Chapter 1

Access to cultural expressions and incentives to creativity: Arguments, evidence and implications

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Abstract

This chapter explores the role played by intellectual property legislation in the creation of cultural expressions (books, music, films, etc) and its influence on markets and access. We describe the theoretical arguments underpinning intellectual property laws, review the empirical evidence and reconsider arguments in light of the evidence. Finally, we propose a solution regarding the moral and pecuniary rights of creators and producers that would improve access to cultural creations while maintaining incentives to creativity. What we propose is to separate the pecuniary rights of creators from those of (re)producers and marketers, with the result that creators would increase their revenues, markets would become more competitive, access to cultural creations would be enhanced and the loss of social wellbeing resulting from temporary monopolies created and guaranteed by law would be limited. We also argue that transforming the moral rights of creators into rights of attribution would encourage the creation of derivative works that would enhance the popularity of original creators and possibly increase their revenues further.

Keywords

Intellectual property law, the economics of intellectual property, access to culture, incentives to cultural creation.

1. Introduction

The new digital technologies have altered the production costs of cultural expressions and how they are marketed and also offer alternative means for accessing cultural expressions. This situation has rekindled the debate regarding the protection of cultural expressions and the corresponding limitations on access. On the one hand, the growing availability of new technologies would suggest an undermining of the arguments in favour of protecting new cultural expressions (lower production costs); on the other hand, new technologies have facilitated access to, and sharing of, cultural expressions, thereby reducing producer and marketer control over traditional markets (lower marketing costs).

In this chapter we first describe the theoretical arguments behind intellectual property (IP) legislation — whose aim is to encourage innovation via what are referred to as a priori incentives — and then review empirical evidence regarding the impact of IP legislation on innovation. We show how incentives to the reproduction and marketing of cultural expressions change a posteriori when authors, (re)producers and marketers have legal rights but different interests.

We next reinterpret theoretical arguments underpinning IP legislation in order to determine what would happen if the IP rights of creators and producers of cultural expressions were eliminated or reduced. We demonstrate how inventions as created and marketed under the current IP protection system would likewise be created and marketed in a competitive system. This applies particularly to creations with sufficiently high demand for the author and producer to recoup incremental creation, production and marketing costs — in other words, creations that produce value for society and for creators. We argue that anything created in a monopolistic system would likewise be created in a competitive system — although naturally, profits for (re)producers and marketers would be lower in the competitive system.

Finally, we assess the implications of this new interpretation of the theoretical arguments underpinning IP protection and conclude with a summary of our main contributions.

2. Why Protect Creations and Inventions: The Theory

2.1. Incentives to Creation

The virtue of competitive markets is that they ensure efficient production and distribution. This means: (1) that once a material object has been produced and marketed, it will be consumed by those most willing to pay the established price; and (2) that the price will be equal to the opportunity cost of the marginal resources required to produce the good. Fulfilment of these two conditions ensures efficient resource allocation.

What happens when we apply the same reasoning to information, knowledge and cultural and digital goods? Preventing access to the good is only efficient if it means consumption by another consumer who values it more. For tangible goods, this goal is achieved by adjusting price so as to make the good available to the consumer willing to pay more. Intangible goods, however, such as information, knowledge, culture and digital content, can be consumed simultaneously by many people — say n people — and by even more people — in total $n+k$ people. However, preventing k additional people from consuming the good does not allocate resources from k (who value the good less) to n (who value the good more). If such goods were supplied in a perfectly competitive market, the price would tend to zero, all $n+k$ consumers would have access to the good and the outcome would be a socially efficient one.

Unfortunately, a zero price would not allow creators and innovators to cover their fixed costs; hence, in a market in which the only incentives were pecuniary, there would be no creators or inventors. The solution to this problem has been to convert creations and innovations into IP protected by legislation that allows a monopoly to exist for a certain period (Gallini & Scotchmer, 2002). However, a new problem arises, namely, the loss of wellbeing, which occurs when consumers with a reduced willingness to pay are denied access to the creation or invention due to its price being higher than the price they are willing to pay. Following the terminology used by Scotchmer (2004), in Figure 1, v (the area below the demand curve) represents

the social value of a creation or invention for a specific period (one year, say). It is, thus, the sum of the values of all consumers, from the highest value (left, where the curve reaches its highest point on the horizontal axis) to the lowest value (right, where the curve intersects the horizontal axis at a price equal to zero).

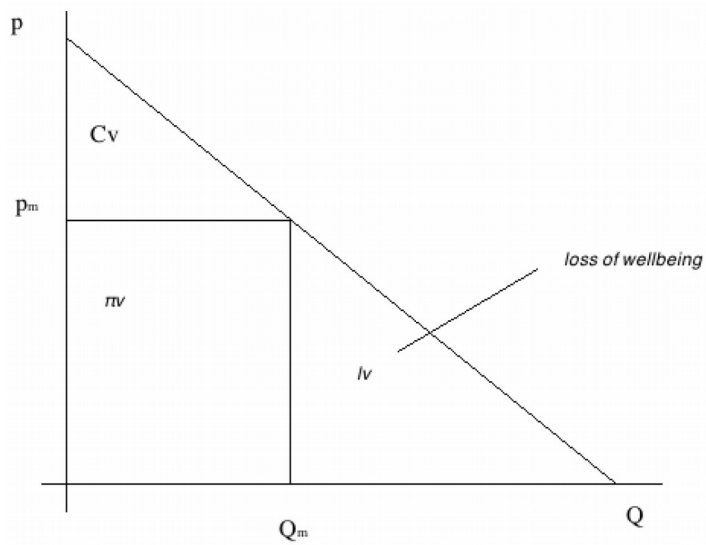

Figure 1. Value distribution between consumers and the creator/producer and the loss of wellbeing arising from restricted access to a creation

