

**WHAT WE KNOW, WHAT WE DON'T KNOW AND WHAT
POLICY-MAKERS WOULD LIKE US TO KNOW ABOUT THE
ECONOMICS OF COPYRIGHT**

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ABSTRACT. There are many gaps between what economists know and what they don't know. This article reviews this situation in the light of what policy-makers say they want to know about the economic effects of copyright. The article sets out what I see as misunderstandings on the part of policy-makers as to what economics can offer in the way of evidence on copyright. The paper is based on my limited experience of advising and consulting as well as on reading calls for evidence in policy documents.

1. INTRODUCTION

Having relied for many years on the assessments of lawyers and on industry insiders for 'evidence' on the effects of copyright and the appropriate changes to the law, policy-makers have turned to economists in the quest for impartial, objective statistical data as the basis for law-making. Governments the world over are looking for evidence on the economic effects of copyright law, the more so since the increased emphasis in government growth policy on the role of the creative industries has led to the justification of copyright as a stimulus to the economy.

What they usually get in response to calls for evidence are persuasive statements from stakeholder interest groups that have sufficient funds for lobbying. Some of these contain data selected in order to make their point –

An outline of this paper was presented in Powerpoint at the 2010 SERCI annual conference held in Cartagena des Indies, Colombia. It is a personal view and is intended to stimulate discussion and criticism.

the outpouring of data on unauthorised use of sound recordings around the world by the International Federation of Phonographic Industries (IFPI) being a notable example.¹ What policy-makers do not usually get is evidence as understood by economists: the result of empirical testing of a hypothesis that is capable of being rejected using objectively selected data. The hope now is that economists can solve the problem of the balance of costs and benefits to the various stake-holders and enable governments to make evidence-based policy. So far, it seems, these hopes have been disappointed. One reason is that what governments want to know is virtually impossible to test for directly; this point is discussed in some detail in what follows. Another reason is that there seem to be relatively few economists engaged in such research, though SERCI has managed to capture the attention of most of them with the result that RERCI is apparently widely read by policy-makers. In terms of the wider economics profession, very few economists have engaged with copyright and those that have done so have typically been critical, even of its very existence.² A further problem is that policy-makers want answers within months of questions that take years to research.

As a result, there are a lot of gaps between what economists know and what they don't know and the point of this article is to review that in the light of what policy-makers say they want to know about the economic effects of copyright.

2. WHAT POLICY-MAKERS WOULD LIKE US TO KNOW

The value of copyright to 'our' country is increasingly sought after by governments. To quote from one document commissioning research it is: 'to quantify the effect(s) of copyright protection on measures of consumer

¹See <http://www.ifpi.org>

²An early critic was Arnold Plant (Plant 1934).

and producer welfare and on the creation, distribution and usage of original works in various markets'.³ This usually means the contribution to GDP plus the value of exports though the effect on the balance of payments is rarely considered (possibly because very few countries are net exporters of products embodying copyright material and most are heavy net importers, mostly from the USA). This kind of information would then, it is anticipated, enable decisions to be made objectively on the economic impact of changes to copyright law and its administration, issues such as extending exceptions and regulating copyright collecting societies, both on the growth of economy and on the various stakeholder groups – creators, intermediaries and consumers.

One of the big questions currently facing policy-makers is what would be the economic impact if copyright could not be enforced in the digital era and this has led to considering whether digitization represents an unprecedented 'paradigm' shift for copyright that the law might not be capable of dealing with. The 'value of copyright' would then act as a warning of potential economic loss, as argued in the case of the effect of piracy in the creative industries.

3. WHAT ARE THE POLICY OBJECTIVES OF COPYRIGHT?

At this point, it might be useful to consider what the policy objectives of copyright are. These are to be found in the existing law and in contemporary policy statements about copyright, particularly those relating to the creative industries. Copyright law since the English Statute of Anne in 1709 (which itself was preceded by considerable debate) has set down the main tenets according to which subsequent changes to the law have been and continue to be made. Those changes have extended the scope and duration of the term of copyright by applying the underlying principles to new art forms

³Quote from Industry Canada bid proposal for 2008 project 'Copyright protection: What is it worth to Canadians? And what constitutes best practices and policies going forward?'

and technologies. What has not happened is the repeal of those principles, the removal of works to which protection applies or reduction in the term with the result that copyright law's accretions have become exceedingly, some would say excessively complex, without enabling it to ride the 'digital challenge' now facing policy-makers.

