

Assessing the economic effects of copyright and its reform

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Abstract

In the paper, I consider three related issues: the economic valuation of copyright; the economic effect or impact of copyright reform; and the economics of piracy. They are all topical: WIPO (World Intellectual Property Organisation) is engaged in producing a *Handbook on Surveying the Economic Contribution of the Copyright-Based Industries* (Geneva, 2003); legislatures are implementing the WIPO Internet Treaties —the WCT (WIPO Copyright Treaty) and WPPT (WIPO Performances and Phonograms Treaty) and seek economic guidance on the choice of policy options; and piracy is an ongoing issue that has prompted both of the above. These issues share another feature —they are (or should be) amenable to empirical analysis by economists, though, each presents its own set of problems.

A unifying underlying notion of these three issues is this: if we had a correct measure of the role of copyright in the economy, that would provide a basis for measuring the costs and benefits of changes to copyright law and for measuring the losses from piracy (i.e. the breaking of copyright law), and therefore copyright reform could be scientifically based on economic criteria. I do not share this view but I believe it lies behind some current policy-making.

This paper does not solve these problems but instead discusses some of the difficulties and suggests possible avenues for future research. Economists have a well-developed framework available for analysing the effects of copyright in markets but we need to apply it empirically —and if that cannot be done, to seriously question the case for its reform.

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1. Introduction

The sub-title for this paper could well be: 'the strengths and weaknesses of empirical measures of the economic role of copyright'. In it I use only the most elementary economic concepts; my experience in cultural economics of applying economic ideas in the cultural sector has shown that a proper grasp of the most basic notions (supply and demand and opportunity cost) can pay considerable dividends and that principle seems to be relevant to the economics of copyright too.

In this paper, I consider three related issues: the economic valuation of copyright; the economic effect or impact of copyright reform; and the economics of piracy. They are all topical:

- WIPO (World Intellectual Property Organisation) is engaged in producing a *Handbook on Surveying the Economic Contribution of the Copyright-Based Industries* (Geneva, 2003) - a title that replaced an earlier one containing value-laden terms the economic importance or economic value of copyright - a 'how to' manual that provides instructions on measurement;
- Legislatures are implementing the WIPO Internet Treaties —the WCT (WIPO Copyright Treaty) and WPPT (WIPO Performances and Phonograms Treaty) and seek economic guidance on the choice of policy options;
- Piracy is an ongoing issue that has prompted both of the above.

Besides being topical, these issues share another feature —they are (or should be) amenable to empirical analysis by economists, though, as I shall explain, each presents its own set of problems. In the case of the *Handbook*, the economic methods are straightforward but their application is not; in the case of the copyright law

reforms due to the WIPO Treaties, economics (or law and economics) does not seem capable of providing the kind of empirical or institutional evidence that policy-makers seek; and in the case of piracy, something that is clearly amenable to economic analysis, few economists have attempted to apply themselves to measuring it, though several have written about it analytically.

A unifying underlying notion of these three issues is something like this: if we had a correct measure of the economic role of copyright, that would provide a basis for measuring the costs and benefits of changes to copyright law and for measuring the losses from piracy (i.e. the breaking of copyright law), and therefore copyright reform could be scientifically based on economic criteria. I do not believe it is possible to make such calculations and even if it were, no simple figures can resolve the complex legal, economic and cultural issues at stake; nevertheless, as we shall see, this view lies behind some current policy-making.

This paper in no way attempts to solve these problems but instead discusses some of the difficulties and suggests possible avenues for future research. The motivation for it is my involvement in the consultation process on the WIPO *Handbook* and a commission from the Canadian government looking for economic advice on the economic impact of the WPPT reforms on their sound recording industry. My interest in piracy is a negative one, though it is intimately tied up with the first two experiences —why hasn't anyone effectively counteracted the claims of the recording industry on the extent of music piracy, the stick with which it which persistently pressures WIPO and national governments for copyright reforms?

2. The WIPO Handbook

In 2002, the Copyright Division of WIPO gathered together an international group of economists who had worked on empirical aspects of copyright to advise on the preparation of the *Handbook*. The first task of the consultation process was to emphasise the point that there would be *some* output of cultural industries absent copyright law —what economic historians call ‘the counterfactual’. After all, music was created and performed and published in the time of Bach, Vivaldi, Monteverdi, Haydn and Mozart (to name a few) but how much more or better it would have been, we cannot know .. Equally, as the modern sound recording industry grew up under the protection of copyright law, it is impossible to say what its economic structure would have been without it. Nevertheless, what economists have to try to judge is the validity of the claims for copyright law as an economic incentive between the polar opposites of no copyright and total protection.

