market. These barriers may be market based, such as high setup costs (such as with mobile telephones) or due to legal restrictions, such as intellectual property regimes. This lack of competition has two primary negative effects, it reduces the need for firms to be efficient in order to survive in a competitive market, thereby resulting in an inefficient allocation of resources. Secondly, the demand schedule allows an inflated price that exploits consumers and represents a transfer of wealth to the (relatively) inefficient monopolist (See generally Varian, 2003; Eaton, Eaton and Allen, 2002).

The key feature in terms of the proportions of Lost and Recovered Demand is the availability of close substitutes. The fewer close substitutes available, or, the higher the cost of transferring to a substitute, the lower the Lost Demand. To exemplify, an operating system such as Windows has few close substitutes – Macintosh-compatible operating systems, Linux, Unix or OSX. Further, there is a substantial cost in terms of hardware and retraining in order to switch (*United States v. Microsoft Corp*).⁶ This can be compared to music CDs or DVDs where there may be no exact substitute for a particular artist or film, but there are close substitutes. In terms of Recovered Demand the same argument applies. Users using goods purchased from the secondary or black market will now be faced with either switching to a substitute or not using the good.

3.1. The Economics of Sony’s device. Sony’s PlayStation is an interesting example as it lies somewhere between the two examples given above. The PlayStation

⁶253 F.3d 34, 52 (D.C. Cir. 2001).

unit itself does have close substitutes, namely, the Microsoft Xbox and Nintendo systems. Comparing this to the Windows example above there is clearly not the same issue with regards to the skill level required to operate the gaming system. However, due to the inoperability of games between these systems once the unit is purchased, there is a cost of transfer. This sunk cost provides a disincentive for consumers to transfer between gaming systems. Further, once the unit is purchased, only Sony games can be played on the system, another example of Sony demarcating their market position. In this respect the PlayStation differs from CDs or DVDs where the manufacturers of CD and DVD players do not have absolute control over the production of CDs and DVDs. Therefore they do not have an interest in making their system exclusive. Rather, the opposite, they have an interest in making their system as widely adaptable as possible to make their product more desirable in the market place. An example of this is multi region DVD players and CD players that can also play mp3 files burnt to CD.

In terms of the use of the Sony device which Sony claimed was a TPM, there is the further restriction that only games purchased in the same region as the PlayStation unit can be played by the unit. All of the above considerations would arguably render the Sony PlayStation games as having no close substitutes.

With regard to cost, the monopolist will attempt to protect the barrier to entry to their market. Generally speaking, the practical effect of TPMs has been to extend the rights conferred by the copyright regime. It is well-documented (see Bechtold, 2004; Shih, 2003; Reese, 2003; Roemer, 2003; Lim, 2006) that TPMs restrict the fair use of copyrighted material, the use beyond expiration of the copyright, the sale of copies on the secondary market, the loan of a copy to a friend, and even accessing a work using an unapproved device is limited. Whilst the undesirability of a 'pay-per-use' society has already been canvassed (Litman, 1994), it would appear that the current legislation in many jurisdictions has not satisfactorily dealt with how users' rights conferred by the copyright regime centuries ago can continue to be exercised in the age of TPMs and legislative provisions protecting TPMs. With TPMs permitting the extension of the copyright owners' ability to control such activities like access, use and reproduction, TPMs thereby increase the barriers to entry. For this reason, the monopolist has a strong incentive to invest in TPMs. This investment represents a sunk cost, meaning that the marginal cost of implementing TPMs is very low.

Consider for a moment the situation of an oligopoly, where there are a small number of sellers, but barriers to entry are still high. An example of an oligopolistic market would be that for music CDs where 4 main players Sony BMG, Universal, Columbia and EMI dominate the market (Rothchild, 2005, p. 543). In such markets the dynamic effects of price discrimination follows a game theoretic path, where the action of one firm is contingent upon the actions of the others. The result of such is that there is an impetus for industry wide TPMs either through collusion or market dynamics (cf Rothchild, 2005, p. 545).

The market for game systems that the Sony PlayStation manufactures is more fairly classified as oligopolistic, rather than monopolistic (*Sony Computer Entm't, Inc. v. Connectix Corp*, 1999)⁷ due to the existence of the two main competitors

⁷48 F. Supp. 2d 1212, 1214 (N.D. Cal. 1999). The facts showed that in the late 1990s, the PlayStation became a success, selling over 20 million copies worldwide and established Sony as a leader in the video game console industry.

Microsoft and Nintendo, both of which have significant market share. However, the inoperability of games between systems makes the game system market place less competitive than the market for music CDs. It is therefore of no surprise that there is industry wide TPMs, further, inoperability between games serves to further cement market share for each market participant.

