Chapter 2

Literature on Economics of Copyright
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In light of the introduction to the subject of this research, an attempt will made to present a brief survey of relevant and representative literature on the discipline of Economics of Copyright. It may be a misnomer to refer to this area of research as the discipline of Economics of Copyright because by definition Copyright subsumes within itself the disciplines of law and economics. Further, to the extent that behaviouralism is included in economic analysis, there would develop an intersection with psychology as well. However, for the sake of brevity of expression the term discipline will be used in the ensuing discussion and shall be used to denote the multidisciplinary aspects of the Economics of Copyrights.

A survey of Literature can be extensive but never complete. The attempt made here is to cover some of the work along a few themes that would exemplify the literature on the subject of Economics of Copyright. These themes have been identified as Theory related to the discipline; how the theory works in the context of Copying which is the subject matter of the law of Copyright; Piracy of Copyright works, both analog and digital and how it plays out in the environment of the Internet; Software, with its peculiar position as a Literary digital work, is subject to much study in its own stead as well as in the context of Piracy; certain Practical aspects of Copyright also have been researched which might appear esoteric but enrich the literature nonetheless; the Enforcement of the Rights have a peculiar set of issues owing to the intangible nature of the works and the private nature of the rights; the International dimensions of Copyright including Trade related issues become significant especially in the context of the TRIPS Agreement at the WTO; and finally what the existing literature identifies as the future threads for Research to take up. Some literature which could not be classified in these comparatively broad categories was also seen during the journey and has been separately taken up51.

Theory of Copyright and related issues

51 Unless otherwise mentioned, for ease of reference all the literature accessed from the Internet carries 12 January 2010 as the date of access, since it was available at least on that date.
No literature survey on this subject would be complete without reference to the seminal work of Landes and Posner vide which they first established the formal contours of the discipline.52 This work has been extensively covered during the discussion in Chapter 1 when a brief introduction to the discipline was being given. Much is owed to these authors by almost all the later authors who have further taken active part in developing the theory of Economics of Copyright in all its dimensions.

Of course their work did not go unchallenged. Palmer53 questions their basic assumption that for a new work to be created the expected returns must exceed the expected costs as rigging the argument. He argues that this assumption was found to be incorrect in the specific case of broadcasting which is also a subject matter of Copyright law, in that the additional revenues from advertising allowed for a different variable to enter the objective function without changing the expected returns and expected costs in any way.54 His more telling assertion rings a bell, in that he finds that regimes fostering innovation and creativity have been to emerge without legislative and judicial intervention in every free society based on the right to self-ownership and voluntary transfer of alienable rights.

However, the first real attempt to look at the economics of Copyright was made much earlier in 1934.

Plant (1934) examined the Economics of Copyright in books in the context of the history of Copyright till his time. He found that despite no Copyright protection for their work in America, British authors made more money through effective contracts with American publishers than they did in Britain itself. In a simple example of high fixed costs and low marginal costs he found that greater the first round of sale lower the prices could be. His conclusions regarding necessity of Copyright were based on certain arguments that are still being forwarded. His third comment was that expectations of direct reward explained only a part of the total

54 However, it can be readily seen that Palmer errs in not subsuming the advertising revenues in the expected returns expression because in the case of broadcasting, since no copies are to be made, the returns necessarily would be different.
output of literature. Professional authors were found to be receiving remunerations not only where their work was protected under Copyright but also in such countries where publishers sought them out to gain first mover advantages even without Copyright protection. He further, found that Copyright monopoly enabled privileged producers to increase their receipts from successful products by restricting the supply. However, Copyright may lead to increase risk bearing by publishers in uncertain markets.

He made a startling discovery that more authors write books because Copyright exists and a greater variety of books is published; but there are fewer copies of the books which people want to read. Whether, successful authors write more books than they otherwise would, is a question of “the elasticity of their demand for income in terms of effort.” He further makes a comment on the monopoly situation created by Copyright law.

“There is, of course, no system of economic calculus which supports the contention that output of the type which monopoly induces is “preferable” to that which emerges from the different disposition of the same scarce productive resources resulting from the competitive bidding of the open market.”

One special weakness of Copyright monopoly as an administrative device he finds is the non-discriminatory nature of the encouragement it affords to ventures which are too risky to be embarked upon in a free market.

In the period since Plant (1934) up to 1970, most of the literature on the economics of creation was overwhelmingly on the economics of Patents and the ramifications of the Law. However, another academic judge, Stephen Breyer made an attempt to understand the issues brought to fore by the newly introduced technology that allowed for mass copying – the photocopier.

Breyer (1970) examined the working of Copyright in the context of books in the presence of copying. He made four quality recommendations and at that time stating that Copyright protection of 56 years so too long; some users may be entitled to for use of copying without permission; copying and storage for research purposes
without permission should be permitted; and computer program should not receive Copyright protection. He did not find any merit in the arguments that since the producer’s fixed cost was high and marginal costs were low, he should be provided Copyright protection. In fact, he recommended looking at probable speed and ferocity of competitive response\textsuperscript{55}, the presence of subsidies, the ability of the buyers to channel revenue to the publishers needed examination before a need for Copyright protection was established. Even that early, Breyer could fathom the likely generation of economic rents by rightholders, imposition of high transaction cost for users of Copyright work and the ability of the right owners to limit competition.

That there were certain social costs associated with a regime of Copyright protection was identified by Novos and Waldman (1984).

They identified two kinds of social welfare losses that may occur under the free riding that takes place in the field of Copyright infringement. The first loss is analogous to the loss that occurs in the case of all public goods i.e. social welfare loss due to under production. The second social welfare loss is that due to under-utilisation because either the consumers who would be willing to pay the marginal cost of production do not consume the goods or who due to those consumers who end up spending more real expenses in copying than would be incurred by the producer in producing the goods. Novos and Waldman find that while the first kind of social welfare loss can be held to be partially correct there is no analytical evidence for any social welfare loss due to under utilisation.

Taking the discourse ahead from Landes and Posner (1989), Besen and Raskind looked at certain newer economic dimensions of the law of Copyright.

Besen and Raskind (1991) state that the objective of intellectual property protection is to create incentives that maximize the difference between the value of the intellectual property that is created and used and the social cost of its creation, including the cost of administering the system. They then go on to examine certain inherent issues related to the economics of IPRs:

\textsuperscript{55} Piracy may provide such response.
1. The find that the incentive to invest is directly proportionate to the appropriateness of returns.

2. Price discrimination allows producers/right holders to appropriate a larger share of the social benefits of innovation and thus, may permit some innovation which would otherwise not occur.

3. They also examined whether any creative activity actually take place at optional cost.

4. Whether the intellectual property system strikes an appropriate balance between creating and disseminating intellectual property. Providing incentives for the creation of many new works may encourage resources to be devoted to innovative activity. However, if the new innovations are not widely used, the system may be less beneficial than one with less creativity, but where the materials created are more broadly disseminated. This issue focuses on the appropriate scope of protection. It arises, for example, in determining the optimal duration of patents and the optimal trade-off between duration and breadth.

5. Another critical element in deciding how to strike the balance between encouraging creativity and dissemination is the extent to which creative activity responds to economic rewards. The less that innovation depends on the resources invested and the potential economic rewards, the more limited is the case for granting substantial rights to creators.

6. They find that there are certain balances that are in operation to Copyright law viz.

   a. Between rights and obligations;
   b. Between creating and disseminating works and
   c. Between incentives and economic rents.

   After the 1989 exposition with Landes, Posner wrote substantially on the subject of Economics of IP Law, which owes much of its richness to his contributions.
While stating that the Intellectual Property is America’s largest export, Posner (2002), examined various issues related to the Law and Economics of Intellectual Property especially in the context of emergence of new technology such as Software and Net-base access systems. He points out the significance of Intellectual Property Rights is that they are enforceable against strangers, i.e persons who are not parties to a contract. To that extent the laws of IPRs needs to be more flexible. It has been, therefore, an evolving practice that the right holders tend to bind down users of IPR through specific contracts which may be more unequal than a specific IPR.  

Posner finds that a longer term of IP Protection reduces congestion and costs for users just like a free public road as more congested than a tolled highway.

Later, Landes and Posner (2003) argue the case for an indefinite but renewable Copyright term. As they point out, a system for renewals would required the government to maintain an up-to-date Copyright registry. Since Copyright registration is not currently required of authors, it can be very costly to locate the legal holders of a Copyright, and the availability of a registry would dramatically reduce the transactions costs of licensing. A registration requirement is a minor burden on authors in exchange for a potentially substantial benefit to those who seek to republish that author’s work. Given today’s technology, the creation of a “universal” Copyright registry, perhaps in exchange for some incremental benefits to authors, would be highly attractive.

Again, sometime later, Posner (2005) touches upon four aspects of the Economics of the law of Copyright viz. the optimal terms of Copyright rules that allow substantial copying with the permission of the rightholder i.e. fair use, the rules governing derivative works and alternative method of providing incentives for creation.

Posner very rightly identifies basic feature of the economics of IP reflects a very high fixed cost to variable cost ratio. When fixed costs are a high percentage of

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56 The End User Licence Agreement (EULA) which by buyers of software who are actually licensees entering through mouse click locks them down to the software.
total costs, a price equal to marginal cost is unlikely to cover total costs unless marginal cost is sharply rising. But a price above marginal cost, though necessary to enable the producer of the intellectual property to recoup fixed costs (unless those costs are subsidized), not only will deflect some potential purchasers to substitutes that cost society more to produce on a quality-adjusted basis, but it will also induce inefficient entry by firms that do not have to incur heavy fixed costs, as is commonly the case when a new entrant can free ride on the investment made by incumbent firms. Marginal-cost pricing would maximize access to existing intellectual property and deter or expel inefficient entrants, but it would reduce, indeed often eliminate, the incentive to create the property in the first place.

He provides a good example of how the public good character of intellectual property alters the economics of misappropriation in the case of the widespread piracy of Copyrighted operating system software. This practice is conventionally though imprecisely referred to as a form of "theft" - an example of the pitfalls of too literal an analogizing of intellectual to physical property. While the theft of physical property deprives the property's owner of its use, the "theft" of intellectual property does not. Indeed, if the software pirate, or those who purchase the pirated software from him, could not or would not pay the price charged by the owner of the patented or Copyrighted software then piracy does not cost the owner any lost sales. Indeed, piracy may increase the income of the original owner if some of the pirate's customers purchase application programs from the owner or if expansion of the owner's user base confers network advantages over competing software producers. However, if piracy reaches a level at which pirates are making copies of their pirated copies and selling the new copies to people who would otherwise buy the Copyrighted product, the Copyright owner will be hurt, maybe severely.