As to policy statements, these are too numerous to cite; suffice it to say that almost every national government has produced policy documents, as have the various supranational and international organizations specifically dealing with IP, such as WIPO, WTO, UNESCO and the EC, as well as those organizations concerned with innovation and economic growth, such as UNDP and OECD. Here I summarize what I understand to be the main policy objectives of copyright policy in terms of initial creation, intermediate and final use and the public interest.

First and foremost is the objective of encouraging creation of new works by recognizing and protecting the work of creators through incentives and rewards. Similarly, intermediaries are encouraged through the prevention of unauthorized copying and distribution to invest in the diffusion of new and exiting works through publication (in the broadest sense) and by the creation of derivative works. Thus, society benefits from the widest possible use and dissemination of creative works by the enhancement of access to, and enjoyment of, culture, knowledge and entertainment. The public interest is served, through the market, by the promotion of cultural diversity within a society and more generally by the social, economic and cultural development of nations and understanding of their cultures. Copyright is also regarded as supporting investment and employment in the creative industries and therefore generates economic growth through creativity and innovation. Growth supported by intellectual property has rapidly come to the fore of policy

objectives in the last decade with the increased emphasis on the creative or knowledge economy.

It is clear that these multiple objectives are unlikely to be fully satisfied by any single policy or policy instrument and that copyright law must be a compromise between the different 'stake-holders' involved.

4. WHAT WE DO KNOW

It has been well established in the economic literature that copyright is a trade-off between opposing forces – the economic incentive to create works of art, literature, music and so on as against the disincentive it causes to users, whether intermediate producers or final consumers. It is a second best solution to market failure and there is no first best answer; all we can do is to aim for features of the law that maximize net benefits. In common with other second best situations facing policy-makers, empirical evidence on costs and benefits is needed to establish these net benefits in specific cases as there is no general answer.

The so-called copyright standard consists of the duration of the term of its many rights and their scope as well as the degree to which it is enforced. Almost all economists are agreed that the copyright term is now inefficiently long with the result that costs of compliance most likely exceed any financial benefits from extensions (and it is worth remembering that the term of protection for a work in the 1709 Statute of Anne was 14 years with the possibility of renewal as compared to 70 years plus life for authors in most developed countries in the present, which means a work could be protected for well over 150 years). Moreover, difficulties of tracing copyright owners and of so-called 'orphan' works has prevented access to copyright material and inhibited both future creation and access to culturally valuable material by the public. It is well known since Breyer (1970) that the vast majority of copyright works is out of print or has long been unavailable on the market

and this tendency is exacerbated by extending the term. One point on which all economists agree is that there can be no possible justification for retrospective extension to the term of copyright for existing works since it defies the economic logic of the copyright incentive, something that nevertheless has been enacted on several occasions.⁴

In addition, the scope of copyright is very broad and nowadays covers many items of no commercial value that were never intended to be commercialized, as is the case with a great deal of material on social-networking sites. This raises the question of the incentive role of the scope of copyright since it offers the same 'blanket' coverage for every type of qualifying work. In general, the lack of discrimination in this 'one-size-fits-all' aspect of copyright is another subject on which economists are agreed: in principle, the incentive should fit the type of work depending upon the investment required, the potential durability of the work and so on - computer software and operas do not have much in common. This applies as much to the term as to the scope of copyright; some works retain their value over a very long period while others lose it very quickly. The rationale for this lack of discrimination, however, is that 'individualizing' incentives would be prohibitively costly both to initiate and to enforce. As it is, that copyright is recognized to have become excessively complex and therefore very costly for users and authors.

A further aspect of the incentive value of copyright has to do with practicalities. Copyright law only stipulates the copyright standard and the rights that protect authors, but authors almost always have to contract with an intermediary or distributor in order to market their work and it is the terms of the contract between them that determine the eventual financial reward to the author. That outcome is uncertain, though, as the contract usually

⁴Perhaps the most notorious case was the CTEA (Sonny Bono or Mickey Mouse) extension in the USA which was also followed up by the European Union, thereby handing out economic rents to the rich and famous of the entertainment world and, more likely, to their descendants.

only lays down the royalty rate, not the value of the revenue of which it is a percentage.⁵ For many rights, such as the public performance right, individual authors and performers cannot contract with all users and the solution is collective rights management. That minimizes transaction costs for both copyright holders and users of copyright material but introduces monopoly pricing and blunts the individual incentive – another trade-off. Technical alternatives, such as digital rights management that are supposed to enable individual control, even if feasible, do not solve the problem of setting the royalty rate. Most economists agree that collective rights management is necessary in those circumstances in order for copyright to be practicable.