Figure 1 shows that we have to give up a part l of the social value of a creation or invention, which we call loss of wellbeing, lv. The rest of the area below the demand curve, $v\text{-}lv=(1\text{-}l)\ v$, is shared between the producer (πv) and consumers (Cv). The figure shows that the higher the monopoly price set by the creator, P_m, the greater the loss of wellbeing, reflected by an increase in size of the triangular area lv.

IP protection has the great virtue that the cost of an invention or creation is supported by consumers through the market price rather than by taxpayers through taxation, which means that the inherent risk is supported by creators and consumers, not by society. For simplicity sake, we will, like O'Donoghue,

Scotchmer and Thisse (1998), separate the exogenous idea creation process from the decision to invest in a creation.

2.2. Selecting Inventions

We denote an idea by the pair (v,c), where v is the social value of the idea for a period of time and c is the cost of turning that idea into an innovation, invention or cultural expression. Figure 2 depicts all the ideas that could be implemented as cultural expressions or innovations. If an idea has indefinite demand over time, its present discounted social value (present social value) will be $S=v/r$, where v is the social value of the innovation or invention for one period (held constant for simplicity sake) and where $1/r$ is the present value of a currency that remains constant for a very long period of time. Hence, v/r is the present value of v (see technical note 2.8.1 in Scotchmer, 2004). It would be socially desirable to implement all projects whose present social value is greater than their cost. The line $c=S=v/r$ divides projects according to whether cost is lower or higher than the present social value. Hence, socially desirable projects are represented by $c<S=v/r$ and socially undesirable projects are represented by $c>S=v/r$. The cost of a project on the left side of the dividing line — for instance, (v_1,c_1) — is higher than the present value of the associated profits; the reverse is true for projects on the right side of the line, $c<S$, which should be implemented as profitable for society.

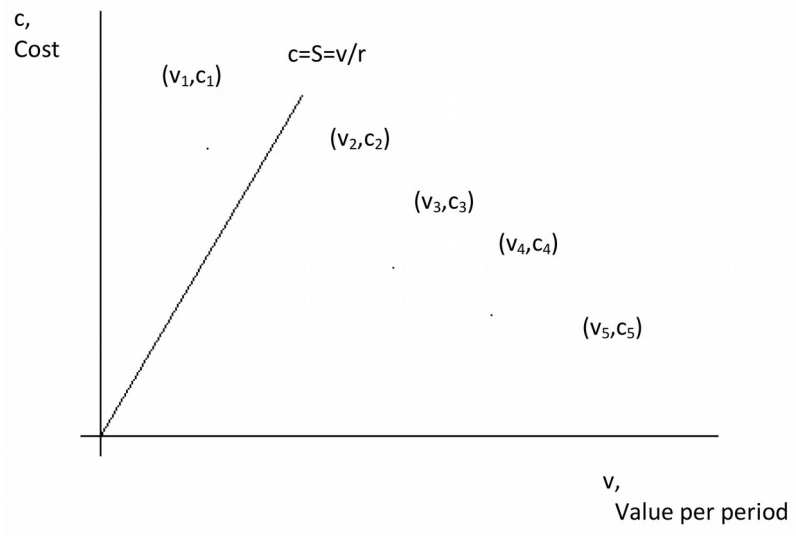

Figure 2. Selecting socially desirable projects

The current IP system grants private rights to innovators to encourage them to invest in socially desirable projects. Figure 3 shows the area under the demand curve, v, divided into the consumer surplus (Cv), the producer surplus (πv) and the loss in wellbeing (lv). The current IP system guarantees private producers a proportion of the total social value of the invention for a period of time T equal to $\pi vT<\pi v/r$, so as to theoretically cover fixed costs — as depicted in Figure 3, where $\pi vT>c$ (a simplification that does not alter the outcome of our argument). In other words, the IP rights holder can obtain a fraction π of the social profits per period v and can benefit from them over a period of time T. The producer and consumer surpluses and the loss in wellbeing (π, C and l, respectively) all depend on the monopoly price, p_m, and on demand at this price, Q_m. As we saw earlier, the higher the monopoly price, the greater the loss in wellbeing l, the lower the consumer surplus C and the higher the producer surplus, that is, the proportion π of the social profits per period yielded by the invention.