In the case of artistic works, Copyright does, however, enable the artist to obtain additional income since copies are poor substitutes. He rightly finds that the most important issue from a public choice perspective in explaining the expansion of intellectual property rights is the asymmetry of interests between owners of such rights and would-be copiers. Since the owners' principal costs are sunk, almost all the revenue from their sale of copies goes directly to the bottom line, giving them a very
large stake in extending their rights. In contrast, would-be copiers, since they will not have exclusive rights once a work is pitched into the public domain, can expect only a competitive return, and so they have less incentive to challenge intellectual property rights in the legislature than the owners of such rights have to defend them. This asymmetry of interests is probably the reason for the practice of extending Copyright and patent terms retroactively, despite the fact that such extensions offer almost no incentive for creating additional intellectual property.

He finds three possible alternatives to the present Copyright system which can sustain rewards the creativity link viz.

(a) A public subsidy to create as was done by the kings and smaller rulers with their poets, painters and musicians;

(b) Making the cost of copying so high that the rewards continue to flow to the right holders. In the digital era strong enforcement introduction appears to be the only method making the cost of the copying is high. However, this enforcement regime may itself by so high because that overall social welfare may decrease; and

(c) The first mover advantage may give such an advantage to the creator/first owner that the copiers do not substantially eat into the incentive structure.

A phase of enquiry was natural to come about when economists would question the link between Copyright law and economic justification for the same.

Siebrasse (2001) contends that Copyright and in fact all Intellectual Property should not be understood in any manner other than being property. Therefore, on the multiple use of public goods aspects of the Intellectual Property, the property rights should be well defined. Therefore, the key feature distinguishing the rights – and the – access balance approach from the property rights approach is that the former looks at a trade off between incentives to create a work with restrictions on the dissemination of the same work, while the latter looks at the trade off between the incentives to create work with restrictions on the dissemination of other works. Thus, in the context of copying the balance approach speaks continued access to the original whereas in the property approach the use by subsequent authors
of different works may get restricted through the assertion of rights by the earlier authors. He argues that courts “and therefore by inference legal practitioners” should concern themselves primarily with the property right approach.

Nadel (2003) questions the economic justification of the specific Section 106 of the Copyright Act of the United States which prohibits unauthorised copying. In fact, he finds that in reality technologies and social norms such as voluntary contribution and subsidies can provide for viable business models emerging to finance creativity obviating the need for strong prohibition against an unauthorised copying. The most interesting conclusion was that given the utmost lottery like choice of success in media in entertainment market, the tendency is to fix on generating high revenue from popular world which are then used for rent seeking promotional efforts. This conclusion appears to be echoed by the superstar syndrome examined earlier. The main thrust of this argument was that such behaviour actually crowds out border line creation which in fact means that the overall volume of creative works may decrease due to enhanced Copyright protection.

Eckersley (2003) recognising that increase body of economic literature was claiming that existing Copyright laws were economically sub-optimal. This explores the economic differences between a system like digital right management that sought to regulate the consumers and the possible public funding of creativity. In summing calculations he finds that well designed systems of public funding were almost certain to produce better social welfare outcomes than DRM based Copyright.

Samuelson(2004) comments that despite the principle justification on IP laws under the common law tradition being economics and their being a substantial body of scholarly literature on many aspects of Copyright laws, economics does not seem to have commensurate impact on Copyright law and policy. She examined various reasons ranging from use of language inaccessible to the policy makers by economists to the fact that because of the inherent possibility of differing views on the same phenomena, economics will not be able to yield an incontrovertible prescriptions on Copyright issues. However, she expresses hope (which seems to be coming true now) that most agencies dealing with the Copyright would not only rely
on economics more and more but also directly engaged to services of economists in the normal working.

Murck (2006) finds antiquated notions of Copyright are impediments towards the universal and immediate delivery of content. He criticises the DMCA as to trying to “to put the genie back in the bottle”. He finds that the efforts to control P2P only strengthens the market position of the market owners of content and legislative efforts, even in the post DMCA period continue to seek to protect the present stakes. He speaks that despite Sony vs. Universal Studio decision the Napster and Grokster cases, have seen judicial action tending to lock down technology using the tool of contributory liability. He finds great merit in the Anderson’s long tail hypothesis including in the context of dark content (content that was commercially viable in earlier period but is now accessible only through the long tail access system and constitutes 98% of the total content available under the protection of Copyright law. He concludes that consumers should not bear cost of technological obsolescence. He finds it disturbing that content industries want to benefit from digital technology but do not want associated risks thereto.

Söderberg (2007) finds a Marxist justification in the situation that is emerging where free software is seen to be out performing commercial software. Perhaps he finds this as the practical working of the Marxian axiom “from each according to his ability to each according to his need.”

The productivity of social labour power impels corporations to subjugate the activity of communities. But, here rouses a contradiction to capital, on one hand it prospers from the technologically skilled, unpaid social labour of users; on the other hand it must suppress the knowledge power of those users to protect the intellectual property regime. To have it both ways, capital can only rely on its hegemonic force.

Marxism offers a theoretical framework to analyse the contradictions inherent in the current intellectual property regime.

The concern with economic growth is an aspirational area of research for almost all economists. Linking IP with growth was but a rational step.
Falvey, et.al.(2004) claim from their analysis of panel data from 80 countries that IPR Protection encourages innovation in high income countries and technology flows to low income countries. They investigated the impact of IPR protection on economic growth in a panel data of 80 countries using threshold regression analysis. They found that whilst the impact of IPR protection on growth depends upon the level of development, IPR protection is positively and significantly related to growth for low and high-income countries, it is not so for middle-income countries. This suggests that, while IPR protection encourages innovation in high-income countries, and technology flows to low income countries, middle-income countries may have offsetting losses from reduced scope for imitation.\(^57\)

Baumol (2005) uses an economic analysis of the law of Patents and its actual operation to identify two primary objectives for the law of Copyright. The first objective is to ensure that a creator receives a remuneration or reward for creative efforts both an equitable payment and incentives for future efforts. The second objective appears to contradict the first objective, in that it speaks to provide ease of access and dissemination to the users of these works so that the benefits of the creation to society as a whole are substantial and widely available within limit of reasonable feasibility. Baumol finds that the law of Copyright is an effective instrument to reconcile possibly contradictory objectives in a workable and apparently socially beneficial way. He finds that the universalisation of the law of Patents had introduced powerful incentives for rapid dissemination of novel products and processes without creating a major disincentive for investment in the innovation

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\(^57\) To quote:

"The results for high-income countries are largely as expected; these countries undertake the vast majority of innovation and where strong IPR protection should encourage further innovation by allowing innovators to profit from their inventions. For low-income countries the positive relationship between IPR protection and growth clearly doesn’t reflect a relationship between IPR protection and innovation, but more likely that strong IPR protection in these countries encourages imports and inward FDI that encourage growth without adversely affecting domestic imitative activities. Middle-income countries also do not engage in innovative activities to any extent, but may well rely on imitative activities. The lack of a relationship between IPR protection and growth in these countries is likely to reflect two opposing forces. The positive impact of IPR protection on growth that works indirectly through trade and FDI is being offset by a negative impact slowing knowledge diffusion and discouraging imitation. Despite the lack of evidence for a significant relationship between IPR protection and growth for middle-income countries in no case do we find evidence of a negative relationship between IPR protection and growth."
process. It is his view that similar approach can be adopted in the working of law of Copyright.

Sag (2006) finds the reach of the Copyright law has become the subject of an increasingly heated and polarized debate. On one side of that debate, Lawrence Lessig argues that Copyright – a law that originally only regulated publishers – has expanded so dramatically it now regulates every conceivable use of work in digital form. Lessing warns that this unprecedented level of control allows large corporate interests to insulate themselves from creative competition and control culture formation. On the other side of the debate, Paul Goldstein was quoted by him as having argued that “[we should] extend (Copyright) into every corner where consumers derive value from literary and artistic works.” The debate between these two extremes plays out in a number of different theatres and with respect to a variety of issues. In particular, recent computer and internet-related technological developments including peer-to-peer file-sharing, digital music players, blogging, Web-casting, and podcasting raise novel questions as to whom should be entitled to dictate the relationship between existing Copyrights and new technology.

For example, Nobel Prize-winning economist Kenneth Arrow and his fellow amici argued that the liability rule adopted by the United States Court of appeals for the Ninth Circuit in Grokster ‘is inefficient....because it fails to give (technology developers) any incentive to deter infringement.’ It has been argued in the same vein by others that courts should decide questions of indirect liability for Copyright infringement by balancing “the harm to Copyright owners against adverse effects on consumers from the loss of non-infringing uses from dual-use technologies.”

He concludes by laying down an abstract scope for Copyright saying that it should be more than nothing and less than everything. He finds that the complexity of the Welfare and scope of relationship in the Copyright context is such that there cannot be generalised optimal Copyright scope and this relationship is likely to have substantial variation within industries as well as between industries. He finds that optimisation of Copyright scope through doctrines which does not take into
consideration. The impact of such doctrines on transactions cost, uncertainty and strategic behaviour will find to be incomplete.

New technologies affect not only the operation of a legal system but also introduce newer dimensions to the economics of the incumbent market structure. These were also studied in the context of Copyright law.

Yu (2006) finds four lessons on Intermediaries. He finds that those who adapt to new technologies (and methods) succeed. It is known that there is a range of intermediaries in the value chain. Growth of technology takes place disintermediation withering away of old intermediaries as well as intermediation and reintermediation (new one arise instead of old one or additionally in the value chain) occurs and the relevant importance of the intermediary also undergoes change. An interesting lesson found Yu is that societal attitude towards the copying keep changes according to the need for access to information and knowledge. Indeed, he states that neither Copyright nor copying are in the nature of universal value that cut across societies and remain constant in time.