Having established this point, the chief area of controversy in the *Handbook* discussions was then about which industries should be regarded as dependent upon copyright (you can see how value judgements so easily slip in!) and several categories of dependence were identified: ‘core copyright’ industries, ‘core interdependent’, ‘partial copyright’ and ‘non-dedicated support’ industries. So, for example, all broadcast material is part of the core industry; producing TV sets is a core interdependent industry (no broadcasts, no demand for TV sets); part of the electrical industry is an interdependent partial industry and part of general transportation is a non-dedicated support industry. You can see how it goes! It is quite clear that the measured amount of the contribution of copyright to the economy depends upon selecting a list of industries that has no well-defined limit and that anyone who wished

to aggrandise its role could do so by extending the supposed scope of its reach. Apart from that, there are other economic objections, for example the fact that factors of production have alternative uses is not taken into account.¹ Thus, there could be no scientific agreement on the proper list of industries or economic activities to be included, nor could there ever be because it is not a 'yes or no' question. But if we want numbers, a line has to be drawn somewhere even if it is a fuzzy one.²

What all the economists present could agree on was that the correct method of measurement is value-added national income accounting but here again there are problems: many (probably most) countries do not have categories in their national income accounts that correspond to core copyright activities. Therefore, a great deal of effort has to be expended on (and assumptions made about) rearranging data within industry classifications. There are problems even with apparently straightforward data on 'core' copyright activity, the earnings of primary creators of copyright material, for example, by authors —let s say, screenplay writers. Many authors (and performers) work freelance and are multiple-job holders ; they are part-time teachers, waitresses and taxi-drivers. National census offices often collect information on earnings and occupation in census week; if the screenwriter spent most of her work hours that week as a teacher, her total earnings (including fees and royalties from screenplays) are allocated to the service sector (restaurants); or, conversely, if she was mostly screen-writing that week, her earnings as a waitress are counted as the value of her contribution to the core copyright activity of screenplays.³

¹ Exaggerating the 'economic impact' of cultural facilities and the cultural industries is a well-known pastime in cultural economics. See article by Seaman on 'Economic Impact' in Towse (2003).

² National Income Accounting does not have to face this issue because it has the national boundary as its natural limit.

When it comes to 'partial' copyright industries and the rest, enormously complex input-output analysis is needed to measure the contribution of copyright. This presents problems even in developed countries with sophisticated national statistical services. It would surely present considerable problems in the less developed countries who are to be encouraged by WIPO (and, no doubt, also by the threat of charges of neglecting their obligations under TRIPs) to mount surveys of the economic contribution of their copyright-based industries.

Despite these manifest problems, estimates of all these categories have been made in several countries —the USA, Australia, the Netherlands, Finland, Norway, Morocco, Paraguay.⁴ In the case of the USA and the Netherlands, repeat studies have been done that allow the growth as well as the size of the copyright-based industries to be measured. As a rough figure, one can say that 5% of GNP is attributable to copyright and the industries concerned have grown (apparently) at around 5% per annum —considerably higher (more or less double) that of other sectors of the economy. (The fact that copyright law has been extended in scope and therefore some of the apparent growth is due to that is ignored). These figures are trumpeted as evidence of the economic importance of copyright, particularly by copyright organisations and pressure groups, such as the International Intellectual Property Alliance (IIPA), which commissions the US studies. This is what I have called data

³ For a fuller account of this problem, see Towse(2001) chapter 3.

⁴ The Allen Consultancy Group (2001) *The Economic Contribution of Australia's Copyright Industries*, Melbourne; *The Economic Importance of Copyright in the Netherlands 2001*, SEO, University of Amsterdam; S. Siweck (2002) *Copyright Industries in the US Economy The 2002 Report*, Economists Inc, Washington, DC; Finnish Copyright Institute (2000) *Economic Importance of Copyright Industries in Finland 2000*, Finnish Copyright Institute, Helsinki; T. Toivonen and R. Picard (2002) *Economic Importance of Copyright Industries in Norway*, Finnish Copyright Institute, Helsinki.

for advocacy , the use of objective statistics for rent-seeking purposes to persuade politicians and others of the need for copyright protection.⁵ Some (including economists) go further —increase IP protection and you ll get higher economic growth.