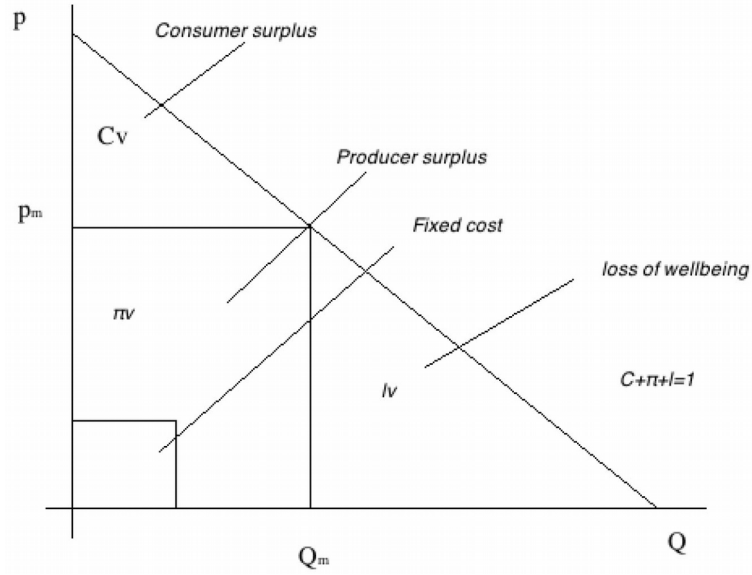

Figure 3. The producer surplus yielded by IP protection must be high enough to cover the fix costs of creation

2.3. Duration of IP Protection

Recall that the purpose of IP protection is to encourage the creation of socially profitable cultural and intellectual expressions — not to make them profitable over and above the profits that would be obtained in a perfectly competitive market, that is, zero profits once all production factors are covered at their opportunity cost. In Figure 4, the line $c=\pi vT$ divides ideas into two groups: (1) those whose development will be encouraged, that is, (v_3,c_3), (v_4,c_4) and (v_5,c_5); and (2) those whose development will not be encouraged, that is, (v_1,c_1) and (v_2,c_2). The fact that the monopolist can only appropriate a proportion π of the social value v of the invention during T periods means that not all socially desirable inventions will be profitable for the private sector.

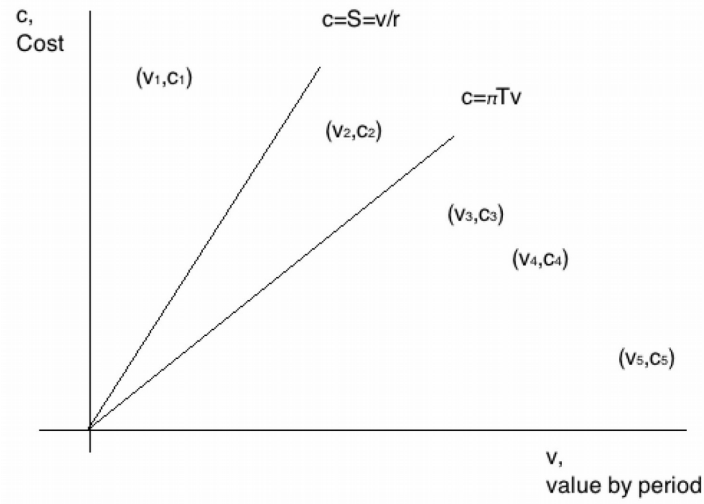

Figure 4. Inventions that would be financed given IP protection and a monopoly price

Thus, Figure 4 shows that project (v_1,c_1) will not be funded by the private sector because it is neither socially nor privately profitable. Neither is there an incentive to implement the socially desirable project (v_2,c_2), given that IP legislation would need to provide protection for a longer period than at present ($T_\delta > T$) for this project to be privately profitable.

Figure 5 shows that if the IP system were to set the period of protection according to the fixed cost of developing and producing the invention, then T_a, T_b and T_δ, and even project (v_2,c_2), would be implemented by the private sector. The fundamental issue regarding the extension of protection periods is that we increase the loss of wellbeing per produced project, from lvT to $lv(T+\Delta T)$. Thus, an increase in the protection period, ΔT, would increase the number of viable projects but would also result in a greater loss in wellbeing. In short, there would be more inventions, but consumers who could not afford to pay the price set by the monopolistic producer would have to wait longer to access the invention or would have to access it in some other way.

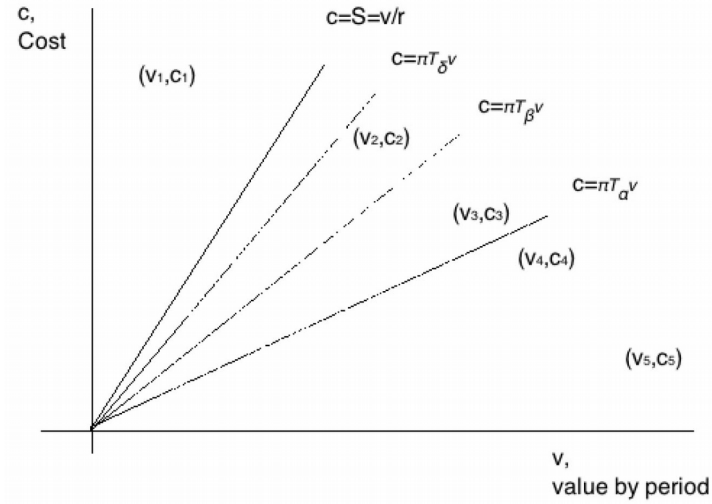

Figure 5. Inventions financed under different IP protection periods, T_α, T_β *and* T_δ

3. The Impact of IP Protection: The Evidence

IP legislation transforms an entire class of creative activities into privately owned intangible goods that can be bought, sold, resold, stolen and defended in the courts like any tangible good. This transformation, according to theoretical arguments, should increase the quantity of financed cultural productions. But has this in fact happened?

3.1. Creation of Culture Markets

Peterson, in a series of articles (1982, 1985, 1990), presented evidence of the impact of the US Copyright Act of 1909 in terms of restricting competition and converting traditional music markets into an industry. This new IP legislation protected the rights of owners of musical compositions for the first time.