The consequence of this analysis is that the greater the degree of monopoly, predominantly characterised by the lack of close substitutes, the greater the incentive to employ TPMs. Hence, in monopolistic or oligopolistic markets there is already a strong incentive to introduce TPMs. This analysis suggests that market, or extra-legal incentives to implement TPMs already exist without the need for the law to incentivise the protection of copyright through TPMs. This is partly because the quasi-monopoly rights granted by the copyright regime are of valuable and exploitable economic worth. This is demonstrated by the PlayStation system that already utilised its device before the Act was amended to outlaw the circumvention of such devices.

Returning to the market for games playable on the Sony PlayStation, as already discussed above, the issue of inoperability between games is important for the consideration of this particular market. The inoperability between games would render Sony PlayStation games as having no close substitutes even though Sony also licenses other companies to make games that can play on the PlayStation (*Sony Computer Entm't, Inc. v. Connectix Corp*, 2000).⁸ This can be contrasted with PC games where the hardware is manufactured by a vast number of companies, and even though the operating system, Windows, is uniform, there are many game producers of PC games. It is therefore arguable that within the market for games playable on the Sony PlayStation, Sony is a monopolist. As a monopolist, Sony already has a strong incentive to invest in and employ TPMs independently of the legal provisions prohibiting the circumvention of TPMs. With this in mind, it is questioned whether an overly broad legal protection is necessary or economically efficient for the utilisation of TPMs by firms in a monopoly or oligopoly. This will be considered in the next section within the framework of Australia's competition law.

The High Court of Australia however failed to uphold that Sony's device was a TPM. This finding, already discussed, was based on a large number of considerations, some extending to general property law concepts. One area touched upon but not fully considered by the High Court is the interface between intellectual property protection and restrictive trade practices law. All members of the High Court were careful in maintaining the existing copyright balance and not over-extend the quasi-monopoly rights granted to copyright owners. Inherent in this is the strong protection for competition and consumer rights that exist in Australia.

4. AUSTRALIAN COMPETITION LAW

This section will analyse the utilisation by Sony of the device in the PlayStation consoles which it claimed was a TPM under the Australian *Copyright Act* 1968. It will argue that Sony's use of the device could arguably be in breach of s46 of the Australian *Trade Practices Act* 1974.

⁸(2000) 203 F.3d 596.

4.1. The Interface between Australian Competition Law and Intellectual Property Law.

In Australia, the interface between intellectual property law and competition law is addressed expressly in s 51(3) of the *Trade Practices Act* 1974. This is in contrast to the US position where the Sherman Act of 1890 does not expressly deal with the interaction. Section 51(3) of the *Trade Practices Act* 1974 (Cth) exempts certain of the provisions on restrictive trade practices from applying to situations concerning intellectual property. This provision exempts from section 45 (agreements substantially lessening competition), s47 (exclusive dealing agreements) and s50 (mergers), the imposition of a condition in a licence or an assignment by a holder of intellectual property rights. In the case of a patent and copyright, the exemption applies only to the extent that the condition relates to the invention or the copyright protected matter.

Section 51(3) specifically provides that s46 and s46A which proscribe misuse of market power and s48 which proscribes retail price maintenance are not exempt. The focus here will be on s46.

One of the aims of competition policy in Australia is to promote economic efficiency, both allocative efficiency and productive efficiency (Steinwall et al., 2000). Allocative efficiency is concerned with how resources are allocated to their most productive use. Productive efficiency refers to the maximisation of output given specific inputs. A firm that seeks to protect its innovation through IP rights does not of itself raise a competition concern because the new technology, techniques or processes may enable it to maximise productive efficiency and produce products at a lower unit cost. The encouragement of investment in new technologies that promotes productive efficiency would be consistent with competition policy.

The views expressed by the High Court in the seminal case of *Queensland Wire Industries v Broken Hill Pty Co Limited* ((1989) 167 CLR 177) in relation to s46 is that: ‘The object of s46 is to protect the interests of consumers, the operation of the section being predicated on the assumption that competition is a means to that end.’ The focus of the competition analysis is on the ability of the IP holder to impact the market and whether the IP holder exercises market power in a manner prohibited by trade practices statute.

4.2. Section 46. Section 46 prohibits a corporation that has a substantial degree of market power from taking advantage of that power for a proscribed anti-competitive purpose. It provides:

46(1) A corporation that has a substantial degree of power in a market shall not take advantage of that power for the purpose of:

- (a) eliminating or substantially damaging a competitor of the corporation or of a body corporate that is related to the corporation in that or any other market;
- (b) preventing the entry of a person into that or any other market; or
- (c) deterring or preventing a person from engaging in competitive conduct in that or any other market.