The case of the WIPO *Handbook* exercise illustrates both the strengths and weaknesses of empirical economics: on the one hand, economists have tried and tested methods for measuring the value added by an industry to the whole economy, while on the other hand, there is no objective basis on which to select the portion of value-added attributable to a sub sector selected on the basis of the significance of copyright.

3. Assessing the economic impact of the WIPO Treaty reforms

Although the national income accounting exercise outlined above is tricky, the conceptual problems pale into insignificance compared to the economic futurology needed for the next exercise!

Faced with the need to implement the WIPO Internet Treaties, Industry Canada (the Ministry of Trade and Industry) recently commissioned a number of studies by economists on the economic impact of a range of options for reforming the Canadian Copyright Act in order to comply with its Treaty obligations. I was commissioned to consider the effects of reforms necessitated by the WPPT in the

music industry. The terms of reference looked quite reasonable - to compare the

⁵ The studies cited in footnote 4 were all carefully done by highly reputable economists using best economic practice. The authors themselves are well aware of the problem of defining a suitable list of industries and, indeed, made important contributions to compiling the WIPO *Handbook*. My criticism

status quo with certain specified changes affecting the rights of performers and producers of sound recordings so as to ensure net gains to Canadians - and it seemed that my previous work on performers' rights would be relevant (the reason I had been asked).⁶ In that research, we had tried to estimate the financial benefits to UK performers of the introduction of new performers' rights in the UK following the Rental Directive (Council Directive 92/100/EEC). Our conclusion was that the new rights were unlikely to produce net benefits to UK performers and we boldly asserted that empirical work should be undertaken before the legal changes were made that promised to do so —'the law provides, the market decides' sums up our message. Thus, I was hoisted by my own petard in the Industry Canada commission and, perhaps predictably, I almost drowned!

The innocuous-seeming terms of reference soon turned into a menu of policy options that I could barely discriminate between, let alone see what either economic theory or empirical economic data could be relevant. While applauding Industry Canada's intentions, at the same time I felt the task of choosing one of several policy options on the basis of net benefit to Canadians was impossible. In order to illustrate the problem, I give two examples of what I was subsequently asked to pronounce on.

The first is the apparently simple question of introducing an explicit distribution right so as to conform to the WPPT. The following options were identified:

- status quo (based on the existing publication right)
- create a right of first publication for performers;
- create a full domestic distribution right in all copies;
- create a right of first publication for performers but to state that the right must be administered collectively;

is not of their work but the way it can be misused by others with a political agenda who are not so careful about interpretation.

⁶ Taylor and Towse (1998)

- create a right of first publication for performers but to state that if the purchaser has lawful exclusive possession, he (or she) will be deemed to be the owner.

My (lame) response was that the economic aspects hang on the strength of the incentive, the ease of transaction and the minimisation of transaction costs; making the right subject to collective administration might appear to save on administration costs but that is only the case where collecting societies have the incentive to minimise their charges. And, as collecting societies frequently operate by means of blanket licences, this blunts the incentive to the individual author or performer. Some commentators have argued that collecting societies do not really administer individual rights.⁷ Understandably finding this inadequate, the question was then asked is it possible to differentiate among the options based on: whether or how they inhibit the development of markets; potential redistribution of benefits and costs; and competitiveness of Canadian performers with performers based elsewhere? That is what the policy-maker reasonably needs to know but what does economics have to say?

A second example is the far more complex one of technological protection measures (TPMs) that are also required to be introduced for Treaty compliance. The options proposed were:

- Amend the Copyright Act to prohibit the act of circumvention of TPMs done for the purpose of infringing copyright. This prohibition would not apply to circumvention done pursuant to an exception or with respect to material in the public domain.
- As above but do not allow circumvention for the purposes of private copying under s. 80 of the Copyright Act (which allows for private copying of works in sound recordings).

⁷ See M. Kretschmer (2002) Copyright Societies do not Administer Individual Rights in R. Towse (ed) (2002) *Copyright in the Cultural Industries*, Edward Elgar, Cheltenham, UK and Northampton, Mass.; 140-164.

- Prohibit not only the circumvention of TPMs, but also the manufacture and trade of devices that may be used to circumvent.
- As above but include an obligation to make the works or means to access or use the works available to users who benefit from specific exceptions or where the work is in the public domain.
- Remedy Options: Possible remedies include:
 - (i) civil remedy;
 - (ii) criminal remedy; or
 - (iii) civil sanctions with the possibility of criminal sanctions if large-scale infringement or infringement done for commercial purposes.
- Regardless of the approach above, provide an exception from liability that would apply in respect of bona fide activities that affect TPMs, which are carried out for the purposes of ensuring inter-operability, reverse engineering and security testing.