Before the invention of the gramophone made recording possible, music publishers subsisted by reprinting sheet music for hit songs and appropriating the works of European composers who received no royalties for their works.

Musicians earned their living from public performances, initially in concerts and later on radio. The invention of the gramophone record and the possibility of making studio recordings theoretically expanded the market for all musicians. Every hit song produced by a record label, however, was followed up with as many versions as competing labels in the market. Music companies soon realized that they needed to own the musical creations in order to be able to retain exclusive rights over the (re)production and marketing of hits.

Songwriters, but especially publishers and record labels, pressurized politicians to include musical creations and their performances in new IP legislation that transformed musical creations into goods that could be bought, sold and developed by owners under the protection of the law. On holding the rights to musical productions protected by law, writers and publishers could, according to Peterson, invest in the promotion of new songs, interpretations and versions, since other publishers and record labels could not legally create their own versions. Thus, record labels began to insist on rights transfers from musicians and performers before they started to work on the master recording. Ownership of musical creations and performances meant that record labels enjoyed a monopoly not only in their investment in musical productions but also in current and future creations. Musical creations and performances thus became goods protected by IP legislation which could now be (re)produced and marketed with total liberty and with the guarantee of appropriating the corresponding revenues. The evidence indicates that the new IP protection of writers and publishers led to a higher level of commercial activity that, in turn, led to innovation in musical genres, including in folk ballads but most especially in ragtime and jazz.

Unlike the European legislation of the time, the new American law also obliged songwriters to be compensated for the use of their music in public places such as concert halls, dance halls and restaurants, although it did not provide any mechanism for collecting the corresponding royalties. In 1914 a group of writers and publishers founded the American Society of Composers, Authors and Publishers (ASCAP) as a private body that would collect

revenues from public use of musical creations. Although not very successful initially, by 1930 it had become very effective in controlling market access for new musical creations, particularly because it managed to impose that only music registered with ASCAP could be reproduced in Broadway musicals, radio broadcasts and Hollywood movies. By 1950, ASCAP, controlled by eight record labels, effectively decided which songs would reach the ears of the public.

3.2. Impact on Innovation and Creativity

Peterson (1990), in his description of the rise of rock music, provides evidence that the US Copyright Act of 1909 transformed the market for musical creations and that ASCAP, representing a handful of record labels, restricted musical innovation by exercising a monopoly and controlling what musical creations would reach the market (see Peterson & Berger 1971, 1975).

The ASCAP record labels shared an aesthetic that favoured themes of abstract love, performed in a strictly orthodox way with strong melodies and muted jazz rhythms. Peterson (1985, 1990) cites *Tea for Two, Stardust* and *Always* as illustrative of this aesthetic. The market, thus controlled, kept innovation at a minimum and audiences only heard ethically 'decent' and aesthetically 'good' music — which is to say, the music sold by the record labels supporting ASCAP. According to Peterson, certain music genres, including African-American blues, jazz, rhythm and blues and (later) soul, were systematically excluded from the media, along with the up-and-coming Latin and country music genres. As a result, new genres were filtered out with the result that they never reach mainstream audiences.

This exercise of monopoly reached such heights in 1939 that a network of radio stations — in dispute with ASCAP about fees for broadcasting ASCAP-registered songs — formed a rival body called Broadcast Music Inc (BMI). BMI immediately signed up numerous publishers, record labels and composers excluded from ASCAP, many of them representing the less mainstream genres mentioned above. Since ASCAP was unable to reach agreement with the radio stations regarding broadcasting fees, from 1940 all

ASCAP-licensed songs were banned from radio stations. Songs broadcast by BMI and the genres they represented thus gained substantial exposure to audiences for the first time in musical history. Even after ASCAP and the radio stations reached agreement, the latter continued to favour songs protected by BMI. From around this point it became possible to make a living as a composer or publisher in these alternative genres, which eventually merged to form the basis for rock.

Going further back in time to the 18th century, Scherer (2004) provides further evidence of the impact of IP protection on the creation of cultural expressions: remuneration of Beethoven and Schumann works was very similar even though only Beethoven compositions enjoyed IP protection and IP protection led to Verdi reducing his efforts as a composer. Leaving aside these specific examples, Scherer (2004) calculated the number of composers in periods before (1700-1752) and after (1767-1849) the introduction of IP legislation in the UK, drawing comparisons with Germany, Italy and Austria where IP legislation remained unchanged. The number of composers per million population dropped in all four countries, but the decline was most marked in the UK after copyright legislation was introduced. This would suggest that protection had a dampening effect on innovation. However, data for France points to a positive impact of legislation on innovation, suggesting the existence of some uncontrolled variable that could explain the difference in IP impact in the UK compared to France.

Boldrin and Levine (2008, 2009) argue that there is, at best, only very weak evidence to suggest that strengthening legal IP protection enhances creativity. Quite simply, the evidence suggests that innovative effort grows in line with market size. According to Kanwar and Evanson (2003), larger and richer countries invest a higher proportion of their gross domestic product (GDP) — reflecting a country's wealth — in research and development (R&D) than smaller and poorer countries, so they not only invest more in absolute terms but also in relative terms. Boldrin and Levine (2009) reanalysed the data of Kanwar and Evanson (2003) in order to take into account market size. Given R&D levels in 31 countries in the period

1981-1990, they suggested that greater legal IP protection increased the GDP share of expenditure on R&D, but only from low R&D-to-GDP ratios; for higher ratios the correlation between legal IP protection and innovation disappeared.