The threshold issue under s 46 is the requirement that a firm has a ‘substantial degree of power in a market.’ The wording of the legislation was changed in 1986 to specifically apply to firms in situations of less than market dominance such as

participants in an oligopolistic market (McMahon, 2000, p. 217). In the Explanatory Memorandum, it was specifically noted that more than one firm may have a substantial degree of power in a market. The Australian cases have established that the most important determinant of market power is the existence of barriers to entry (*Queensland Wire Industries v Broken Hill Pty Co Limited*, 1989).⁹ In considering the degree of market power in an action under s46, subsection (3) further requires the court to consider whether the firm is constrained by the activities of competitors, potential competitors, supplies and customers.

In the case of the Sony PlayStation, as discussed above, the game system market is at least one of an oligopoly. With regard to the market for games playable on the Sony PlayStation, Sony would have a monopoly, not just in the Australian market, but possibly the global market. The barriers to entry are numerous, some grounded in protections given by intellectual property regimes such as copyright and patents. In addition, the Sony device which Sony claimed was a TPM constituted another barrier to entry because even if one were able to produce games playable on the PlayStation console, the boot ROM on the console which reads games from CDs containing an 'access code' would reject games not produced by or with the permission of Sony and which do not contain the access code. Thus, it would appear that Sony satisfies the threshold requirement of having a substantial degree of power in a market, whether that market is taken to be the Australian game system market or the market in Australia for games playable on the PlayStation.

The remainder of s46(1) requires the taking advantage of the market power for a proscribed purpose. The Australian courts have acknowledged the difficulty in distinguishing between conduct that is monopolistic practices from conduct which is competitive. The High Court in *Queensland Wire Industries v Broken Hill Pty Co Limited* interpreted the words 'take advantage' to merely mean 'use' in a non-pejorative sense devoid of moral considerations. Of the proscribed purposes listed in s 46(1), the relevant one to consider for the argument here in relation to Sony's device is s 46(1)(b), that of preventing the entry of a person into that or any other market. However, the exercise of determining purpose under s 46 is a subjective one and evidence would need to be produced of Sony's purpose in utilising the device.

The litigation in Australia was run as a copyright claim and thus extensive evidence was not directly adduced of Sony's purpose in implementing its device. In a *Trade Practices Act* section 46 action, much evidence would need to be produced to prove the purpose of the conduct, or more specifically in this case, the use of the device by Sony. Nevertheless, it is possible to gain knowledge of Sony's likely purpose by extrapolating from the facts presented in the copyright litigation. In a number of the judgments (*Stevens v Sony*, 2005, [175], [211]-[212]) in the High Court decision of *Stevens v Sony*, reference was made to Sony's division of the global market into three spheres or markets. Through the combined operation of the CD ROM access code and the Boot ROM in the PlayStation consoles, Sony sought to in effect, and apparently intentionally, reduce global market competition by imposing differential price structures in those separate markets. Taking this as Sony's purpose, the device also in effect gave Sony broader powers over pricing of its products in its self-designated markets than what the copyright regime in Australia allows.

⁹(1989) 167 CLR 177 at 188.

While the device gave Sony the ability to enforce global market price differentiation, it also meant that consumers who bought a PlayStation CD ROM game sold and distributed in one global region are not able to play the game on an unmodified PlayStation console sold and distributed in another region. The next step in this analysis is to consider Sony's purpose as extrapolated in the previous paragraph in light of the proscribed purpose set out in s 46(1)(b). Take the person who wishes to import into Australia, PlayStation CD ROM games lawfully acquired, say, in Japan or the United States. Section 44E of the *Copyright Act* 1968 now permits the parallel importation of computer programs which are non-infringing copies published in a qualifying country. Both Japan and the US are qualifying countries. However, if one were to import the games from Japan or the US, the imported games would be of little value to the Australian market as the access code and boot ROM device would render the imported games unplayable in consoles sold in Australia. It is arguable that the purpose and effect of Sony's conduct in utilising the access code and boot ROM device is to prevent the entry of a person into the Australian market of supplying games playable on Sony PlayStations legally acquired overseas. This would be in breach of s 46(1)(b) of the *Trade Practices Act* 1974.