All I could find to say was based on the economics of crime —that the value of TPMs depends upon how much it is worthwhile spending to prosecute offenders which is equal to the economic rent of having the measures; that infringers would spend up to that amount tampering with TPMs minus the expected cost of punishment; that the punishment must not be so severe as to cause moral hazard problems i.e. provide an incentive to greater infringement efforts; and that the cost of complex legal proceedings should also be taken into consideration. I also made some general remarks about the loss of fair dealing and its effects *la* Landes and Posner (1989) on subsequent creators as well as consumers. All of this, however relevant, nevertheless does not answer the question!

What I am sure the record industry (the main 'stakeholder') would like to see listed as the benefits of TPMs are figures on the losses from piracy and illegal Internet downloads. Measures of piracy are therefore to be seen as intimately tied up with WIPO Internet Treaty reforms. I discuss this issue below.

Before leaving this topic, several general observations may be made. First, Industry Canada's idea of stakeholders (as is WIPO's) is the industry i.e. performers organisations and the record industry. Performers organisations (trade unions/professional associations and collecting societies) are often small and their members relatively poor and they may not spend much money on research or public relations and so one is left with the highly-organised record industry.⁸ Their pressure groups, such as the IFPI (International Federation of Phonographic Industries) and the IIPA, which is supported by the IFPI, RIAA (Recording Industry Association of America) and US Motion Picture Industry, are the only ones to produce detailed data on the industry and so we have the usual problem widely recognised in regulation economics and public choice theory that the regulator, in this case the government body that has the task of law reform, has to rely on evidence from the most interested party. This must go all the way up the line to WIPO, which is constantly lobbied by the music and film industry pressure groups.⁹ It may be, of course, that one advantage of the WIPO *Handbook* endeavour will be that governments have better and more objective information in the future. By contrast, consumers barely make their voice heard through the political process (again, a well-attested public choice observation). It could be said that it is only because of piracy that their 'demands' have been taken seriously. Indeed, the DCMS (2000) document cited earlier with the rather pointed title 'Consumers Call the Tune' recognises that consumers have not been well served by the sound recording industry in relation to Internet access to music. It has also been observed that the record industry now treats consumers as 'the enemy'. This is, of course, ironic to an economist - whatever happened to consumer sovereignty?

⁸ The UK Department of Media, Culture and Sport (DCMS) has (or had) two music industry advisers on secondment to DCMS to 'advise on policy relating to the Music Industry (capitals in original!) and to improve links between industry and Government' (DCMS, 2000; p.14).

⁹ Koelman (2003) points reports the unprecedented lobbying for the EC Copyright Directive

(Answer, if you protect an oligopolistic industry with over strong copyright, it's not so surprising). The record industry has begun to recognise the error of its ways, see Rosen (2002).

A second observation is that copyright law has become so complex due to technological developments that governments and the rest of us flounder about trying to make sense of it all. The speed of technical change is apparently swifter, and the consequences more pressing, than with earlier changes, such as the invention of sound recording itself or of radio, TV, VCRs and photocopiers. Not only do we have little to go on for predicting the economic effects, the time frame seems to be shorter between the widespread adoption of new technologies (especially by consumers) and the impulse to change copyright law to accommodate technical change and preserve the underlying property rights and the exceptions and limitations to the exclusive right of authorisation.¹⁰ The Canadian government —any government —is correct that economic evidence should play a role in its decision-making but that evidence gets harder and harder to obtain.

A third point is this: how much freedom to choose does one national legislature actually have when faced with international treaties like the WIPO Internet Treaties? They are essentially motivated by international trade —TRIPs is the most obvious example but it is not alone in that respect. With trans-national corporations dominating production in the cultural industries, what chance does Ruritania stand in fashioning its own copyright law? and whatever it deems to be its own interests, can it resist international economic (and legal) pressures?