3.3. Influence on Content

Although there may be some uncertainty regarding whether IP protection positively affects the number of intellectual creations, data from various studies would support the thesis that IP legislation influences the content of what is invented or created.

Consider, for example, the impact of the change to IP legislation in the USA in 1891. According to Griswold (1981), US legislation protected local but not foreign writers until 1891, which meant, in practice, that publishers discriminated against US writers in favour of British writers. For US publishers it was more profitable and less risky to publish an American edition of a successful British novel than to publish an American novel: no royalties had to be paid and the British novel had already demonstrated its success. US authors thus had to write about topics of particular interest to US readers if they were to have any chance of being published. US publishers even privately hired British authors to edit their UK-published works so these could be launched in the US market almost immediately after launch in the UK market, while avoiding the payment of royalties to the UK publishers.

The International Copyright Act of 1891 led to an increase in publications of American authors and, therefore, a redistribution of revenues in their favour. It also led to a shift in the novelistic themes of American writers, as they were no longer forced to write only on topics of interest to US readers. IP protection thus led to a redistribution in both revenues and content and the new legislation designed to protect foreign productions also acted to protect domestic productions.

Moser (2003) provides further evidence of the impact of IP protection in an analysis of catalogues of innovations exhibited at trade fairs in the 19th century. The advantage of using such catalogues was that it was possible to

count innovations in countries without IP protection. Moser's study of around 20,000 innovations in different industrial sectors suggests several effects, as follows:

1. *The number of innovations.* Of all the countries participating in the Crystal Palace Exhibition of 1851, Switzerland, at that time with no legal IP protection system, was notable in being ranked second in the number of innovations per capita. Moreover, countries with no legal IP protection system received more medals for outstanding innovations than countries with IP protection (Moser, 2003: page 3).
2. *The kind of innovation.* Countries with no legal IP protection systems developed more innovations in the small machinery, control instrument and food processing areas. Moser found that one in four innovations at the Crystal Palace Exhibition was a new solution for the small machinery and control instrument sectors for countries with no legal IP protection, while the proportion was one in seven for countries with legal IP protection. The reverse occurred with heavy machinery inventions, especially for the manufacturing and agricultural sectors. Indeed, when the Netherlands abolished IP protection in 1869, innovation in the food processing sector grew from 11% to 37% (Moser 2003: page 6).
3. *Revenue transfers.* Switzerland's economically most important industries — chemicals and textiles — opposed the introduction of legal IP protection for foreign patents, as it would have restricted use in Switzerland of processes invented in countries with a legal IP protection system.

4. Summary of the Impact of Intellectual Monopolies

The evidence suggests that IP protection legislation has effects as follows: (1) it transforms cultural expressions into goods that can be bought, sold and resold, thus creating a market for cultural expressions and for creators; (2) it increases the profitability of protected cultural expressions in the marketplace;

(3) it encourages investment in projects with low development costs and high demand in markets with little or no legal IP protection (the case of book publishers in the US and the chemicals and textiles industries in Switzerland); (4) it redistributes revenues (a) between individuals in the same market, that is, from consumers to rights holders, and (b) between creators in markets with different levels of IP protection, but always in favour of producers or marketers (right holders) operating in markets with less or no IP protection; and, finally, (5) it influences creativity, but only when innovation levels are low, given that the correlation between IP protection and innovation disappears at high levels of innovation.

4.1. Incentives to Creativity Once a Monopoly Has Legally Been Established

The loss in wellbeing resulting from intellectual monopolies is twofold: (1) the loss in wellbeing may be high if the marginal cost of producing the cultural expression is low; and (2) the incentive to innovate is lower than in a competitive situation in which incremental costs are low (that is, there is less incentive to republish works). The loss of social wellbeing has already been demonstrated in the previous pages. The reduced incentive to innovate can be demonstrated with a reinterpretation of the Arrow (1962) model.

4.2. Incentives to Creativity, Production and Revenue Distribution

We assume that the author assigns the rights to produce and subsequently reproduce and market the original (master copy) to the publisher. When the IP legislation does not separate author rights from (re)producer and marketer rights, the author assigns her rights during T periods of time to the publisher. In this case the situation (the scenario at present) is one of a temporary monopoly in reproduction. However, if the law granted the creator a monopoly over time T that could not be assigned to the (re)producer and marketer, we would have a free-entry market with competition in the

(re)production and marketing of cultural expressions, with the author retaining her monopoly over time T.

In the case of a (re)production and marketing monopoly, the publisher retains the corresponding rights and only the monopolistic publisher can republish the work or sell the corresponding rights. Thus, a (re)production and marketing monopoly can be understood as a market with barriers to entry (created by IP legislation). In other words, a temporary monopoly situation exists due to the legal protection granted to ownership of cultural expressions. However, the entry of new firms with innovations by other creators is not impeded. This situation can, therefore, be interpreted as a monopolistic competitive situation, if not, in fact, a monopoly (see Justman & Meherez, 1984). We would argue that the incentive to republish is less in a (re)production and marketing monopoly with legal barriers to entry than in a competitive market without legal barriers to entry.