The issue of parallel importation and its effect on pricing in Australia has been hotly debated for a number of decades in Australia. In the 1990s, numerous bodies carried out inquiries which found that the restrictions on parallel imports in existence at the time resulted in Australian prices for items such as business software being higher than those paid by consumers in the US and UK. A series of reports by the Price Surveillance Authority, Industry Commission, ACCC and the Intellectual Property and Competition Review Committee mostly recommended the repeal of the restriction on parallel imports (see Australian Attorney General's Department, 2000).

From the foregoing, it would appear that the utilisation by Sony of the device in the PlayStation consoles amounts to conduct prohibited by s 46 of the Australian *Trade Practices Act* 1974. It should be noted that it is important that the device permits the achievement of economic ends additional to, and different from, those ordinarily protected by copyright law. If the Sony device only prevented infringing copies of games from being played in the console and nothing more, it would be difficult to argue that Sony's purpose for the utilisation of the device is for any of the proscribed purposes set out in s 46. This however is not to say that Sony is not in a monopoly position in respect to the manufacture of the games playable in the PlayStation console. Under Australian law however, being in a monopoly position does not infringe the competition provisions, it is only the unlawful exercise of market power that attracts liability.

The remaining issue to consider is the use of TPMs generally and its relationship with s 46. As discussed in section 3, some TPMs increase the barriers to entry. If a TPM has a function or purpose reaching beyond the exclusive rights conferred by copyright, and it is used by a firm with substantial market power for a proscribed purpose, it would expose the firm to liability under one or more subsections of s 46(1). Section 46(1)(b) concerning the prevention of the entry of a person into that or any other market already discussed would be an obvious proscribed purpose but the remaining two purposes of eliminating or substantially damaging a competitor or deterring or preventing a person from engaging in competitive conduct in that

or any other market would also be relevant. It would need to be considered on a case by case basis.

5. THE ROLE OF THE LAW

The conclusion reached in section 3 was that the greater the degree of monopoly, predominantly characterised by the lack of close substitutes, the greater the incentive to employ TPMs. And that in monopolistic or oligopolistic markets there is already a strong incentive to introduce TPMs so that market, or extra-legal incentives to implement TPMs already exist without the need for the law to incentivise the protection of copyright through TPMs. In Section 4, it was hypothesised that under Australian competition law, a TPM that has a function or purpose reaching beyond the exclusive rights conferred by copyright, and if it is used by a firm with substantial market power for a proscribed purpose, it could expose the firm to liability under one or more subsections of s 46(1).

The question then is what is the role of the law in incentivising the use of TPMs? The law is clearly not needed to incentivise the use of TPMs in monopolies and oligopolies but does the law have a role to play in these and other markets? It would appear that both the provisions in the Australian *Copyright Act* concerning TPMs and s 46 of the *Trade Practices Act* imposes a limitation on the types of TPMs permitted in Australia. Could it be that the law in Australia incentivises the use of less complex TPMs? And is there value in this? Although the *Copyright Act* gives legal protection to TPMs, it also sets a limit on what constitutes a TPM. In this way, one could argue that TPMs utilised might be less unpleasant where there is legal protection for them compared with the TPMs used in the absence of such law.

The first point to note is that the discussion in Section 3 is very much focussed on monopolies and oligopolies. Outside of these, it would appear that the legal protection of TPMs may generally indeed incentivise their use. The creation of copyrighted material can be extremely expensive but in the digital age, others can generally acquire and use it at very little cost even with the presence of copyright laws. Such appropriations interfere with the creators' return on their investments and therefore reduce the incentives to invest. A likely consequence of this market failure is that the supply of new copyrighted material will be reduced. This reduction in new creations in turn impairs creation of wealth and overall social welfare (Lemley, 1997; Besen & Raskind, 1991). One method of protecting against such third party acquisition and use is through the device of TPMs. These can curb the unauthorised acquisitions at the point where they occur. An additional layer of legal protection for TPMs can further mitigate or eliminate this market failure and hence provide the incentives for their use. The resulting control over use and distribution allows the creators to capture the return on their investments. The legal protection therefore encourages, or avoids discouraging, investment in copyrighted material and TPMs.

The foregoing however is a generalised position of TPMs. The Australian statutes already discussed would appear to be espousing less complex TPMs and not just TPMs in any shape or form. When one considers less complex TPMs, as opposed to TPMs in general, the same incentive arguments apply except that the level of encouragement provided by the legal protection will increase or decrease in proportion to the type of TPMs sanctioned by the law. Legal protection of complex

TPMs will on the whole encourage greater investment in TPMs as they provide greater control to the creators. However, a firm utilising complex TPMs would need to consider the economic returns in terms of sales and licensing as these may be compromised with consumers switching to substitutes that are not so stringently controlled. Legal protection of less complex TPMs on the other hand, may provide creators with lesser control and may encourage investment in TPMs at a lower level than legal protection of complex TPMs but it nevertheless still incentivises the use of TPMs. Further, the loss demand may not be as great for a firm utilising less complex TPMs because consumers may tolerate the slight restrictions. The net result is that the legal protection of less complex TPMs may possibly result in the same or even higher level of encouragement compared with complex TPMs. The exact level of encouragement will depend on the type of TPM employed and the specific market condition.