Finally, and related to the above; the criterion of net national benefit adopted by governments as a decision rule is somewhat meaningless in relation to sound recording makers (which almost everywhere essentially means the 5 majors —Sony Music Entertainment, Universal/Polygram, EMI, Bertlesmann, AOL/Time Warner - which produce over 80% of sound recordings worldwide (Throsby, 2002). The national origin and destination of performers' earnings is also difficult to identify. That is because the majority of performers obtain rewards from copyright from multiple international sources via collecting societies. The complex arrangements between national collecting societies make it extremely difficult to say what revenues are distributed to performers of one nationality or another; even if we ignore the issue of who is British or a Canadian singer, it is impossible, short of a detailed survey of singers earnings, to discover the value of their various rights. It depends upon what agreements are made between which national collecting societies and whether they are A or B agreements (transferring funds or not), how much is deducted in administrative charges and in cultural contributions by the societies around the world, etc. and that is assuming the same rights exist in each country.¹¹

The tendency has apparently developed in WIPO (and other) legal circles to view collecting societies as desirable bodies through whom to direct performers rights. While this undoubtedly reduces transaction costs, it at the same time blunts individual incentives.¹² And could it be that it also enables control by publishers and record companies who are usually dominant partners in collecting societies?

¹⁰ Copyright law requires updating with the development of copying technologies; that is not the case with patent or trademark law.

¹¹ See Taylor and Towse (1998)

¹² See Kretschmer (2002)

4. Digression into Law and Economics of copyright reform

More fundamental matters also come into play here. In a recent commentary on the EC 2001 Copyright Directive¹³, Koelman (2003) makes the case that the emphasis has shifted from authors' rights in the European civil law tradition to an instrumental view of economic rights. Recitals of the Directive put exploitation on a par with creation and stress the importance of copyright as an economic incentive stimulating European competitiveness in the creative industries. This no doubt follows the stance of WIPO, since the Copyright Directive is the EC's implementation of the WIPO Internet Treaties, Koelman's law and economics analysis no doubt applies to them too.

In developing his argument, Koelman shows that the reforms required by the Copyright Directive (a making available right for online supply, TPMs, etc) favour certain types of economic exploitation, such as price discrimination, and that is due to the adoption in the Directive of property rules in preference to liability rules. Exclusive rights for copyright holders are property rules whereas remuneration rights are applied where there are exceptions or statutory licensing as liability rules. The economic implications of this are notable: the value of exclusive rights is established through the market process but the value of remuneration is (mostly) set by an administrative process by a judge or a Copyright Board.¹⁴ Generally speaking, transaction costs must be considerably greater where the juridical process is involved

¹³ Directive 2001/29/EC of the European Parliament and of the Council of 22 May 2001 on the harmonisation of certain aspects of copyright and related rights in the information society.

¹⁴ The UK model is unusual in that collecting societies negotiate licence rates with users (typically trade bodies) and only in the event of an unresolved dispute is there recourse to the Copyright Tribunal. In Canada, the Copyright Board effectively sets many of the rates for secondary use of copyright material and similar judicial arrangements exist in the USA. In Europe, collecting societies are often set up by grant of monopoly from the government and their licence fees thus regulated. There is a very good research project here on the administration of copyright world wide. An early investigation of this topic is by Besen and Kirkby (1989).

(and the question of who pays the costs of the process must be included in any cost benefit calculations). However, it may not be so easy to generalise about the relative advantages of exclusive rights and remuneration rights and value creation.

In order to consider the force of Koelman's point, let us look again at the introduction of the distribution right for performers mandated in the WPPT and the Canadian proposals for implementing them mentioned above. This right applies to tangible objects (whereas the making available right applies to online, intangible supply). The right can be limited by applying the exhaustion principle after the first sale (or transfer); in Europe the Copyright Directive applies this to sale within the Community. In other cases, exhaustion would be within the national jurisdiction. The Canadian Recording Industry Association has stated that national exhaustion encourages domestic performers and recordings and flexible marketing of release of records according to conditions in the national market, as well as providing a basis for effective enforcement. The UK Music Industry taskforce also argues for an exclusive distribution right on the grounds that it encourages competition (DCMS, 2000).

But who is likely in practice to benefit from this right? Is the right valuable to a performer without a recording contract? We then need to know many performers are releasing their own recordings but here is no evidence on that. From casual observation it seems that performers mostly have to work with a record label to be successful and that is likely on balance to be one of the majors, to whom the right would be transferred by contract. Thus the right, if it has any value (and if it does not,

why have it?) would essentially benefit the recording industry unless it is collectively administered (one of the Canadian policy options). Collective administration would presumably be by blanket licensing at rates determined by (or subject to) the Copyright Board. As stated earlier, collective licensing blunts the economic incentive to the individual (in this case, the performer) and the mediation of the Copyright Board raises transaction costs. And although in general collective licensing reduces transaction costs to users who cannot (or cannot easily) contract with the rightholder, in this case the performer is already contracting with the record label so that seems not to be an advantage.