Economists have made some headway in estimating earnings from copyright, which is significant for the question of the importance of the incentive it offers to creators. Research on royalty earnings of individual creators and performers has been limited because by and large, it has been on earnings from specific rights rather than on the entire bundle; for example, we know what composers earn from performing and mechanical rights for their compositions but not what they earn from performers' rights as well, as players or conductors. Research on artists' total earnings including royalties shows that only a small minority earn an amount comparable to national earnings in other occupations and only 'superstars' make huge amounts. Copyright produces limited economic rewards to the 'ordinary' professional creator; on the other hand, what the situation would be like absent copyright protection cannot be estimated. There has also been recent work on estimating the asset value of original works of art to which copyright applies that is a notable set forward in the measurement of the economic contribution of

⁵The uncertainty is the greater the less experienced the author. Firms, however, are more experienced and can pool risks and therefore they consider the probability of the outcome, not uncertainty. We have all signed book contracts not knowing even the price the publisher will charge for the book!

the products embodying these copyright works but again, it does not tell us what incentive role copyright had in stimulating that production.⁶

In this context, it is generally accepted by economists that piracy has adversely affected sales in creative industries that did not anticipate effects of digitization, P2P, MP3 and other such means of using the internet to obtain unauthorized copies, especially in sound recording. We do not know the true size of the effect (i.e. how much of the loss in sales is actually due to piracy, and how much to other effects), nor do we know the real cost to the industry – losses in profit rather than sales.

Nor has there been research on the distribution of the loss of potential revenue to authors and performers.

Economists have responded to the apparent threat to copyright posed by digitization by suggesting that copyright law is anyway excessively complex and unnecessary if suitable business models are developed that would enable the market alone to reward the owner. Some have gone further and argued that copyright inhibits the development of these models.⁷ One solution to the difficulties of enforcing copyright in the digital age that has been widely adopted is the so-called ‘copyright levy’; that has been almost universally opposed by economists on the grounds that its remuneration to creators bears no resemblance to the market value of the works and therefore could not act as a valid incentive to creators. Its only merit is that it reduces transaction costs of obtaining remuneration for right holders, though it is argued that it acts as a tax on goods, such as computers, that are not directly responsible for the uses or abuses to which they are put.

Finally, economists have long had concerns that copyright has a moral hazard effect on incumbent firms, including those in the creative industries, by encouraging them to rely on enforcement of the law rather than

⁶For the UK, Farooqui et al, (2011); for the US, Soloveichik (2010), and Soloveichik and Wasshausen (2011).

⁷Varian (2005); Boldrin and Levine (2002).

adopt new technologies and business models to deal with new technologies. Many economists espouse the Schumpeterian view of the process of creative destruction of technical progress, whereby incumbent firms are replaced by new firms/industries that have developed the ability to exploit new technologies.⁸ It is well-known that creative industries have spent huge amounts of money lobbying governments for increased copyright protection both through strengthening the law and stronger enforcement, not only within national boundaries but also through international treaties.

These are the topics that economists have researched and on which most would agree.

5. WHAT WE DON'T KNOW

First and foremost of what we don't know is the overall impact of that copyright law has on the economy, the very thing that policy-makers seek. We do not know what is the optimal scope and duration of copyright because we do not know the costs and benefits either at the micro or the macro level. At the macro level estimates may be made of the value of copyright assets and the contribution to GDP of so-called copyright based industries, however these are defined,⁹ but that does not tell us the role copyright actually plays – what the situation would be absent copyright or if different business models had been adopted – and little attempt has been made to estimate the costs to users or final consumers in terms of higher prices and rental rates and of the transaction costs of searching and clearing copyright material. Thus we do not have the answer to the 'big' question that concerns policy-makers and reputable economists are not likely to be willing to 'quantify the effect(s) of copyright protection on measures of consumer and producer welfare and on

⁸For example, Aghion and Howitt (1998), Metcalfe (1997). See Liebowitz (2006) and Handke (2006) for relevance to the music industry.

⁹UNDP (2008) reviews the various ways in which industries are classified as 'creative' or 'copyright-based'.

the creation, distribution and usage of original works in various markets'. No single figure for overall net benefit the whole economy can be justified.