4.2.1. The Competitive (Re)production and Marketing Market

Assuming that costs are constant, the unit cost will be c for the first edition and c' for new editions, with $c'<c$. The fixed cost of publication, which is expected to be recouped with the first edition, is included in c but not in c'. Let us assume that the cost c of the first edition also includes an author royalty r. The sale price for the first edition in a competitive market will therefore be equal to the opportunity cost of production, that is, $p_c=c$. Assume that demand at price c is $q_c(p_c)$. Since the incremental cost of reedition is less than the incremental cost of the first edition (that is, $c'<c$), to prevent the entry of competitors, the price of the reedition should tend to the incremental cost of the reedition (that is, $p_{c'}=c'$) and publisher profits should tend to zero. However, the creator's revenues will increase with the reedition, since if $q_c<q_{c'}$, then the market for period t will grow by $q_{c'}-q_c$ and the creator's revenues will grow by $\Delta I=rq_{c'}- rq_c=r(q_{c'}-q_c)$. In other words, in a competitive market for (re)production and marketing, the publisher has an incentive to reduce the price of reeditions, with the outcome that both the consumer surplus and creator revenues increase. Depoorter, Holland and Somerstein (2009) provide

evidence corroborating this analysis, namely, that copyright-expired works are reprinted more often than copyrighted works.

4.2.2. The Monopolistic (Re)production and Marketing Market

In the case of a (re)production and marketing monopoly we assume that both demand, $q(p)$, and the increase in total revenues from selling an additional unit, incremental revenue $R(q)$, decrease; hence, the number of copies offered in a monopolistic market before reedition, $q_m,(p_m)$, given by the equation $R(q_m)=c$, will always be less than demand at a price equal to the incremental cost.

Similarly, after the first edition, the publisher's offer in a temporary (re)production and marketing monopoly will be $q'_m(p_m)$. Let us assume that the monopoly prices corresponding to supply q_m and q'_m are p_m and p'_m, respectively. Let us also assume that B and B' are the profits of the monopolistic publisher before reedition $(B=(p_m-c)\ q_m)$ and after reedition $(B'=(p'_m-c')\ q'_m)$. In this scenario, what will be the incremental profits to the publisher and the incremental revenues to the creator? The monopolistic publisher will increase profits by $B'-B>0$. The margin per unit sold will increase and the total sales volume will also increase — with the exact quantity depending on the elasticity of demand, the elasticity of the incremental revenue and the new incremental cost. Profits will always be positive, however. As for the creator, the variation in revenues will be the difference between first edition revenues, $I_m=rq_m$, and second edition revenues, $I'_m=rq'_m$, that is, $I'_m-I_m=r\ (q'_m-q_m)$. In other words, both revenues and revenue variation after reedition will clearly be lower than in a competitive market for the (re)production and marketing of cultural expressions, given that q_c' and q_c will be higher.

4.2.3. Comparison

Incentives for the publisher in the monopolistic market are positive but there is a loss in social wellbeing (reduced access to cultural expressions) that

does not occur for the publisher operating in a competitive market. As for the creator, incentives are greater in the case of the competitive market as revenues will be higher. Furthermore, if the publisher has scarce resources and, as would be expected, aims to maximize profits regardless of the cultural productions from which profits derive (that is, not maximize profits for each production of each creator), then the revenues corresponding to less popular authors would be even lower. This is because the reedition cost must take into account the publisher's opportunity cost and resources. The reedition cost for a less profitable creator compared to a more profitable creator should take into account the cost of foregoing reedition for the former. This scenario becomes more likely as the publisher accumulates rights — although financial resources are unlikely to grow at the same pace. Thus, in a monopoly situation, less profitable creators transfer part of their revenues to more profitable creators and the more profitable creators receive less revenue than they would in a free-entry (re)production and marketing market. In a competitive market, however, publishers would have an incentive to republish works; indeed, there would be no such thing as less profitable creators, as all creators would yield the same profits — virtually zero. So, differences would be reduced between more and less successful (more and less popular) creators in the publisher's portfolio, especially when we bear in mind that a monopoly implies economies of scale in (re)production and marketing and so provides an incentive to produce celebrities.

5. The Paradox of Access to Culture Versus Incentives to Creativity

As Liivak (2010) points out, achieving the seemingly difficult balance between access to culture and incentives to creativity — at the centre of most political discussions about IP — is nothing less than a paradox. Once conventional wisdom has internalized this balance between reduced access due to IP protection and increased access incentivized by profits, it is easy to see why an IP system based on free entry may seem untenable: we inevitably think that socially desirable projects will not be implemented if

pecuniary incentives are reduced and we erroneously believe that a free-entry market amounts to reduced IP protection and reduced incentives to private producers. In a free-entry system compared to a temporary monopoly we think that some projects will simply not be profitable. We use the model described above to illustrate the reasoning of Liivak (2010).

In Figure 6, note how project (v_3, c_3) is close to the incentive frontier for (re)production by a private publisher. If we reduce monopoly duration T, this project would not be funded. But here is the error in the argument. A free-entry system is not the same as a monopoly with a reduced period of IP protection. A balanced free-entry system does not make cultural creation unprofitable, it merely affects the amount of profits. A free-entry system indeed reduces profitability — but only for projects where revenues exceed the incremental production cost. Thus, it is feasible for new competitors to enter highly profitable markets where market size is such as to admit entry. For inventions for which a monopoly overpays creators and producers, free entry will attract new competitors to the point where it becomes unprofitable for further competitors to enter. In the case of unprofitable projects, like (v_3, c_3) in Figure 6, no firm would enter the market during a temporary monopoly, as the structure of production (costs) and marketing (revenues) and of the market itself (competition) would allow for just one project.