This suggests that it does not matter so much what the legal intentions of the reforms are as how they will work out in practice, for which empirical and institutional research is needed.

5. Measuring piracy and unauthorised Internet downloads of music

We turn now to the third issue, the measurement of music piracy. As suggested in the Introduction, piracy (or unauthorised use, as it should properly be called) is the fuel for the fire of copyright reform and its extent and 'economic importance' motivate WIPO Internet Treaties. In this section, I discuss the well-known industry figures on music piracy and the causal implications that are read into them. It takes only elementary economics to criticise them but unfortunately, no-one has yet undertaken the task of doing a proper measure. The IFPI, which regularly publishes international sales figures of sound recordings, makes a distinction between pirate sound carrier (cassettes and CD) production and sales and pirate Internet downloads. So far, it has

concentrated mostly on the former and that is where I start. I deal with downloads below.

Pirate Sales

IFPI figures show that over the last few years, legal CD sales have fallen considerably (by 10% in the last year they were measured, 2001-2). In 2002, it produced the *2002 Piracy Report* (IFPI, 2002) with regional and country statistics on piracy. The IFPI measures the value of piracy by the estimated volume of pirate sales at local pirate prices. Using this calculation, it shows a world wide value of US \$4.2billion in 2000. It attributes ('correlates') the decline in legal sales to the growth of pirate sales. With such figures it apparently must be concluded that very considerable damage is done to the record industry. Moreover, the industry claims that local music and performers are significantly damaged, not just international stars.

But do these figures correctly measure the loss of legal business? The answer is obviously no since with pirate prices below legal ones, more purchases are made at pirate prices than would be the case for those sold legally. All other things being equal, the way that could be estimated would be by estimating the elasticity of demand at a point somewhere between the legal and pirate prices. That, however, assumes that a pirate recording is a perfect substitute for a legal one and that the same demand schedule applies to both. Quality differences between legal and pirate recordings and the conditions under which they are sold may mean that the demand schedules differ and so the cross elasticity of demand (% change in quantity of legal recordings sold due to % change in pirate prices) is more appropriate. A further refinement is to consider the demand for particular titles and artists. There is a small

literature in cultural economics that do this¹⁵. However, it is not concerned so much with the effect of price on demand as with predicting title success.

It has been said that one reason for the decline of record sales is the lack of appeal of performers/genres - hedonic characteristics in economic language. This would suggest a Lancasterian or hedonic demand schedule. Another factor said to have influenced demand was a technological shift, as consumers replaced LPs and cassettes with CDs (Throsby, 2002). That artificially pushed up sales of recordings in the 1990s and their decline is part of a normal product cycle. As sound recordings come in various forms (sound carriers) - singles, cassettes, CDs, DVDs and music videos - demand should be analysed for each form. We know from IFPI figures that singles and CD sales are falling while DVD and music video sales are rising and that Asian consumers prefer cassettes to CDs, so there is already evidence that technology has an effect on consumption.

The above are the microeconomic aspects of demand for legal sound recordings. Macroeconomic variables also play a role. The most obvious is the world wide fall in consumer expenditure in general, especially in major economies (USA, Japan, Germany) which are also major producers of sound recordings. This calls for some analysis of long term trends in record consumption using real income and real prices of recordings (it is worth noting that the IFPI figures on sales are always current prices and no attempt is made to correct them for inflation).¹⁶ Finally, it can be noted that there have been a couple of studies by economists that attempt to explain the determinants of pirate sales, using various economic variables and an index of

¹⁵ Burke(1994), Cox and Chung (1995), Strobl and Tucker (2000).

law abidingness (including signature of international conventions) (Burke, 1996; van Kranenburg and Hogenbirk, 2002).

I do not pretend that this kind of empirical analysis is easy or would be conclusive; however, these criticisms should be considered before the sound recording industry's claims of losses due to piracy are accepted and their inevitable call for tighter laws and enforcement, for which, of course, the rest of us pay. (Indeed, the cost of litigation and the cost of complying with copyright law is an area that has not received any attention from economists, as far as I know). One more point is that economists should question whether sales data (and CD sales at that) are the most relevant evidence of the effects of losses from piracy. Most economists would regard profitability to be more important in private enterprise. It is also worth noting that the industry does not report income from licensing, for example, from public performance. Licence income is rising (and should rise steeply as record companies make arrangements for legal licensing of Internet downloads). This source of income has so far been relatively insignificant to record companies (though more important to performers and writers, composers and lyricists) who tend to regard radio play etc. as advertisement for sales and it is also the case, as noted earlier, that income coming through collecting societies is difficult to predict. The industry's emphasis on sales however, is really at the bottom of the problem of their thinking about the technological possibilities of Internet licensing and other business models for exploiting sound recordings.