Some work has been done at the micro level on the perceived importance of copyright to firms using or producing copyright works, which have shown mixed results,¹⁰ but again, it does not delve into how firms use it, for example in relation to supply or pricing decisions, and there has been no work other than that on unauthorized use to show the impact on costs to consumers. We also don't know if copyright is the incentive to authors and other primary content creators it is held to be. Economic rights do not produce significant earnings for this group of rights owners but monetary rewards alone do not seem to have great value to artists anyway.¹¹ Copyright would seem to have non-monetary value because of the moral rights but there has been little work on the economic aspects of artistic motivation.¹² We do know that in the UK, for one, moral rights are routinely waived in some types of contracts but in general, we don't know the extent to which contracts 'over-ride' copyright in practice with the use of buy-outs, waivers of rights or the extent of copyright works created by employees as 'work for hire'.¹³ But, as mentioned above, we also do not know how artists and other primary creators would fare in contracting without copyright.

6. WHY DON'T WE KNOW THESE THINGS?

The main reason that economists have found it very difficult to provide empirical evidence on the impact of copyright is that there is no obvious counter-factual – that is, a situation comparable to those in which copyright does apply to one in which it does not. Given the widespread application of

¹⁰Greenhalgh and Rogers (2007); Handke (2006).

¹¹Kretschmer and Hardwick (2007).

¹²Towse (2010).

¹³Symposium on Contracts, Creativity and Copyright, CIPPM (2009) available on <http://www.cippm.org.uk/symposia/symposium-2009.html>

copyright, its 'impact' cannot be distinguished. Copyright's scope is universal with the definition of the law. Even where copyright may not be regarded as useful in the production of some cultural goods or services, it still applies. For instance, few choreographers need to rely on enforcing copyright to protect their work as reputation will do the job but nevertheless, choreography falls within the scope of the law and it cannot be ruled out that copyright plays a role in stimulating creativity in dance. There is evidence from surveys of firms that some regard copyright as not only not useful to their enterprise but actually that it even imposes costs on some (Handke, 2006). Moreover, economics does not deal easily with all or nothing states of the type envisaged by the impact of the whole system; its strength is in analyzing marginal changes. The most promising situations for research therefore seem to be those in which some new feature of copyright, or a specific right, is introduced for the first time, for example, though a change to the scope or duration which presents the possibility of analyzing the effect 'before' and after'.¹⁴ The problem here is that fast moving technical changes also affect production and consumption patterns and it can be very difficult to pin down a 'before' and 'after' test of the impact of the change to copyright law.

Even if some feasible scenario can be found, the absence of registration of copyright works makes 'direct research' on the effects of copyright impossible, unlike the position with patents. By direct research, I mean where works can be identified and their exploitation traced through the market. As the requirement of compulsory registration of works contravenes the Berne convention, signatories therefore have had to abandon registration if they

¹⁴That is what I tried to do (with the assistance of Milly Taylor) in the 1990s when the UK was required to introduce equitable remuneration for public performance rights for non-contracted musicians' contributions to sound recordings in order to implement the EC's Rental Directive (Taylor and Towse, 1998). This was a 'before and after' situation as far as this one particular right was concerned in the UK but the *ceteris paribus* assumption unfortunately did not hold: among other things (delay in implementation, absence of required institutional arrangements), changes in technology were already beginning to alter the market for sound recordings.

required it prior to joining (the case with the UK and the USA).¹⁵ Consequently, researchers must use either ‘old’ registrations, as has been done in the USA, or abandon the attempt to work with direct data in copyright works and substitute instead products that contain a strong element of copyright material, such books and sound recordings. That has been the most common approach to measuring the effect of copyright: initiatives like the WIPO *Guide* and other such measures of the contribution of the creative industries to GDP measure value at the end product of creativity but not the effect of the copyright incentive. The reasoning can be circular here too: the creative industries are mostly defined in terms of their ‘reliance’ on copyright so cause and effects become confused.¹⁶ Even where they measure value-added to GDP by the creative industries (and many use turnover figures), benefits to the national economy are overestimated by omitting the balance of payments of royalties, for which data barely exist¹⁷ and of overseas transfers of profits by multi-national corporations, which dominate the publishing, music and film industries, among others.¹⁸ Moreover, in cost benefit terms, these measures fail as they concentrate entirely on the supposed benefits but completely ignore the costs of copyright to users and consumers and the deadweight loss of administrative costs.