Returning to the situation of a monopoly or oligopoly. As illustrated by the Sony case, the existence of the legal protection of TPMs certainly did not sanction the use of complex TPMs and for this reason alone, the legal protection of TPMs would appear then to serve a legitimate social purpose. Although the legal protection was not necessary to encourage Sony to implement and utilise TPMs in the first place, the legal protection stood to restrict or limit the type of TPMs which Sony could use in order to obtain the protection of the law in Australia. Compare this with the situation where there are no legal protection of TPMs and no restrictions on the type of TPMs protected, it would seem likely that the TPMs utilised would be like those used by Sony: there is every likelihood that they would be draconian rather than reasonable.

6. CONCLUSION

From the preceding discussion, it would seem that in Australia, there are limits in place in the *Trade Practices Act 1974* which prevent overly broad legal protection for the utilisation of TPMs by firms in a monopoly or oligopoly. In such markets, the legal protection of TPMs is not needed to incentivise their use. However, the existence of legal protection for less complex TPMs can ensure that more reasonable TPMs are utilised, not just in monopolies or oligopolies but generally. This is in fact the legal landscape in Australia.

REFERENCES

- Australian Attorney General's Department** (2000), *Copyright Reform: Parallel Importation of Software Products - Fact Sheet*. Available on <https://www.ag.gov.au/agd/Department/Publications/publications/factsheets/SoftwarefactSheet.pdf>.
- Australian Competition and Consumer Commission (ACCC)** (2002), Press Release, February 2002. Available on its website <<http://www.accc.gov.au>>
- Bechtold, S.** (2004), "Digital Rights Management in the United States and Europe", *American Journal of Comparative Law*, 52; 323-382.
- Besen, S. and L. Raskind** (1991), "An Introduction to the Law and Economics of Intellectual Property", *Journal of Economic Perspectives*, 5; 3-27.
- Eaton, B., D Eaton and D. Allen** (2002), *Microeconomics 5th Ed.*, Scarborough: Prentice Hall.
- IPCRC** (2000), *Commonwealth of Australia, Review of intellectual Property Legislation under the Competition Principles Agreement Final Report*, Canberra: AGP.

- Lemley, M.** (1997), "The Economics of Improvement in Intellectual Property Law", *Texas Law Review*, 75; 989-1084.
- Lim, Y.F.** (2006), "Digital Rights Management: Merging Contract, Copyright and Criminal Law" in R. Safavi-Naini R and M.Yung (Eds.), *Proceedings of First International Conference on Digital Rights Management: Technologies, Issues, Challenges and Systems 2005, Lecture Notes in Computer Science Series 3919*, Berlin: Heidelberg Springer-Verlag pp 66-74.
- Litman, J.** (1994), "The Exclusive Right to Read", *Cardozo Arts & Entertainment Law Journal*, 13; 29-54.
- McMahon, K.** (2000), "Misuse of Market Power" in Steinwall R. et al., *Butterworths Australian Competition Law*, Sydney: Butterworths; pp. 215-288.
- Reese, R.** (2003), "Symposium: The Law and Technology of Digital Rights Management: Will Merging Access Controls and Rights Controls Undermine the Structure of Anticircumvention Law?", *Berkeley Technology Law Journal*, 18; 619-665.
- Roemer, R.** (2003), "Trusted Computing, Digital Rights Management, and the Fight for Copyright Control on Your Computer", *UCLA Journal of Law and Technology*, 8. Available at http://www.lawtechjournal.com/articles/2003/08_040223_roemer.php.
- Rothchild, J.** (2005), "Economic Analysis of Technological Protection Measures", *Oregon Law Review*, 84; 489-561.
- Shih, R.** (2003), "Symposium: The Law and Technology of Digital Rights Management: Consumers and Creative Destruction: Fair Use Beyond Market Failure", *Berkeley Technology Law Journal*, 18; 539-574.
- Steinwall, R., J. Duns, K. McMahon, V. Nagarajan and R. Smith** (2000), *Butterworths Australian Competition Law*, Sydney: Butterworths.
- Varian, H.** (2003), *Intermediate Microeconomics: A Modern Approach 6th Ed.*, New York: Norton.

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