The relationship of Copyright to new technologies that exploit Copyrighted works is often perceived to pit Copyright against progress. Historically, when Copyright owners seek to eliminate a new kind of dissemination, and when courts do not deem that dissemination harmful to Copyright owners, courts decline to find infringement. However, when owners seek instead to participate in and be paid for the new modes of exploitation, the courts, and Congress, appear more favourable to Copyright control over that new market. Today, the courts and Congress regard the unlicensed distribution of works over the Internet as impairing Copyright owners’ ability to avail themselves of new markets for digital communication of works; they accord control over those markets to Copyright owners in order to promote wide dissemination. Copyright control by authors, particularly those excluded by traditional intermediary controlled distribution systems, may offer the public an increased quantity and variety of works of authorship.

The threat to public domain under the growth of Copyright law was always apprehended especially in light of the doctrine of ‘the tragedy of the commons’. Some work in this area is listed below.
Boyle (2002) finds the public domain under considerable threat because it is not being allowed to be repopulated and is being constantly fenced off by right holders. He comments on the futility of seeking tightly controlled sufficient markets for Intellectual Property either through legal means or through preventive technology. He contends that actually a large leaky market may generate more revenue than a small tightly controlled one.

Samuelson (2003) seeks to provide a map of the public domain because he thinks it is important to accept that public domain is comprised of three separate regions: where there is undeserving matters which should not be of any social consequence, regions which can be partially propertised for better utilisation of the value therein and the balance which should remain open unownable as resources for future creations. She goes on to say that it is possible to construct a new politics of Intellectual Property that has regard for the public domain and fair uses. To be successful, a new public-regarding politics of intellectual property must have a positive agenda of its own. It cannot just oppose whatever legislative initiatives the major content industry organisations support (although it almost certainly will need to do this as well). It should be grounded on the realization that information is not only or mainly a commodity; it is also a critically important resource and input to learning, culture, competition, innovation, and democratic discourse. Intellectual property must find a home in a broader-based information policy, and be a servant, not a master, of the information society.

Length of Copyright duration has excited attention ever since the *amici curae* in the case Eldred vs. Ashcroft case before the US Supreme Court submitted a strong case against further extension of the duration of Copyright.

Yuan and Chen (2005) develop and simulate a market each for information products under two separate Copyright regimes i.e. one which is indefinitely renewable and the other of fixed length. They find evidence contacting Landes and Posner (2003) that the fixed length system generate greater social welfare than the indefinitely renewable system.

In a sample of 18 countries, Png and Wang (2006) found that the extensions were associated with a 1.80% (+1.77%) to 12.7% (+5.82%) increase in
movie production. An especially compelling result was that the increase in production was higher in countries with lower rates of piracy. The findings were robust to various specifications, including controlling for changes in government funding of movie production.

The legal monopolies created by Copyright law would but naturally be an attraction for those who would like to see anti-trust ramifications in the structure.

Ramello (2002) finds a possible contradiction between competition and Copyright law. On the one hand Copyright regulates the market by introducing, as a solution for achieving its welfare enhancing aim, incentives and constraints which limit competition and constitute a second best. On the other hand, competition law and antitrust attempt to direct markets toward their first best solution, eliminating all possible obstacles to competition. He notes that technological change is concurrently altering the structure of the markets, weakening and at times eliminating certain strategic elements crucial to the monopolistic exercise of Copyright, such as control over distribution networks. He, therefore, suggests that an acceptable antitrust policy for the information goods sector would appear to be one of minimum, contingent and non systematic intervention, which does not attempt to steer technological change and does not propose a different and contradictory system of incentives. A corollary to this assertion is the observation that, if effects detrimental to efficiency exist, these arise for the most part from the system created by Copyright. Therefore, the rule of reason suggests that, when this is necessary, there should be an intervention principally on Copyright itself, taking care not to further aggravate its negative effects.

Musick (2004) finds that the Copyright law is straining to contend with digital technology. As a consequence, holders of Copyright on a variety of types of creative works in digital format are questioning the right of consumers to make use of Copyright materials in potentially infringing ways. Consumers, on the other hand, have begun to chafe at Copyright owners’ use of digital technologies to impose obstacles to some uses for Copyrighted works to which they have become accustomed.
He portends that the allocation of legal rights between Copyright owners and users of Copyrighted material will likely continue to be contested as digital processing becomes more powerful and assumes a greater variety of forms, and as high-speed distribution and exchange of digital content becomes more pervasive in society. He thinks that Digital Right Management Technology today can allow for perfect price discrimination on the basis of a consumer’s willingness to pay which would enable the market to be expanded to every potential consumer. Therefore, he suggests certain basic legal principles to be used for upgrading of Copyright laws; since Copyright law is not absolute and unviable over time the legislative intent needs to ensure efficiency in the markets for creative works and other products and revision to the law to incorporate technological changes should be done after considerable amount of introspection because many unintended consequences can occur.

He finds that it had long been recognised, that if a monopoly was necessary for incentives, coupling it with price discrimination could serve the purpose of giving the author the needed inducements without reducing output as much as would occur under a monopoly that lacked price discrimination.

Posner (2005) contends that high transaction costs incurred in the licensing of intellectual property created a pressure on legal principles ranging from the fair use doctrine of copyright law to the tying doctrine in antitrust law. To him it appeared, with some exceptions, that antitrust law was imposing excessive restrictions on the licensing of intellectual property. The effect of these restrictions, combined with the high transaction costs inherent in the licensing of intellectual property, was to prevent the maximally efficient allocation of IP resources.

Creative industries and the entire realm of creativity are the subject matter of the law of Copyright. Some interesting studies attempted to find possible theoretical threads in this field.

Amabile (1996) found an interesting link between reward and barriers to creativity that was contra-intuitive and counter to the oft-repeated assertion of the creativity-reward-more creativity virtuous cycle. Using two groups of creative persons, one rewarded and one not, she saw that there was a clear and statistically significant superiority of non-rewarded subjects. She further states that there were
nearly significant differences between the two groups on intrinsic measures: subjects expressed enjoyment of the activities and their willingness to volunteer for further participation. She concludes that there was considerable evidence suggesting that reward and other forms of task constraint might be detrimental to creativity; “...Subjects offered rewards differed from subjects not offered rewards in their approach to open-ended tasks; they approach their tasks with less enjoyment; they focus more narrowly on the attainment of the extrinsic goal; they sometimes express less interest in the task; ...... and they may even produce work that is subjectively rated as less creative.”

Towse (2002) examines the need for a different approach to Copyright policy which is the dovetailed to the cultural policy in general due to the possibility of a disincentives towards adopting between technology by Creative Industries because of the heavy financed anti-piracy campaigns. A corollary to this assertion is that digitalisation can open up immense creative impulses if not circumscribed by outdated Copyright enforcement regimes.

She states that like with patents, economists have queried the case for Copyright as a necessary system for incentive and reward and have questioned its economic consequences. She says that Plant’s (1934) idea of the first mover advantage might not hold true in the current day. However, although the development of copying technologies has considerably reduced lead time as an effective business strategy in the creative industries, it nevertheless still has a role to play (because ‘nobody knows’). As to moral hazard, it is now accepted that overreliance on Copyright protection on the part of the creative industries (as witnessed by heavily financed anti-piracy campaigns nationally and internationally via the World Trade Organisation, World Intellectual Property Organisation and the like) has reduced their incentive to adopt new technologies, for example by developing legal digital downloading of cultural products.

She finds that the current debate about Copyright is not whether or not it should exist but if it will work with digitalisation. This is a debate in which economists should have a strong voice. It is not only a matter of legal principle but also of economic pragmatism The creative industries, those most likely to be affected
by digitalisation, have evolved a range of pricing methods and strategies for
organising the delivery of creative content to the market; they need the incentive of
contestability to continue to do this. These topics merit further study by economists in
order to anticipate the effects of digitalisation and of changes to Copyright law on
industrial organisation and on artists’ labour markets. The most serious problem of
Copyright policy is an economic one – the tendency to oligopoly in the creative
industries. For Copyrights not only reduce competition they appear also to encourage
mergers of firms based on Copyright assets. This has important consequences for
cultural policy and as a result Copyright policy should explicitly take cultural issues
into consideration. It can be argued that that is the purpose of fair use doctrine but that
is particularly under threat from digitalisation. And although the economists’
approach to fair use emphasises the balance of costs and benefits, this is at bottom an
empirical question but little empirical work has been done on Copyright at all.

Indeed, she also says that the empirical work that has been done is in the
context of artists’ labour markets, looking at the distribution of artists’ earnings from
Copyright and other sources (royalties appear to contribute very little to the ‘ordinary’
artist’s income). In artists’ labour markets there is also a tendency to concentration –
the superstar phenomenon. The selection of superstars, however, relies upon a pool of
artists (creators) and encourages oversupply with the result that rewards are
depressed. Creators often work alone or in small ‘craft’ firms and, though their work
is protected by Copyright when it is sold on, these small operators are very vulnerable
to economic pressures, reflecting the uneven bargaining power with purchasers in the
creative industries. The vicious circle, however, is that strengthening and extending
Copyright does not solve the problem, it may indeed exacerbate it. Thus Copyright
policy cannot alone solve this problem. It is a matter for cultural policy too. Thus
work by cultural economists versed in Copyright law and its administration and in
industrial organisation in the creative industries is needed to streamline Copyright and
cultural policy.

Cohen (2006) says that creativity is universally agreed to be a good that
Copyright law should seek to promote, yet Copyright scholarship and policymaking
have proceeded largely on the basis of assumptions about what it actually is. When
asked to discuss the source of their inspiration, individual artists describe a process that is intrinsically ineffable. Rights theorists of all varieties have generally subscribed to this understanding, describing creativity in terms of an individual liberty whose form remains largely unspecified. Economic theorists of Copyright work from the opposite end of the creative process, seeking to divine the optimal rules for promoting creativity by measuring its marketable byproducts. But these theorists offer no particular reason to think that marketable by-products are either an appropriate proxy or an effective stimulus for creativity (as opposed to production), and more typically refuse to engage the question. The upshot is that the more creativity is talked about, the more it disappears from view. At the same time, the mainstream of intellectual property scholarship has persistently overlooked a broad array of social science methodologies that provide both descriptive tools for constructing ethnographies of creative processes and theoretical tools for modeling them.

She argues that the study of creativity has been especially problematic for Copyright scholars because it sits at the nexus of three methodological anxieties that Copyright scholars experience acutely:

a. Choice of right theory or economic theory;

b. The progress problem as foundational;

c. Securing materiality.