It has been argued that the advent of digitization provides a natural experiment for researching the economic importance of copyright and that measuring the value of lost sales and other revenues due to unauthorized use of copyright works is evidence of the value of copyright. Experience with empirical testing of ‘piracy’ has shown difficulties of this research¹⁹ and although there is a consensus now that it has had a significant impact,

¹⁵Historical studies have also provided interesting counterfactual situations for example, those by Khan (2004) and Heald (2009).

¹⁶Towse (2010).

¹⁷UNDP (2008).

¹⁸For a UK study, see Frontier Economics (2007).

¹⁹See Handke (2011).

particularly on sound recording (the industry that has been most researched by economists), it has taken almost a decade for that consensus to emerge and during this time, not only has the technology changed, especially of distribution, but the players in the industry have changed too. This suggests how much more difficult it would be to measure a value for copyright in the whole economy.

7. WHAT CAN WE TELL POLICY-MAKERS?

As explained above, we cannot place a value on the whole ‘copyright system’, meaning the value of copyright works that have been created due to the copyright incentive and with the enforcement of copyright law. The measures that have been used are crude and subject to the selection made of goods and services and, anyway, cannot get at the fundamental question: what would have been the value of their output absent copyright? Some studies have tried to analyze production of information goods to which copyright does not apply, such as jokes and recipes but it is difficult to generalize from them to the whole sector.²⁰

Nevertheless, we can likely estimate the *marginal* benefits and costs of specific changes to the law, for example, extending fair dealing in the UK to photocopying in educational establishments,²¹ the cost savings to the UK of cross border licensing.

So this leads to the conclusion that what we can tell policy-makers is to look to economics for valuation of specific policies rather than the ‘blockbuster’ valuations of the whole copyright system that have been on the agenda.

Further, we can tell policy-makers that collective administration of copyrights has a sound economic basis: by pooling transaction costs, all copyright

²⁰For jokes, see Oliar and Sprigman (2010).

²¹See Towse (2001).

holders are able to obtain their reward from uses they otherwise could not control. The down side is that blanket licences that are currently used by copyright collecting societies do not reward on an individual basis but on the other hand, that makes for very low transaction costs for licensing users.²² Collecting societies usually have monopoly control over a specific bundle of licences and the terms on which they deal with both rights holders and users may leave something to be desired but that is in many cases due to state regulation. It is also the case that cross-media and cross-border licensing are very unwieldy and therefore costly. But the fact remains that copyright law would not work without collective administration. What is important to understand is that collecting societies are natural monopolies as well as legal ones, which is why competition is unlikely to reduce administrative costs, rather the opposite, and it is likely to lead to ‘cherry-picking’ and marginalizing small time rights holders. As with other natural monopolies, proper regulation is needed instead of breaking up the monopoly. It is worth remembering that if the market were capable of working, there would be no need for intermediation of this kind – or, indeed, for copyright law itself. They are both second best solutions for market failure.

8. WHAT WE (I) WOULD LIKE POLICY-MAKERS TO THINK ABOUT

The single thing that would most assist economists in researching copyright would be a system of public registration of works. At one time, that would have been cumbersome and costly but with digital technology, it is simple and inexpensive. Though compulsory registration of copyright works contravenes the Berne Convention, and altering that would be extremely cumbersome, it does not prevent the development of a national voluntary scheme. In fact, there are many ‘private’ registration systems, such as ISBN for books that already requires information from authors by publishers and

²²Handke and Towse (2007).

‘copyright’ libraries. Rights holders who have published works often register them with a collecting society and collecting societies exist for almost all of the rights (anyway for the valuable ones) that are protected by copyright law. There are also private companies that register works for the author in order to establish ‘prior’ creation and provide evidence in the event of a dispute. The UK’s Hargreaves Report recommends the setting up of a Digital Copyright Exchange as a major cost-saving way of administering digital rights;²³ there are difficulties of implementing this recommendation that are currently being researched by lawyers and economists.