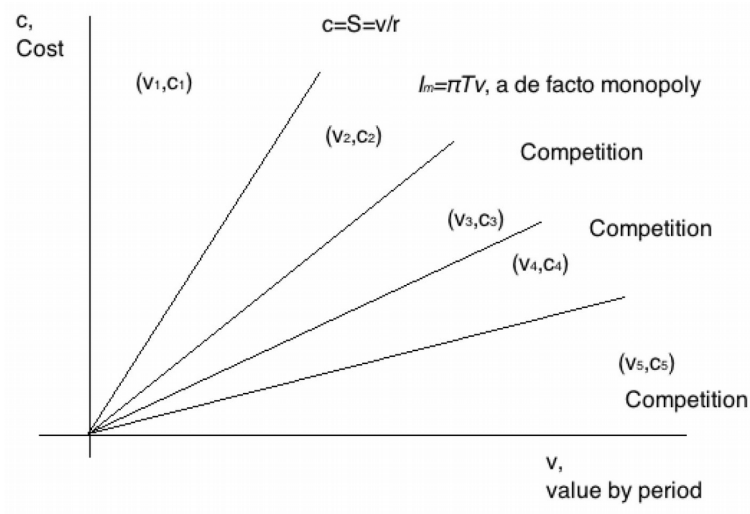

Figure 6. Incentives to creativity according to the duration of IP protection

In other words, for projects like (v_3,c_3), a free-entry system would, in fact, be rendered equivalent to a monopoly, as the market would have only one entrant. In contrast, for highly profitable projects with low creation, (re)production and marketing costs — like (v_5,c_5) in Figure 6 — a free-entry system would reduce profits but not creativity. Furthermore, in comparison to a monopolistic system, the loss of wellbeing would be less and the consumer surplus would be increased. That is, in regard to a priori incentives to innovation, the period of protection should be adjusted according to the incremental cost required to produce the creation. And in regard to a posteriori incentives to reproduce and market cultural expressions, IP legislation should establish separate periods of protection for creators and for (re)producers and marketers of cultural expressions. In other words, the protection period should reflect the production costs of inventions: the greater the incremental cost, the longer the period of legal protection of the rights of use of producers (Liivak, 2010) and the rights of attribution of creators (Depoorter et al., 2009). The impact of the new technologies is that they have greatly reduced the incremental costs of producing most cultural expressions on an industrial scale and they allow many cultural expressions to be reproduced digitally. All this would indicate that the duration of protection

should be shortened (Lemley, 2009a; North, 2009). In sum, use rights (of producers) and ownership rights (of creators) need to be separated, first, to increase the revenues of creators and encourage innovation and, second, to enhance competition in (re)production and marketing and so increase access to cultural expressions (Vertinsky, 2009).

6. Implications

Research into access to cultural expressions demonstrates the following: (1) since many cultural expressions (those that can be produced digitally) share the properties of public goods, excluding consumers willing to pay less than the monopoly price does not improve resource allocation, as efficient allocation would respond to a price equal to the opportunity cost of production; (2) positive externalities of access to and consumption of cultural expressions favour the social integration of individuals sharing knowledge of these cultural expressions and may even strengthen self-identity (García-Álvarez, López-Sintas & Zerva, 2009a, 2009b); (3) excluded consumers who use alternative means to access cultural expressions would not necessarily be consumers if those alternative means were unavailable (even though producers mistakenly claim these consumers to represent lost sales); and (4) although copies or alternative means of access to cultural expressions are adequate substitutes in terms of sharing common properties of original products, they do not allow sharing of the symbolic properties that classify individuals in society.

Regarding incentives to creativity, in our arguments we have drawn a distinction between generation and production, (re)production and marketing. That is, we have treated innovations and creations as exogenous data and have focused on funding for their production, (re)production and marketing. The evidence presented above suggests that IP legislation that creates pecuniary rights attached to new creations has not been effective in encouraging innovation (Boldrin & Levine, 2008, 2009; Scherer, 2004). In fact, evidence from Depoorter et al. (2009) suggests that an increase in the number

of creations (measured in terms of registered rights) only correlates with a population increase, whereas evidence from Kanwar and Evanson (2003) suggests that although IP protection does have a positive impact on innovation, this is only the case for low levels of innovation.

IP legislation has significantly influenced the kind of innovations produced and their profitability. Tougher IP protection laws have favoured capital-intensive innovations, with high fixed production costs for the first unit, over less capital-intensive innovations (Lemley, 2009b). In international markets, when innovations originate in states with different levels of IP protection, revenues are redistributed between creators and producers and both the consumer surplus and social wellbeing are increased.

Depoorter et al. (2009: page 1066) provide further evidence regarding the impact of IP protection. The increase in copyright duration in the period 1986-1998 in the USA affected the value of copyright-intensive corporations (Walt Disney, for instance) and obviously reduced wellbeing (regarding political aspects of IP protection, see North, 2009). Thus, IP legislation has transformed the cultural expressions market in such a way as to protect the interests of (re)producers and marketers, which, furthermore, constantly lobby to lengthen the period of legal protection of their temporary monopoly. Yet the evidence indicates that increasing the duration of protection does not increase the number of new creations, especially in large countries with high levels of innovation.