Further she considers the implications of this model for Copyright lawmaking and policy analysis. Opponents of “Copyright maximalism” have sought to characterize Copyright as an intervention into the “information ecology” that can work both good and harm. A more sceptical stance toward the methodological commitments of conventional Copyright analysis makes it easier to see (and explain) why. Those commitments tend to produce both an inflated notion of Copyright’s role in stimulating creativity and an insufficiently keen appreciation of the harms that overly broad Copyright can cause. Decentering creativity, by contrast, tends to foster both a more modest conception of Copyright’s role in stimulating creativity and a keener appreciation of Copyright’s downside risks. It also fosters a clearer understanding of the connections between Copyright, cultural progress, and social
justice. Contrary to popular perception, this approach does not necessarily lead to the conclusion that Copyright is harmful per se; to adopt it is not, therefore, to be “against Copyright.” It does, however, suggest some essential doctrinal and policy adjustments.

Certain serendipitous studies occurred which add to the body of knowledge on a newly emerging discipline. Behavioural Economics offers a different take on explaining economic phenomena, taking it away from the Marshallian framework of the rational and fully informed economic actor. However, even before it could take root in the field of Economics of IP law, Posner (1998), in a brilliant critique of paper by Jobbs, Sunstein and Thaler (1998), Stanford Law Review, Vol. 50, No. 5 (May 1998), seriously questioned its role in the area.

In his review of a paper by Jobbs, Sunstein and Thaler (1998) and Posner (1998) criticises not only the theoretical basis of their approach but also a complete lack of variable empirical data for the same.

The author examined an approach to law based upon behavioural economics. This branch of economics is often used to explain market phenomena which tends to show inconsistent results. This branch of economics assumes that the economics actor does not always behave rationally for maximisation of satisfaction. The author looks at three bounds within which the actor operates viz.

a. Bounded rationality;

b. Bounded will power; and

c. Bounded self interest.

Behind that these bounds have major impact on consumer behaviour operating under non-market sustained constraints.

However, Cullen (2003) sought to address Copyright in the framework of Behaviouralism.

Cullen (2003) points out that while the basis for any economic analysis in the neo classical framework is the assumption of rationality on the part of the market
actors, does not always true. Certain behavioural aspects crucially affects the actors decision as stated below:

1. Probabilistic in rationality

People build their decision parameters on the basis of heuristics and biases/prevent accurate probabilistic calculations. He identifies three separate kinds of manifestations and the errors that can result therefrom:

Manifestation No. 1. Personal hypotheses resulting in belief perserverance, conformatory bias and motivated reasoning;

Manifestation No. 2. Over confidence of the actor can result in biases due to optimism and disbelief in reputation of experience, benefit of hindsight bias.

Manifestation No. 3. Since these market actors are bad statisticians, therefore, over estimates are the likelihood of future events and have a tendency to link on the event to a particular class of events and exhibit buyers in favour of norms anchor and standard value and their manipulability.

He states that the preferences shown by market actors are actually depending upon how these are elicited. These result in:

a. Status quo bias;

b. Endowment effect the objects which are owned, are valued more as compared to those which are not owned;

c. The desire to be viewed as non-extreme;

d. Reliance on irrelevant information;

e. Finding that the ability to discount overtime dissolves with proximity to maturation;

f. Contextual irrationality, perceptions of intrinsic fairness of other market actors.

g. Framing effects
Cullen finds that the behaviouralism by itself carries it an overall lack of coherency while rationalism assumes completeness, reflexivity, transitivity, self interest and limitless computational ability to explain market. Behaviouralism has too many variables based upon disparate, incongruent, unconnected behavioural traits. He first looks at the decisions to create. While examining this issue he critically looks at the crowding out of activity in the absence of extrinsic incentives if reward for creativity were to vanish under neo-classical micro-economics. The basic assumption which justifies reward for creativity is that of a negative marginal ability of effort. However, this is not always true. Some activities are intrinsically pleasing and this pleasure itself acts as an incentive for the continuation with the said activity. Additionally, legally created monetary incentives are such intrinsically pleasing activity over sufficiently justified. Economic incentives outweigh the intrinsic pleasure in such activities. If the economic incentives are withdrawn the actor is less likely to assume activities for the intrinsic pleasure.

The growing body of research commonly referred to as behaviouralism has revealed several phenomena that call into question the canonical economic justifications for the Copyright regime. In particular, there is much evidence that the rational actor model that informs Copyright’s incentive structure incompletely explains an author’s decision to create.

Deviations from the behaviour expected of a rational author can lead to inefficiencies, many of which can persist despite the corrective influences of the market. While some research has dealt specifically with Copyright-based scenarios, there is much experimental and empirical work left to be done to better relate known behavioural phenomena to the specifics of Copyright.

Miceli and Adelstein (2005) worked on a formal model of fair use. Their analysis highlighted the role of fair use in achieving an optimal balance between the incentive effects of copyright protection on one hand, and the distortions arising from the copyright holder’s monopoly power on the other. By employing a differentiated product model, they attempted to develop a threshold test for fair use that balances the benefits of wider use of original works against the possible disincentive for authors to create the works in the first place. Interestingly, they were able to underscore the role
of technology in shaping the optimal fair use standard. They state that the emergence of technologies that permit both fair and infringing uses heightens the need for the court to delineate the optimal scope for fair use. They claim that their model offers an economic framework for performing this task.

Deazley (2006) attempted to revisit the entire logic and discourse on Copyright by retracing its history. He posited two possible theories on Copyright; First by describing what Copyright was not by conceiving the nature and extent of the public domain and second by seeking to define what Copyright was by examining the extent of property freedoms and privileges (as he says ‘in that order’). In an interesting exercise he finds that many a judicial pronouncement and theorising has been based on interpretations of history of copyright used by judges and theorists at the time of making their pitch. As such, he suggests that developments in the future in the field of Copyright and its jurisprudence might be crucially dependent on the sources used by theorists and judges to arrive at their conclusions at the material time. Deazley’s main contribution to literature on the subject is the range of material he has brought into the discussion and the crucial role of history in defining the realm of copyrights.

Bodrine and Levine (2008) in their challenge to the way the concept of intellectual property is peddled and enforced have questioned the need for the government to adopt expensive means to protect private contract rights and find that private non-disruptive enforcement might be the lesser of the two evils on enforcement.

*Copying and Copyright*

Copying and Copyright are as close to each other as twins. Of course, when one twin turns truant this copying can become illegal. This issue is covered with separately from the theory of economics of Copyright over here because of the more mundane issues on copying that are not with permission fall outside pure theory.

Johnson (1985) concluded that an increase in copying has uncertain effects on the price the author-monopolist charges for her creative work (due to the possible increase of the slope of the demand function), but that revenue would certainly
Johnson views authors’ marginal cost as zero, any switch from buying to copying by a consumer actually decreased her contribution to total consumer surplus, so an increase in copying may have a negative effect on social welfare from the consumer’s point of view as well. In the long run, social welfare will depend on the numbers of people switching from buying to copying and the elasticity of supply.

Johnson found two models to advance the possibilities that unlimited copying reduces social welfare and that restrictions on copying may enhance social surplus. Such possibilities were shown to depend on (1) the degree to which copying reduces the demand for originals as opposed to increasing total consumption, (2) the elasticity of supply of creative works, and (3) the value consumers place on product variety.

Belleflamme (2002) finds that information goods fall in the category of public goods with exclusion, that is, public goods the consumption of which by individuals can be controlled, measured and subjected to payment or other contractual limitation. Exclusion can be achieved through legal authority and/or technical means.

However, simply specifying intellectual property laws does not ensure that they will be enforced similarly, technical protective measures are often imperfect and can be “cracked”. As a result, piracy (or illicit copying) cannot be completely evacuated. It is therefore extremely important to understand how piracy affects the demand for legitimate information goods and the pricing behaviour of their producers. It is equally important, for policy purposes, to identify clearly the welfare implications of piracy.

He develops base model with one information goods which is as follows:-

If the quality of copies of a lower quality as compared to the original then the producer is either ignores piracy threat; or modify the behaviour to ‘deter’ or ‘accommodate’ piracy. Under the latter conditions, he finds that competition from the pirate would increase social welfare at the cost of the producers’ profits. However, the total increase in the welfare is likely to be less than the loss to the producers. He then expands the model to an arbitrary number of information goods. He then examined the two scenarios:
i. The fixed cost is equal to zero and only marginal cost is increased, in this case piracy is seen to damage social welfare in the long run.

ii. The fixed cost is greater than zero and marginal cost is equal to zero though the model is complicated. In this scenario he finds that when the producers free-ride by fixing high prices to deter piracy and undercut prices when they have to accommodate pirate.

Grgeta (2003) states that there was some evidence that copying allowed consumers with low valuations to become music listeners and become the high valuation listeners that record producers wanted. There is also literature on network externalities where more exposure to a product leads to greater demand, but for different reasons.

A similar but opposite effect is the “stock” effect. The more CDs a person has, the less net utility he derives from a new CD because there are already many others that he can listen to. Because each CD is different, this effect is not expected to be very strong. If the typical CD is listened to only a few times, the stock effect would be weak, but it would be stronger if CDs are listened to over and over. An analogy with books would be that mystery novels do not have any stock effect, as they are a one-time read (they might have a strong habit effect). However, once a person has a dictionary and a thesaurus, another one is not needed.

According to Varian (2005), the parameters of Intellectual Property Protection (IPP) are determined by the three dimensions of IPP, namely height, width and length.

“Height” is the standard of novelty required for a work to be protected. For Copyright, the standard of novelty is very low-virtually anything one creates is automatically Copyrighted when it is “fixed in tangible form.” It is important for ideas. Rather, the expression of ideas is subject to Copyright.

The “width” of intellectual protection refers to the breadth of coverage that the protection offers. As indicated above, Copyright is relatively narrow in that it is only the expression that is protected: it does not protect facts, ideas, concepts or methods of operation. Furthermore, under certain conditions, extracts from works
that have been Copyrighted may be reproduced. The U.S Copyright Act of 1976 indicates that reproductions for purposes such as “criticism, comment, news reporting, teaching (including multiple copies for classroom use), scholarship, or research, is not an infringement of Copyright.”

The “length” of intellectual property protection refers to the term of Copyright. Unlike the other two dimensions, the length of Copyright is easily quantified. One simple model for the term of protection of intellectual property compares the social benefits and costs that accrue under two regimes: the protected period, when Copyright is enforced, and the unprotected period, when the work is in the public domain.