A registration system would also enable the implementation of a proposal that I believe most economists would support – the introduction of a renewal system into the copyright term. Copyright could become more similar to a patent by having an initial term of protection of a work, say of 20 years, renewable for further terms. (This, of course, was the provision in the Statute of Anne, with 14 year renewable terms). The advantage of this is twofold: it enables a ‘use it or lose it’ regime to function and, more relevant to the economics of copyright, it enables the market to function better in valuing a work (the vast majority of works, as we know, are anyway out of print because they are deemed to have no commercial value while the copyright is still valid); knowing that renewal would be necessary would also alter contractual terms between creators and intermediaries, thereby improving the efficiency of contracting and the prospect of fairer contracts.²⁴

A more drastic version of this scenario has been proposed by Landes and Posner (2002): in keeping with trademarks, copyright would become perpetual with renewal required at stated intervals. But the incentive to renew would only exist for protecting works that the right holder considered to be valuable. Unrenewed (lacking value) works would go into the public

²³Hargreaves (2011).

²⁴See Kretschmer (2011) <http://www.cippm.org.uk/publications/Kretschmer-term-reversion.pdf>

domain, thereby overcoming the widely recognized problem of orphan works. Landes and Posner were concerned with the considerable waste of resources employed in lobbying for extensions to copyright (with the CTEA being a prime case in point) something that would be preempted by their scheme.

Other changes that could be considered relate to altering the focus of copyright more towards protecting the initial creator than subsequent rights holders; this might be done by raising the requirement of ‘originality’, which has a very low threshold. With the development of social networking and other internet-based activities, the explosion of user-created copyright material has surely altered copyright law’s intention of encouraging of learning (as well as leading to considerable unauthorized use of others’ copyright material); again, registration of works would reduce the problem of the excessive quantity of protected material and might deter unauthorized use too.

The regulation of collective rights administration could well be informed by more intelligent economic thinking than has so far been applied. That is a complex process that includes debundling of rights in a particular medium, such as music, art, literature, broadcasts, setting licence fees for specific rights for their use in widely varying circumstances and developing formulae for distribution of revenues to individual rights owners, including remunerations from levies and compulsory licences and the like, registering lists of works provided by members/others who wish to licence them collectively, maintaining a database of details of rights owners (names, addresses, bank accounts etc.) and distributing monies to ‘nationals’ and transfer credit/monies to ‘sister’ collective rights organisations abroad. Regulation and any moves to introduce competition needs to take all these activities into account.

Finally, policy makers should stop making statements such as copyright ‘ensures a fair return for creators and performers’. All it can do is lay the

foundation for the ownership of rights, not the reward they gain. Copyright's rewards always come through the market, even where institutional arrangements have been put in place by the state to ensure that copyright is administered fairly. And so do its costs.

9. CONCLUDING REMARKS

This article set out to lay out what I see as misunderstandings on the part of policy-makers as to what economics can offer in the way of evidence on copyright. It is based on my limited experience of advising and consulting as well as on reading calls for evidence in policy documents. It does not attempt to review recent work in empirical economic research on the economics of copyright, which is comprehensively covered in Handke (2011).

Two generalizations may be made: first, the rhetoric and justification of copyright confusingly alternates between economic efficiency arguments and equity ones. Fairness is often evoked by lawyers – fair enough! but it is not easily amenable to empirical analysis and, though there is some interest on the part of economists in measures of fairness, they have not so far been applied to copyright. Secondly, it is apparent from stakeholder consultations, that creative industries interest groups regard copyright as a right that must be maintained or preferably strengthened rather than as a privilege granted for the wider benefit of society. They are not that interested in objective evidence unless it supports their claims.

Although much work has been done on measuring the creative industries, work that has improved considerably with the application of national income accounting, it still does not get to the heart of the role of copyright: what exactly does it achieve as an economic incentive? Much more detailed research is needed on motivation of primary creators as well as on contracting of rights, as suggested by Kretschmer et al (2010).

Copyright is essentially pragmatic and is based on perceived net social benefit. However, focus by policy-makers on the benefits of the creative industries in the form of their size and contribution to GDP and to economic growth emphasizes financial benefits and ignores cultural benefits as well as costs. Net social benefit is contingent on the state of technology and on cultural perceptions and therefore needs reviewing as technologies and consumption habits change but so far this has just led to additions to statutes and extensions of copyrights duration and scope. Moreover, copyright is a line in the sand and moving the line by changing the law redistributes costs and benefits between producers, intermediaries and consumers.

At the end of the day, the success of copyright (and on authors' rights which do not rely on economic justification) depends upon how well markets function for products embodying creative works. That depends upon the good old laws of supply and demand. Copyright is an intervention in the market that should help not hinder them. My choice for that help is to encourage registration and renewal of copyrights rather than to forever 'stengthen' copyright law.

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