Complexity is greater when the cultural productions of different countries compete in the international market. Scotchmer (2004) suggests that producers from smaller countries with less IP protection benefit from greater IP protection in their home country and in the international market. However, conditions in the international market for cultural expressions belie her arguments; in the case of film and music, for instance, there is a cultural discount in exchange values outside of the original sociocultural context (García-Álvarez & López-Sintas, 2008). This asymmetric cultural discount is higher for smaller and lesser known cultures (such as Spain) and lower for larger and better known cultures (such as the USA). Therefore, as long as

such asymmetries exist, it is strategically useful to maintain asymmetrical IP protection in markets.

So far we have considered the balance between incentives to creativity (dynamic efficiency), access to cultural expressions (static efficiency) and incentives to the reproduction of works (static efficiency). Given the evidence provided above, we ask how IP legislation could increase access to cultural expressions (that is, reduce loss of wellbeing and increase static efficiency in resource allocation) and simultaneously maintain incentives for the creation and production of new cultural expressions (that is, ensure dynamic efficiency in resource allocation), at the cost of lower profits for producers and greater revenues for creators.

If IP legislation did not grant exclusive (monopoly) rights for the (re)production of cultural expressions during a period of time T, the market price would reach equilibrium with the marginal cost of production. Access to cultural expressions would thus increase to the point of optimal resource allocation. In fact, as noted earlier, the evidence indicates that copyright-expired works are reprinted more often than copyrighted works. Furthermore, only a minority of books remain on sale after 20 years, for which reason, Burrows (1994) suggests that authorship rights be protected for 20 years and producer rights for only five years — but always taking into account the cost of producing the first unit (the master copy).

The temporary monopoly of symbolic expressions would therefore only be held by the first producer — who incurs the cost of producing the master copy of the cultural expression — and not by new entrants to the market who produce derivative works or reeditions. The distribution of profits between publishers would favour the first producer, who would obtain profits at least temporarily, while new entrants would obtain near-zero profits. Moreover, if the first producer wished to maintain the initial monopoly, they could always fix a price close to the marginal cost of the first edition (c in the model described above) and so discourage new entrants to the market. In fact, in reprints of a previously published book, Burrows (1994) suggests that original publishers have a cost advantage of 25% over competitors, that

is, *(c–c')/c=0.25*. If the first producer was willing to allow other entrants to the market, they could always price the work at slightly higher than *c* for reeditions and so obtain a profit that was 25% greater. Since, at a slightly lower price than c, no competitor would reedit the work, the first producer would continue to enjoy good profits. At the country level, smaller and less innovative states would see their domestic markets grow in terms of both production and consumption and, hence, in terms of the revenues necessary for further domestic innovation.

Creators would obtain greater revenues due to the increase in market size. The fact that monopolistic demand would become competitive demand would likely increase creator revenues, irrespective of whether she participated in an international or domestic market. If, in addition, IP legislation restricted creators' moral rights to attribution rights (Depoorter et al., 2009), competition would lead to the creation of derivative works, which would, in turn, have a positive impact on the reputation and popularity of the original creators and likely bring them additional revenues from complementary activities. Derivative works (for instance, reprints) create publicity for the original work, although such works may be at a disadvantage in terms of costs and symbolic benefits for consumers.

Nonetheless, the problem remains of fair use/fair dealing regarding original works when the author does not share or authorize the derivative work. Moral rights as currently protected give creators the right to block derivative use of their works — despite the fact that all authors feed on previously created cultural expressions as part of their own cultural heritage. Indeed, their creations typically use known ingredients packaged in some new way. Limiting moral rights to attribution rights would protect the rights of original creators and would also safeguard them from any consequences arising from a derivative work. The right of attribution would indeed reduce the rights of creators to block use of their creations, but it would have the advantage of increasing access to cultural expressions and encouraging the creation of variations on the original work.

7. Conclusions

Although the theory suggests that access to cultural expressions has to be restricted to ensure incentives to creativity, recent reviews of the theory suggest that the temporary monopolies generated by IP legislation are neither useful (Liivak, 2010) nor the only way to enable producers to recoup the incremental costs incurred in innovating (Towse, 2001). Competition does not render such goods unprofitable, it merely reduces profits to near zero (although the resources used are remunerated). Meanwhile, access to cultural expressions is maximized, consumer surplus is increased and there is no loss of wellbeing resulting from the temporary monopoly

The laws governing IP, in fact, defend the interests of intermediaries who perform the tasks of (re)production and marketing (publishers, record labels, etc) more than the interests of creators. Legislation that eliminated the monopoly on (re)production and marketing of cultural expressions would increase access, eliminate the loss in wellbeing resulting from the monopoly and increase creator revenues.

Moreover, restricting authors' moral rights to rights of attribution would enhance their popularity (thanks to derivative works), foster the production of cultural expressions and facilitate market segmentation. Note that although cultural expressions share certain cultural properties, originals have certain symbolic properties that are not shared with copies and derivative works.

All this suggests that IP legislation needs to be reformed, yet it is clear that reform along the lines proposed here would encounter many obstacles, primarily from the disproportionately powerful (re)producers and marketers of cultural expressions. Indeed, much of the discussion about online access to cultural expressions is a consequence of the fact that producers and distributors of cultural expressions face losing control over the market.

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