Varian then goes to examine various business models which can work in a world without Copyright. He mentions the following:-

1. Make the original cheaper than a copy.
2. Make a copy more expensive than the original.
3. Sell physical complements.
4. Sell self information complements.
5. Subscriptions.
7. Advertise yourself.
8. Advertise other things.
10. Site licenses.
11. Media tax.
12. Ransom.
13. Pure public provision.
14. Prizes, awards and commissions.
Frischmann and Moylan (2006) find laws on IPRs tracing to converge regarding misuse of IPRs as a result of even though there is no specific law on misuse of Copyright common law principle which are to be developed in this area. A mixed approach involving anti-trust-based misuse(per se rules and the rule of reason) supplemented by narrow public policy-based per se rules best allows courts to meet the substantive demand for common law rules without overreaching or generating debilitating uncertainty in the licensing and enforcement of Copyrights.

Handler (2007) finds the British and Australian Copyright laws conceptually flawed because they are not able to distinguish between Cinematographic work and Film fixation. He states, “Whereas the former is said to be the product of the creative and perhaps technical contributions of those involved in the making of the film and where recognised, tends to be protected under ‘authors’ rights’ style laws, the latter, being the product resulting from financial investment in the film making process, tends to be afforded additional ‘neighbouring rights’ style protection.”

This logical difference has direct relevance on the philosophy of enforcement of copyright. Enforcement of a right to protect financial investment has an economic logic as opposed to the enforcement right in a creative work which carries a social and cultural context. The world over this distinction has been deliberately blurred to lend moral and social sanction to civil and criminal enforcement of copyrights.

Piracy and the Internet

The main interest that the Internet excites in researchers today relates to downloading of content without permission. A large number of studies in this field have added to the body of knowledge herein. There is always a likelihood of such downloading being termed piracy.

Piracy

One of the most significant issues against piracy has consistently been that by interrupting the creativity-reward link, it impedes creativity and leads to a decrease
in the production of Copyright goods. The Piracy Paradox in the fashion industry bucks this argument in a spectacular way.

Raustalia, et. al. found an interesting situation in the Fashion Industry. This industry produces huge variety of creative books in markets which are seen to be larger than markets for movies, music and books in the global context where there is a little Copyright protection and where copying is rampant. Standard IP theory would sound the death knell for such an industry. However, this industry continues to create at a rapid pace, that is not elsewhere. The creators do take steps to protect the brand and the trade mark but not so for the designs. Piracy of design in this industry is taken to be copying but also homage to the creators as well. The authors examine the stable law – IP Equilibrium and question whether such equilibria would be possible in other Copyright industries. They identify two specific features of fashion industry which allows for such stable laws of IP equilibrium. Such equilibrium is seen to be aided by the fact that fashion is status based and also that it operates in cycle. The interesting attitudinal issue regarding fashion is that there exists an acceptability about copying and there does not exist any substantial doctrinal barriers to extending Copyright to fashion designs.

Extending on the theme induced obsolescence, they find that apparels are positional goods i.e. the goods whose value is closely tied to the perception that they are valued than others. Therefore, there would be a reduction in value of original due to copying because all are tarnishing by cheap invitation as well as the fact that wide diffusion diminishes value for early adoption for fashion. This rapid decline in the value of the original results is the need for newer design to retain customers’ interest. The low IP Regime accelerate diffusion of existing ideas in design and style and hence stimulates need to generate new ideas. Since there is no value in rapid design or style induced and rapid obsolescence actually stimulates more creativity. This phenomenon is crucially based upon the features of the Fashion Industry including where derivative works are actually encouraged as variations of the original. As the design originators are brand conscious of their brand they normally do not dilute their brand with derivative works themselves. However, given this tolerance for such derivative works more creativity is actually seen to be stimulated.
The second feature of anchoring identified by the authors is actually the phenomenon of generating the new trend in a new season which exemplifies the specific season. This trend evolves through an informal and intricate process of copying references and receiving inputs from consultants.\(^{58}\)

The authors also identified other explanations for this low level IP equilibrium which are:

(a) The Copyright doctrine itself is acting as a barrier whereby certain creative works do not find a mention in the scope of the Copyright law;

(b) Where political barriers can be erected by such stakeholders which are in completion with the creators as has been seen in the case of fashion retail sector which has a bigger clout over the polity in the United States than the fashion designer themselves; and

(c) The first mover advantage enjoyed by the design originators which leaves the copier with dated fashion.

Network effects of any use have found echo in not only the study of fair use in Copyright industries but also in piracy.

Klein, et.al. (2002) contend that it is incorrect to state that record companies are seeking to restrict fair use. In fact, fair use enhances the consumption of music and, therefore, downstream purchase. Therefore, what record companies seem to be doing is only to protect themselves against piracy and have to live with certain amount of loss of revenue due to restricted fair use.

Alvisi (2002) study the impact of piracy on the quality choices of a monopolist. In the absence of piracy, the monopolist has no incentive to differentiate its products. With piracy the monopolist might instead produce more than one quality, so that differentiation arises as the optimal strategy. This is because the producer wants to divert consumers from the pirated good to the original one.

\(^{58}\) This can be compared to the separate genres of music and movies which tends to proliferate at different times e.g. in the case of music we have seen periods of Rock and Roll and Pop whereas in the case of films western and disaster movies tended to be produced in large numbers in different periods of time.
Differentiation involves either producing a low-quality good such that piracy is eliminated or the monopolist can choose qualities such that piracy is still observed in equilibrium.

Thus, they conclude when the proportion of high-cost consumers is low and differentiation is the optimal strategy, the quality level chosen for the low-quality good is such that piracy is completely eliminated in equilibrium.

When instead the proportion of high-cost consumers is high, there is an equilibrium with maximum differentiation where the monopolist admits some piracy. This happens because, since in this case the monopolist finds profitable to sell both qualities to the high-cost segment of the market.

This considers the possibility that consumption of copies of intellectual property (e.g. pirated software) can reveal the product quality of originals, when they are experience goods. Imperfect substitutability between copies and originals allows for the possibility of subsequent sales of originals to informed copiers. Consequently, the presence of copying can induce a Pareto improvement in social welfare, as it has the potential to solve the adverse selection problem as well as pre-empt the production of socially undesirable low quality which might otherwise be produced in the absence of copying. Furthermore, the paper also demonstrates that not enforcing (or temporarily suspending) the Copyright can in and of itself be a signal of high quality. Finally, any measure of the relative “harm” from copying must appropriately account for variations in product quality that might exist between the copying and no-copying regimes as well as any costs of signalling high quality that must be employed in the regime without copying.

Sundarrajan (2003), analyses the optimal choice of pricing schedules and technological deterrence levels in a market with digital piracy, when legal sellers can sometimes control the extent of piracy by implementing digital rights management (DRM) systems. It is show that the seller’s optimal pricing schedule can be characterized as a simple combination of the zero-piracy pricing schedule, and a piracy indifferent pricing schedule which makes all customers indifferent between legal consumption and piracy. An increase in the level of piracy is shown to lower prices and profits but may improve welfare by expanding the fraction of legal users
and the volume of legal usage. In the absence of price-discrimination, the optimal level of technology-based protection against piracy is shown to be the technologically maximal level, which maximises the difference between the quality of the legal and pirated goods. However, when a seller can price-discriminate, it is always optimal for them to choose a strictly lower level of technology based protection. Moreover, if a DRM system weakens over time, due to its technology being progressively hacked, the optimal strategic response may involve either increasing or decreasing the level of technology based protection and the corresponding prices. This direction of change is related to whether the technology implementing each marginal reduction in piracy is increasingly less or more vulnerable to hacking. Pricing and technology choice guidelines based on these results are presented, some social welfare issues are discussed and ongoing work on the role of usage externalities in pricing and protection is outlined.

Belleflamme and Picard (2004) find that although, other things being equal, copying is less attractive with bad copies than in the case of good copies, it turns out that there is no symmetric equilibrium where firms manage to deter copying. The key to understand this seemingly paradoxical result is that, with bad copies, each firm must set a high enough price to deter users from reverting their purchase decision. In contrast with the case of high-quality copies, a firm’s individual deterrence price increases with the price set by the other producers. As a result, the section of a firm’s best-response function where deterrence is the optimal conduct is onward-sloping (meaning that prices become strategic substitutes) and reaches prices which are above the unconstrained monopoly price.

Information goods fall in the category of public goods with exclusion, that is, the consumption of which by individuals can be controlled, measured and subjected to payment or other contractual limitation. Exclusion can be achieved through legal authority and /or technical means. However, simply specifying intellectual property laws does not ensure that they will be enforced; similarly, technical protective measures are often imperfect and can be “cracked”. As a result, illicit copying (or piracy) cannot be completely avoided. It is, therefore, extremely important to understand how copying affects the demand for legitimate information
goods and the pricing behaviour of their producers. Producers seek to deter piracy where quality of copies is high and the returns of copying is also high. However, they seek to accommodate piracy if the copies are of poor quality and the returns are weak.

According to the Peitz and Waelbroeck (2003) estimated a 2% loss in CD sales due to music downloads, a small number compared to the observed 9% drop in 2002 in the US. Different factors can explain the current downward trend in CD sales. One such factor may be the effect of the diffusion of fast internet connections on leisure activities. Currently, people are more listening to audio clips and internet radio than downloading music files. While it is not clear how audio streaming will affect record companies in the future. It is only one of the many activities of broadband users. Other forms of digital activities such as instant messaging, looking for news, job and hobby information, creating online content (pictures, web pages), watching video clips and movies, playing online games, purchasing products online and undirected browsing, that are embraced by broadband users, are clearly a substitute to traditional forms of entertainment. Indeed, survey data provide evidence that heavy internet users have reduced the amount of time watching television and listening to music.

As a consequence, the recent legal actions and the development of technical measures of protection of musical CDs carried by Copyright owners may be badly motivated. Besides, there are reasons to believe that the music industry might actually benefit from digital distribution. Indeed, numerous surveys highlight the potential sampling role of digital copies. While current P2P technologies are not very good at sampling new music available on P2P networks, since downloader’s profiles are not available and cross-recommendations in existent, new platforms can be designed to make sampling easier. As a result, labels may benefit from file-sharing because they may be able to save on marketing and promotion costs, by letting consumers search for their most preferred music.