Internet downloads of music

¹⁶ Throsby (2000) appears to have made a start with analysing adjusted data.

The same general economic principles apply to the measurement and prediction of downloads as for pirate sales but some additional problems should be noted: there are no agreed upon figures for the number or for the price of either legal or illegal downloads. At present, estimates of numbers of music files downloaded are made from hits on various sites and from survey data on what visitors to P2P sites are apparently doing by organisations such as IPSOS-Reid and Forrester. Estimates are also made by proxy from data on blank CD sales which have increased very considerably over the past few years; for example, in Canada from 1999-2001, CD-R sales more than doubled and were nearly twice the number of CD sales. Similar figures relate to CDR.RW writers. This is often characterised as free music because users do not pay the sound recording maker for it. However, the view that downloading is free needs to be challenged; a shadow price can certainly be placed on a downloaded track.

The price of an illegal download is the cost of the blank CD track plus the time it takes to download, which is the cost of the connection plus the cost of the person's time in locating and downloading the track. Those costs probably vary—the time of day and the opportunity cost of the person's time. For some people, that may be trivial (students!) but for others it may not be. Even if the cost is small, it provides a price for measuring cross elasticities, etc.

Such a price would also provide a comparator for the price of legal downloads via the new(ish) sites being set up by the record industry. Those sites apparently charge around a dollar a track, making the cost greater than for a legally purchased CD—not quite the ideal way of weaning people away from illegal sites, one might think! This

does not seem justified, considering that the record company no longer has to pay for printing, storage or transport, or even so much on promotion (?). The artists involved do not seem to be getting higher royalties or fees. Indeed, one of the things that encourages some people to download illegally is the view (often expressed by artists) that the artists get a poor deal from their record label (Rosen, 2002). These issues should, in my opinion, be confronted before granting a raft of new rights to the record industry.

6. Conclusion

This paper is about what economists can (and should) say about the three issues outlined here: measuring the economic role of copyright; assessing the economic impact of changes to copyright law (as per the WIPO Internet Treaties) and underlying both of these as motivation for them, the measurement of illegal activity and its effect on legal trade in sound recordings. What has been said in the paper uses very elementary economics but nevertheless, this analysis does not appear so far to have much currency among policy-makers. The overall message is that these elementary economic notions are difficult to apply but that should not be an excuse for ignoring them. After all, the copyright stakes seem pretty high, judging from the observed behaviour of producers and consumers.

It is clear from looking at the issues around implementing the WIPO Treaties that they are overly complex and interventionist and that it is very difficult to imagine their economic consequences. Several of the provisions not discussed here involve retrospective grant of rights to performers. There is no apparent economic justification for this and in my opinion it is doubtful that performers will see much

money as a result, though it is likely to add considerably to the costs of administration of collecting societies (not to mention costs to users). Perhaps the drafters of the WIPO Treaties are more concerned with neatening the legal edges rather than economic consequences. It would be interesting to know where the impetus for these treaties originated.

There is apparently a view among the drafters of Treaties and Directives that the anticipated consequences work out —pass a law and people will behave according to its intent. I believe that, as a result, unintended consequences are not considered (Towse, 2001). An (I hope) unintended consequence of increasing the scope and duration of copyright law is to increase the value of copyright assets of firms in the cultural industries (the record labels, film studios, TV companies and the rest) which enables mergers to take place between firms, increasing firm size and thus encouraging oligopoly/monopoly. The EU Directive 2001/29/EC on the harmonisation of certain aspects of copyright and related rights in the information society even stresses encouraging economies of scale —though that leads to industry concentration!

What is wrong with greater economic power of firms in the cultural industries? Well, it leads to cultural homogeneity, such as a reduction of the number of titles offered for sale (restriction of consumer choice), and reduction of local or national cultural products; it reduces the number of artists and encourages a winner takes all superstar cultural economy; and it reduces the relative bargaining power of artists vis- -vis the suits, what Caves (2000) judiciously calls the humdrum inputs. Furthermore, the apparent help given to artists (e.g. performers) by granting them rights that can only

be exercised via collecting societies is a misunderstanding of collecting societies and what they do—they are collectives of workers and employers not trade unions.