Hui and Png (2003) studied the experience in 28 countries between 1994-98. The demand for music CDs decreased with piracy, suggesting that “theft” outweighed any positive effects of piracy. They calculated that, in 1998, actual losses
amounted to about 6.6% of sales. The actual loss of revenue would have been higher as publishers would have raised prices in the absence of piracy.

The HLR Note (2003) states that the alternative conceptions of TRIPS presented by the various IR theories represent highly stylized policy options that are in no way mutually exclusive. Mixing elements from each area of analysis may prove to be the most successful reform package for the TRIPS regime. A limited legalistic conception of TRIPS may blind one to the broader IR themes whose casual significance within the global governance of computer software piracy is only beginning to be understood.

Given the analyses outlined above, however, some preliminary observations are in order. A central tension that has emerged through examining the various IR approaches is whether reform should move forward under the auspices of the TRIPS regime or through alternative legal and institutional solutions. This Note concludes with a word of caution for states and private entities seeking alternative measures to the traditional multilateralist approach embodied in the WTO. The TRIPS regime is still in an early state of implementation. Like most international agreements, compliance with TRIPS is linked to individual state willingness to comply. Ultimately (and admittedly from a constructivist view), the willingness of developing countries to protect computer software under a rule-based regime corresponds to the extent that they perceive TRIPS as an equitable agreement that permits the meaningful implementation of their counties’ development objectives. Alternatively, unilateral measures lack the long-term sustainability that more multilateral institutional measures, embedded in constructivist thought, promise. This observation is not to deride the realist or rationalist institutionalist camps’ reliance on rules backed by the threat of sanctions. Instead, it merely recognizes that such policy measures alone may prove insufficient. The value of institutionalist constructivist measures, complemented by the activities of non-state actors as advanced by liberalist theory, may offer greater compliance with the TRIPS regime than a purely power-based approach would yield.

Belleflamme (2003) considers interdependent demand in the presence of copying as a result of the consumer’s copying technology exhibiting increasing
returns to scale. This is typical when a consumer incurs a high initial fixed cost, for example by buying equipment in order to enable him to copy. If the consumers’ average cost of copying is sufficiently high, a multiproduct monopolist will either set the unconstrained monopoly price or lower its price so as to deter copying. In contract, if each single information good is provided by one firm, these firms might have to consider copying as a phenomenon at industry level, and set a high price in order to gain a high margin from those consumers who buy originals. Piracy enlarges the installed base of users, it generates network effects that increase the legitimate users’ willingness to pay for the software and, thereby, potentially raises the producer’s profits.

In this context, Bae and Choi (2003) interestingly demonstrate that the threat of piracy obliges the monopoly to lower its price, implying that the firm’s ex-post profit falls whereas the usage of authorised copy increases.

Ceballos (2003) finds that Copyright holder lobby groups often present arguments to the effect that piracy is so rampant that it is threatening the very existence of legal transactions involving intellectual property. Indeed, in some countries, it is argued that the proportion of consumers using pirate copies of certain items of physical supports of intellectual property is almost as great as those using legitimate copies. Statistics are also given to the effect that piracy is costing immense amounts of money in lost legitimate trade. However, such statistics must be treated with a certain degree of doubt, since they are typically based upon the assumption that each pirate copy that is transacted represents the loss of a legitimate sale. This is an obviously incorrect foundation upon which to base an estimate of the loss of legitimate trade, simply because pirate copies are transacted at a lower price than legitimate copies, and so eliminating the pirate copy does not imply that the user would then purchase a legitimate copy. Furthermore, eliminating the option of pirate copies would certainly affect the price at which legitimate copies are sold, presumably increasing it further since legitimate trade would be facing less competition. Hence, there may be reason to believe that eliminating the option of piracy may even reduce the number of legitimate copies sold due to price increases. Indeed, recent studies based on more correct economic theory suggest that only about 10 percent of pirate
copy transactions represent lost sales of originals (compared to the figures, often between 40 and 60 percent, that multinational record companies discuss). Finally, on this point, it should also be noted that the economic harm that piracy inflicts upon Copyright holders should not be measured in terms of lost income, but rather lost profit. Given that profit margins may be as low as 5 percent of sales, the true economic harm is far less than what is often cited.

She states that while piracy can take many forms, depending on the type of access (and, perhaps, the type of intellectual property), in principle it is relatively easy to do (that is, it can be done at a relatively low cost) and difficult (that is, costly) to avoid via a legal system. It is quite easy to see that the higher is the price at which legal access is granted, the greater is the incentive for users to resort to piracy as a substitute for legal access. The natural implication is that there exists more than one way to attack the problem of piracy, one based upon the introduction of legal regulations, and the other based upon the incentives provided by price systems.

Further, she states that it is not clear which of the two is likely to be more adequate, but what is certainly obvious is that the introduction of artificial rules will always require maintenance costs (behaviour will need to be monitored and verified for the rules to have any real effect, since otherwise parallel markets in which the rules are not observed will always be established, in the same way that smuggling and other illegal activities are the logical response to laws that eliminate legitimate trade in certain goods), incentive based mechanisms can never be avoided.

She finds however, Copyright holders are typically unwilling to admit that a solution, even though partial, to the problem of piracy lies in their own pricing policies. The reasons for this are often cited to be that price reductions are impossible, since legitimate production requires not only the marginal cost of producing physical support units, but also the fixed costs of producing the original unit (the master tape) including the costs of promotion. On top of this, legitimate units are obviously subject to the Copyright royalty that units produced by pirates save. Consequently, pirate copies are a means of supply of a perfect substitute item at a lower fixed and marginal cost, leading to the obvious conclusion that they can be sold profitably at a lower price.
Her main conclusion is that Copyright needs to evaluate to accept new technology and look for relevant method to properly administer, reward and protect the rights.

Farchy (2004) finds a major problem with the data of losses due to fall in sales of music as reported by industry because of the estimates not being based on actual losses but on shortfall in projected earnings. Piracy is just one factor behind falls in record sales whereas the technology behind CD itself has now become dated and CDs themselves being overpriced naturally seemed to be overtaken by other firms of maintaining music. He suggests that right holders should attempt to offset losses due to copying through indirect appropriation of revenue using price discrimination, selling complementary goods in services, using network effects by allowing sampling etc. Farchy concludes that purely technical and defensive solution against piracy are impractical. He finds the conflict between P2P and DRM as counter productive and that there should be a need for better distribution of revenue. He suggests that economists need to remove these issues from the consigns of strictly legal and technology debate.

Yu (2004) examined how domestic as well as international law would deal with Digital Piracy on the Internet. He concludes that despite significant legislative efforts, both within national territory as well as international legislation such as the internet treaties have sought to control net based piracy, when the internet becomes more globalised in the years to come. Digital Piracy will definitely grow into a major trans-national problem. However, Yu is hopeful that there would not be a static response from the policy makers and as new norms developed to handle new technologies, more effective opportunities would also emerged.

Haruvy, et. al (2004) found that strategic tolerance of piracy may increase profits. This is because piracy may help in defusing the software to its target market by increasing the size of user base which can result in benefits to local buyers due to network externality. Network extended externality has been defined as an additional utility derived from the size of user base. Thus, in the case of software, if more persons have this software it becomes more useful for the users.
Piracy can help in establishing the initial user base but it has to be limited to appropriate pricing and piracy protection (PP). The authors define PP as Anti-Piracy Actions that lower expected value derived by the pirate. They find that a moderate tolerance of piracy is useful in facilitating both faster adoption and higher prices. The authors go on to identify conditions under which piracy tolerance should not be recommended, viz. when piracy control is cheap, information is precise, penetration is quick, externalities are low, future profits are greatly discounted, customers’ inertia is low and when product life is short. The results by these authors showed that some tolerance in PP is always optimal even when PP is costlier and certainly when it is costly. They also found that with higher PP, higher prices can be maintained even though the cost of PP may be higher because higher prices will outweigh high cost of PP. Further, products that do not exhibit at great deal of network, externality should not tolerate piracy, e.g. music and film once the market moves into piracy mode. In such a case, it will be difficult to wean it away from this mode towards the buying legitimate products if the value of the product and PP is low. However, if the product is short-lived and immediate profits are a strong motive then piracy-first approach is not appropriate. On the other hand, if long terms profits are the focus then high prices and low PP should be adopted. They contend that with a new product percentage of piracy first rises and then falls whereas buyers’ percentage rises and then stabilises. This is because that any point of time a buyer has three options:

a. To pirate or buy pirated copy.

b. To buy legitimate copy.

c. Do not adopt the product at all.

Consumers in the market for pirated products normally do not exercise option b & c. Only a fresh non-user has all three options.

Katz (2005) analysis of network Effects in the field of software is interesting. He finds that piracy can lead to increasing network value and help in achieving monopoly. Further, he says that in the approach to accommodate piracy, the software publishers are seen to be employing third degree price discrimination
whereby they offer the same product to customers with different preferences and with different prices. Citing the action pursued by the Business Software Alliance, he finds the use of enforcement normally follows the technology lock in that may have occurred initially due to piracy. Thus, the size of the network itself becomes much larger increasing the revenue of the software publishers. He then speaks to address the paradox between the beneficial network effects of piracy and the constant clamour for stringent anti piracy measures by the rightholders. He calls this a strategy so that the attention that explicit price discrimination may attack from the high value users who may feel discouraged by higher prices they pay for the same product, is avoided.

The primary factor is the way in which piracy and the campaigns against it affect users’ preferences and their willingness to pay. Anti-piracy campaigns raise the cost of piracy by making it morally less acceptable and legally riskier, thus decreasing gains from piracy and increasing users’ willingness to pay for legitimate software. Explicit price discrimination may have the opposite effect: the existence of legitimate users who are able to obtain a legal copy for a much lower price may cause some high-value users to believe that they are being charged excessively and unfairly and encourage them to seek opportunities for arbitrage or even to change their moral perceptions or risk aversions and pirate the software instead of buying it. It may also signal to competitors and governments that there are significant economic profits to be shared or that the publisher is a monopolist that should somehow be regulated. Tolerating piracy, while on its face economically equivalent to licensing for free, avoids these possible results by excluding any comparable lower price and helps to convey a message that the software publisher is indeed a victim rather than an exploitative monopolist. He further finds that in the network setting, the status quo in which piracy is illegal but prevalent, and its rates controlled rather than eliminated, yields a Pareto optimal result or, at least, results close to it. The profits of the software publishers are maximised, while incentives to innovation are maintained; consumers enjoy a bigger and more valuable network with virtually no deadweight loss. Of course, he identifies two limitations on the Pareto Optimality conclusion. There would be a danger of inefficient longer run lock in which prevents improvement and is strengthened by piracy and the exploitation of the consumers of
the right holder by extending lock in period through the raising of a high pitched bogey of the dishonest, unfair and unethical nature of piracy. He pleads that policy-makers, especially in developing countries, he often finds themselves on the defensive in the pace of high range piracy should use such analysis to take more informed decisions on higher IP protection, harsher penalty or more public expenditure on enforcement.