Alan Peacock, a pioneer of cultural economics and the economics of copyright in the music industry ¹⁷, often laments the fact that economics is the dismal science, pouring cold water on well-intentioned but unsound initiatives. He also frequently complains about the perception of economists as hired guns doing the dirty work of drumming up evidence supporting petitioners' preconceived policies. I think we risk the latter role in relation to copyright reform if we do not embrace the former. Economists have a well-developed framework available for analysing the effects of copyright in markets but we need to apply it empirically—and if that cannot be done, to seriously question the case for its reform.

Bibliography

Allen Consultancy Group (2001) *The Economic Contribution of Australia's Copyright Industries*, Melbourne.

Besen, S., Kirkby, S., (1989a) *Compensating Creators of Intellectual Property*, RAND Corporation.

Burke, A. (1994) 'The Demand for Vinyl LPs 1975-1988. Time Series Estimation of a Product Group in the Presence of Product Differentiation Innovation', *Journal of Cultural Economics*, 18, 1; 41-64.

Burke, A. (1996) 'How effective are international copyright conventions in the music industry?' *Journal of Cultural Economics*, 20; 51-66.

Caves, R. (2000), *Creative Industries*, Harvard University Press, Boston, Mass.

Cox, R., Felton, J. and Chung, K. (1995) 'The Concentration of Commercial Success in Popular Music: An Analysis of the Distribution of Gold Records', *Journal of Cultural Economics*, 19, 4; 333-340.

¹⁷ For an intellectual biography of Alan Peacock as a cultural economist, see Towse (2003).

Department for Media, Culture and Sport (DCMS) (2000) *Consumers Call the Tune Report of the impact of new technologies on the music industry*, DCMS, London.

IFPI (International Federation of Phonographic Industries) (2002) *Music Piracy Report*, IFPI, London.

Koelman, K. (2003) 'Copyright Law and Economics in the Copyright Directive: is the *Droit d'Auteur* Passe?' Mimeo, Computer Law Institute, Free University, Amsterdam, The Netherlands.

Kretschmer, M. (2002) Copyright Societies do not Administer Individual Rights in R. Towse (ed.) (2002) *Copyright in the Cultural Industries*, Edward Elgar, Cheltenham, UK and Northampton, Mass.; 140-164.

Van Kranenburg, H. and A. Hogenbirk, (2002) 'Determinants of Multimedia, Entertainment and Business Software Piracy', paper presented at 5th World Media Economics conference, Turku, Finland.

Landes, W. and R. Posner (1989) An Economic analysis of Copyright Law , *Journal of Legal Studies*, 18; 325-66.

Rosen, Hilary (2002) Chairman and CEO, Recording Industry Association of America, July 8. www.ifpi.org/site-content/press/inthedia06.html

SEO (2002) *The Economic Importance of Copyright in the Netherlands 2001*, SEO, University of Amsterdam.

Seaman, B. 'Economic Impact' in R. Towse (ed) *A Handbook of Cultural Economics*, Edward Elgar Publishing, Cheltenham ,UK and Northampton, MA, USA.

Siweck, S. (2002) *Copyright Industries in the US Economy The 2002 Report*, Economists Inc, Washington, DC.

Strobl, E. and Tucker, C. (2000), The Dynamics of Chart Success in the UK Pre-recorded Popular Music Industry , *Journal of Cultural Economics*, 24 (2), 113-34.

Taylor, M. and R. Towse (1998) The Value of Performers Rights *Media, Culture and Society*, 20,4; 631-52.

Toivonen, T. and R. Picard (2002) *Economic Importance of Copyright Industries in Norway*, Finnish Copyright Institute, Helsinki.

Throsby, D. (2002) *The Music Industry in the New Millennium: Global and Local Perspectives*, Division of Arts and Cultural Enterprise, UNESCO, Paris,

Towse, R (2001) *Creativity, Incentive and Reward: an Economic Analysis of Copyright and Culture in the Information Age*, Edward Elgar Publishing, Cheltenham, UK and Northampton, MA, USA.

Towse, R. (2003) 'Professor Sir Alan Peacock as a Cultural Economist', mimeo, Erasmus University Rotterdam. [Towse@fhk](mailto:Towse@fhk.eur.nl) eur.nl.