Lionetti (2006) finds that from the ex ante point of view, protecting intellectual property rights preserves the incentive to create information goods, which are inherently public (absent appropriate protection, creators might not be able to recoup their potentially high initial creation costs). On the other hand, from an ex post point of view, protecting IPR encompasses various potential inefficiencies (e.g. protection grants de-fact monopoly rights, which generates the standard deadweight losses; also, by inhibiting imitation, protecting IPR might limit the creators’ ability to borrow from, or build upon, earlier works, and thereby increase the cost of producing new ideas. Surely, there are differences among different demographic groups, different geographic locations, and even different cultures and judicial systems. The phenomena may include such factors as how the difficulty of making an illegal copy affects the frequency of copying; the effect of the availability of illegal copies on the price and the availability of legitimate copies; the consumer’s personal sense of the moral or ethical dimensions of the copying behaviour; the degree of law enforcement or legal scrutiny directed at the behaviours; and peer group or other social opprobrium or encouragement (Committee on Intellectual Property Rights and the Emerging Information Infrastructure, National Research Council 2000). There is a need for an improvement but probably, the damage caused by piracy also depends on publishers’ pricing strategies. Thus, it could be the case that strategies used to prevent piracy end up inducing would be consumers not to buy or use the product at all. Lowering prices could be a useful strategy in discouraging piracy, but it would understate the loss in revenue, while raising prices in order to compensate for the consumer’s increased surplus due to private copying would overstate the losses due to piracy. Piracy has some positive demand-side externalities, such as direct and indirect network externalities (both for interaction for software and for music). Hence, from the supply
side point of view, copying can actually result in positive effects for the relevant industry, increasing demand and thereby the profits for the firm that sells the original. Furthermore, copying greatly facilitates social sharing of information goods (in some ways akin to imitation or free advertising of the product), which can also increase the consumer’s willingness to pay for these goods. On the negative side, expectations of a future illegal market for copies can also create expectations of future price cuts on the original and thus inhibit current consumption. Takeyama (1994) points out that such expectations may cause reductions in demand and profit for the seller of the original.

If both firms and consumers do lose from piracy, it goes without saying that strategies to prevent piracy should be implemented; but in some studies, the results have been that consumers sometimes gain from piracy, and in such a case there is a lot of room for alternative policy options.

In order to eliminate copies a firm can: lower its price or spend additional resources on developing a technology that increases the probability of detection. While a lower price improves welfare because less effect in copying is needed, increasing the probability of detection is inefficient from a social point of view, and the surplus of copiers is also reduced.

Detection by the industry raise the social cost of copying, thus raising the price of the original product (in this case, enforcing Copyright protection could decrease the demand for the originals). Detection by the government (beyond the laws and the enforcement mechanism) would instead consist in tax on copies and recording equipments, subsidies to the original and penalties in case of Copyright violations. If piracy is a real threat (i.e., it reduces profit), three strategies can be adopted: (1) not react at all; (2) deter piracy by (a) lowering the price of the legal product which in turn increases social welfare, or (b) spending additional resources on a technology that increases the probability of detection. The extent of piracy is endogenous, in the sense that it depends on the price of the legitimate item and on the expected penalty.

Focusing on the determinants of bilateral trade in audio video and multimedia created contents to evaluate whether piracy has any effect on such trade
Lionetti and Patuelli (2009) found evidence that there was a negative impact of bilateral trade in music but positive impact in the case of films and other new generation media. They make a pitch for a more accurate and flexible system of Copyright enforcement especially in consumer countries.

A counter view on piracy, in view of the inequity that consumers face in developing country markets, has been in emergence for quite some time now. However, this view suffered from lack of academic rigour because the discussants tended to be high on noise and short on substance. This is changing ever since a sizeable section of academic community started challenging the IP model as the sole model of innovation and consequent economic development.

Karagnis (2011) holds that there is no stable definition of piracy. In fact, he thinks the term has been extensively used to deliberately blur the difference between types of uncompensated use. He finds major flaws in the numbers generated by industry research about the extent of piracy because of use of unsubstantiated and secret methodology, some of it being openly challenged on the strength of available data. He states that this misinformation covers the estimates of piracy, the losses due to piracy and the existence of substitution effects (one-to-one correspondence between piracy and loss of sales). In a scathing attack on the way enforcement is organised, Karagnis states that it has now brought about a ‘Confiscation Regime’ where even civil remedies are being used to impose severe costs on copiers by way of rendering them out of the market, at times without legal basis. He also found evidence of selective enforcement through high-profile raids and dogged pursuance of some infringing cases with high public visibility. He finds little evidence that this kind of enforcement actually decreases piracy. What it does is that it inhibits even legally permitted uncompensated use. He does not find any major impact of the huge sums of money being spent on educating not only the general public but also the other stakeholders in the operation of the law, viz. the enforcement agencies and the judiciary. He also finds a new refrain in the anti-piracy campaigns which talks of confluence of interests of those involved in counterfeiting and piracy with established criminal organisations involved in drugs and arms trafficking, which he says has never been systematically established, except by stray anecdotal references. He states
that the main mover of the anti-piracy is the big transnational business which first of all seeks to protect its established business in the developed countries and its domination of the markets in the developing world. He cites the high prices of entertainment goods in developing country markets which more or less are at par with those in developed countries despite a huge difference in purchasing power. Karagnis finds the entire argument sidestepping the basic stimulant for piracy in the high prices and the resultant unmet consumer demand.

India has been in the throes of bilateral pressures to deliver on IP protection. However, detailed studies to understand the contours of piracy in India were not easy to come by. The last major concerted study conducted was to assess the size of piracy in India in 1999 by the National Productivity Council. This study was beset by major data problems but managed to deliver some evidence on the subject. Most of the other time, it is multinational interests who seem to be quick off-the-block with many figures about the size of piracy in India. These figures are generated on the basis of secret and mostly dubious methodology and are now being increasingly questioned. Liang and Sundaram have investigated the issue of media piracy in the context of inequity and data manipulation.

Liang and Sundaram (2011) extended the theme of Karagnis to the examination of Indian conditions. Their main findings related essentially to the dominant role played by the Indian film and music industries in the local context and the impact it had on the discourse on piracy in the country. They also found a crucial role for the fact that the media market in India is highly decentralised in production and governance.

The main focus of their work was on three aspects of piracy in India:

1. The entire organisation of the informal media economy which was seen to be losing its erstwhile cross-border linkages and was turning into a domestic operation with local production and Internet distribution.

2. Reorganisation of the Film production and distribution system which resulted in the Multiplex formula and which effectively locked down distribution along with rising prices and resulted in aggressive competition in the secondary
markets for Disc media; all of this was also seen to cause declining prices in the disc market and direct competition with the pirate market.

3. Greater cooperation between enforcement agencies at national and state level as also more involvement of foreign agencies in an entire spectrum of enforcement and related activities of training, direct action and prosecution.

They also identified a crucial role for ‘windowing’ which is the control of circulation over time. This windowing is used to decide the dates of release of the work in any or all the forms of display and diffusion.

Though not the subject matter of this research, they have found the threat of P2P as exaggerated owing to the low penetration of home computers and the Internet in the Indian market as well as low bandwidth available to consumers of telephony services.

On content, they made a surprising discovery that the greatest popularity of content on the Internet was not films or music but local television programming.

They also found strong evidence of market segmentation (which may result in market segregation) in the case of films in that larger urban areas have now started offering movie-going as an entirely different experience owing to multiplexes being located in or near malls thus adding to the range of consumer goods on offer. Single screen halls remain the most common platform for viewing in smaller towns and even in large cities for the comparatively less well-off but are facing rapid closure in the latter.

Their evidence on prices and comparative purchasing power rates has already been discussed in Chapter 1.

They further found a much direct interface between the industry and the enforcement superstructure of police and the judiciary but also found growing resentment in both at the effort to ‘sensitise’ them to piracy. The role of industry groups in initiating large number of raids and follow them up with prosecution was also seen to attract the ire of the judiciary as an effort to browbeat them by clogging the justice system and was seen to have actually prevented a commensurate increase in injunctions and convictions.
Liang and Sundaram arrive at similar conclusions (not surprisingly) as Karagnis(2011) about the role of prices in the level of piracy but at the same time find evidence of ‘accommodation’ behaviour towards pirates by the incumbent producers which soon allows the pirate to go legit himself. They suggest that the Indian model owing to its large and differentiated production and governance base and its experience on net-based distribution can become a model for other industrialising and middle income countries.

Measurement of attitudes towards piracy attracted a series of studies. Husted (2000) identifies 6 hypotheses to examine as follows:-

Hypothesis 1: The higher the level of economic development, the lower the rate of software piracy.

Hypothesis 2: Other things being equal, the lower the level of income inequality (the larger the middle class), the greater the rate of software piracy.

Hypothesis 3: The higher the power distance in a country the higher the rate of software piracy in a country.

Hypothesis 4: The more individualistic (less collectivistic) a society the lower the rate of software piracy.

Hypothesis 5: The greater the masculinity of a culture, the higher the rate of software piracy.

Hypothesis 6: The greater the level of uncertainty avoidance in a nation, the higher the rate of software piracy.

In the end the author is able to establish only hypothesis 1 to 4 and proves that:

Collectivist nations place a greater emphasis on social harmony than confrontation, on shame than guilt, and on fact than truth. The relationship of individualism to software piracy suggests that anti-piracy campaigns need to demonstrate that piracy is a shameful practice that brings a loss of face upon the family, school or business firm. A focus on the criminal nature of piracy would
probably have less impact. Economic solutions should provide incentives so that the whole group, rather than the individual, is willing to comply with legal norms. In addition, the software industry needs to understand that collectivist countries, such as India, place less emphasis on individual rights as opposed to overall social well being. For the software business to convince governments of collectivist countries, it must demonstrate that strict regulation of software piracy would lead to greater overall well being for society.

Demographic variables, such as age, may play a moderating role given the findings of earlier research that older students are more likely to pirate software than younger students.

Certain empirical studies, based on the Husted approach on measuring piracy, were conducted in East Asia. These studies sought to measure attitudes towards piracy under hypotheses in the context of various demographic features. These studies were substantially helpful in formulating the contours of this research.

Kwong et. al. (2003) examined the impact of attitude toward piracy on intention to buy pirated CDs using Chinese samples. They measured attitude toward piracy on a multi-item scale on the anvil of social cost of piracy, anti-big business attitude, social benefit of dissemination, and ethical belief. They found that social benefit of dissemination and anti-big business attitude tended to show a positive relationship with intention to buy pirated CDs. However, knowledge about social cost of piracy and ethical belief tended to inhibit predisposition towards piracy. They found ethical belief to have the greatest explanatory power in predicting intention to buy (or not buy) pirated CDs. They also found impact of demographic variables such as gender and age in the intention to buy pirated CDs. They also found an interesting feature that those who had experienced such a purchase were more likely to buy pirated CDs than those without such experience.

This work was the main stimulant for taking on the current research in that no such study had been conducted in India. Of course the scope of the current research was considerably enlarged and the hypotheses developed in the present work, as laid down in Chapters 3 and 4, sought to address a greater number of policy issues than Kwong, et.al attempted. However, debt is owed to this work.
Chiou, et. al. (2005) developed and empirically tested a model examining the antecedents of consumer attitude and behavioural intention toward music piracy behaviour in Taiwan. They tested 9 hypotheses on two separate criteria:

**Antecedents of piracy attitudes**

a. Consumers' satisfaction with current Copyrighted CDs will negatively affect their general attitudes toward music piracy

b. Consumers' singer idolization will negatively affect their general attitudes toward music piracy

c. Consumers' perceived prosecution risk will negatively affect their general attitudes toward music piracy

d. Consumers' perceived magnitude of consequences will negatively affect their general attitudes toward music piracy

e. Consumers' perceived social consensus will negatively affect their general attitudes toward music piracy

f. Consumers' perceived proximity will negatively affect their general attitudes toward music piracy

**Antecedents of piracy intentions**

g. Consumers' idolization toward a singer/band will negatively affect their behavioural intentions toward music piracy of their idol singers/bands

h. Consumers' general attitude toward music piracy will positively affect their behavioural intentions toward music piracy of their idol singers/bands

They found support for all their hypotheses and found that surprisingly positive attitude towards their idolised bands and singers prevented the consumers from purchasing pirated products but not from illegally downloading their works.

**Internet**

According to informed commentators on Copyright, nothing more exciting than the Internet occurred since Guttenberg. Naturally, the issue of copying came to the fore once again due to this new medium.
Jones (2000) examined the issues of technology convergence as well as other matters related to music and the Internet. He states that the ability to record and transmit the sound is actually power over sound. He points out that purchasing and listening practices are being reshaped by new technologies. Internet-based discussion forums, chat rooms, etc. (and social networking sites such as Facebook and Twitter) have major impact on shaping demand for music. Introduction of CD drives was the starting point of change in listening habits (role of YouTube, Internet radio and other ‘on-demand’ sites, in satisfying, listening and viewing demand was crucial). He refers to the proposition of disintermediation has put forth by Janson and Mansell (1988) who found that online purchasing hard and soft copies substantially enhanced market access of both the consumer and the producer of music. There also appears to be emergence of newer possibility of production of music on line through mixing of performances as well as jamming simultaneously. He finds that disintermediation in sale does not lead to increase in consumption unless it is accompanied by disintermediation or in some cases, mediation in promotion. He finds problems with the Music industry not recognising the benefits of working closely with the ICT Industry. Now, that it has started happening, newer business models are expected to emerge shortly. He believes that record labels are most likely to embrace the on line work as a marketing tool, as a means of fighting piracy, as a means of increasing revenue by cutting out retailers as a less expensive distribution models. He makes a specific point that musicians need audience and for that the Internet is extremely useful too.

Gopal, et. al. (2006) find that music (and film) is an information good as well as experience good, whose true value is revealed to the consumer only after it is


60 There appears to be considerable role of enabling technology related to bandwidth, software and hardware and generational change from 2G to 3G and now 4G.

61 The Long Tail hypothesis of Anderson (2006) offers a solution to this need to access audience.
consumed. Music takes little time to be consumed. It is also a public good because it is difficult to preclude other consumers once it has been provided to a few.\textsuperscript{62}

They echo the belief that IP has been under threat since the printing press was invented. But new business models have consistently embraced new technology to generate increased revenues from IP. Indeed, Internet-enabled sharing technologies enable consumers to reduce the information uncertainty regarding commercially available music. Much to the chagrin of the recording industry, they also permit users to obtain illegal copies of the music without paying proper remuneration to the recording industry, the artists and other entities involved in the creation and distribution of the music. Thus, a consumer who considers using online sharing technologies to experience the music without first paying for it incurs a cost of sampling. This captures the time and effort expended by the user in searching, downloading, and listening to the illegal copy of the music. If a consumer decides to not to purchase after sampling, this cost becomes a sunk cost. In this light they say that there is a role for sampling in fighting piracy. This is because when cost of sampling is high very few samplers purchase legitimate copies. However, as cost of sampling decreases, sale of legitimate product increases. And as price increases and cost of sampling also remains high, sale of legitimate produce decreases since the consumer turns risk averse as the true intrinsic value offer product is not known to him.

Fear of the music companies that with increase in sharing the consumer will first sample and then switch to piracy appears unfounded because some consumers demand is inelastic even with sharing taking place. In fact, if sharing takes place, then additional consumer demand will be generated due to this sharing. Therefore, revenue will increase as compared to a situation of no sharing. Additionally, highly valued music will be bought in greater numbers with sharing and lower valued music will be pirated with more sharing. They conclude that both more stringent enforcement and more value added services are more effective in curtailing piracy than increasing the cost of sampling. This was seen because high cost of

\textsuperscript{62} Repeat consumption is possible with a single purchase for an extended period of time since there is no physical attrition of the product itself. Also free access would decline for free riders after a length of time in case it is not duplicated and focused in some other medium.
sampling will prevent even the existing customer base from sampling while actually turning away new customers. Their main point is that samplers’ welfare shown by the consumer surplus is considerably enhanced when purchases are made on the basis of informed choices. All this holds true for unknown artists. In the case of superstars, there is a lower need for sampling since low variability in quality is anticipated by the consumer. In fact, direct purchase of music of superstars is likely to be affected by piracy only if the expected value of this music is less than the true intrinsic value. Further, for superstars since the shelf life of their work is longer, the buying is always a strong option. Their claim is that their empirical evaluation provides strong support for the hypotheses that the existing superstar phenomenon in the music business is positively aided by high sampling costs and that this superstar status is threatened by the advent of online music sampling services. Superstars come under increasing threat from two fronts: (a) a greater proportion of sampling of superstar music leads to piracy-users who sample do so with an increased intention to pirate, and (b) decreasing sampling costs lead to an erosion of superstardom.

Peitz and Waelbroeck (2004), relying on market and survey data at the international level as well as expert statements investigated developments in legal and technological protection of digital music. They sought to describe possible new business models in light of the attitude of consumers towards the music download, both legal and illegal and audio trimming. They examined certain potential cases of the decline in CD sales that was taking place around that time. They identified the following five cases.

1. They found that there was an actual increase in the real prices of CDs.

2. In the period 2000-01, they also found that the depressed economic environment contributed towards the decline in sale of CDs.

3. On a preliminary basis they also found the decline in the variety of music available on Radio Stations which reduces sampling stimulators and thus decline in CD sales because of the major merger took place in Radio Broadcasting Industries. In the US the merger was seen to have favoured the super star system which has its own limitations.
4. In the demographic analysis of age of persons buying CDs, they found an interesting pattern that the youths were buying less while the elderly were seen to be buying the more mostly as a replacement of their old vinyl LP records.

5. In a manner similar to the substitution and replacement of cassettes by CDs, CDs themselves were seen to be facing replacement and substitution by music on DVDs, MB3 and other portable devices. The increased penetration of CD writers was also identified by them as a probable cost. Interestingly, they find that consumers had substituted time listening to CDs for playing computer and video games as well as watching DVDs. An enhancement in internet activities, not necessarily down loading of music, but also seems to have changed the attitude towards buying CDs.

They also quote from a study by Bounie, D., Bourreau, M. and P. Woelbreck on ‘Effect of Music Downloads on CD Purchases : Evidence from a survey of French University Students’, where Bounie, et. al. found that most of the respondents in the study did not find any change in their purchase of CDs after having assessed MP 3 version of songs. In fact, 18.5% actually said that they increased their purchases after getting music MP3 and 27.5% stated that they decreased purchases. It was seen that the infrequent buyers of CDs decreased purchases and the frequent buyers increased their purchases. Interestingly, the heavy buyers were the same people who showed stronger sampling behaviour and stronger taste in music. However, this study was never published in any directly accessible format.

Peitz and Waelbroeck (2004) quote PEW Internet Report which showed that only 5% of the musicians interviewed stated that free downloads had a negative impact on their careers.

Zentner (2003) uses individual survey data from October 2001 in large European countries. Preliminary estimation results suggest that music downloads do not significantly reduce the probability to purchase music. However, after controlling for unobserved heterogeneity in music taste, Zentner finds that music downloads reduce the probability to purchase music by 30%. Assuming that people who download music purchase as much as people who do not, Zentner finds that internet
pираски could have decreased CD sales in unit by 7% in the countries considered. This study gives roughly the same aggregate effect as in Peitz-Waelbroeck (2004) for the same period.

Oberholzer and Strumpf (2004) use actual download and sales data. They determine which albums have been downloaded most on file-sharing networks during the last quarter of 2002. Controlling for possible endogeneity issues, they show, contrary to the two previous studies, that the number of times an album has been downloaded does not have a statistically significant effect on sales. They also conclude that “estimates are of moderate economic significance”

Liebowitz (2004) argues that the effect of file-sharing on sales of individual albums is hard to extrapolate at the industry level and questions the validity of the instruments chosen by the authors.

Honigsberg (2001) examined the Napster Revolution. He made a startling discovery that record sale has actually increased before Napster shut down but after its closer record sales actually came down. His contention was that record companies were not absentees to prevent file sharing for fear of losses due to fall in record sales but that they were more afraid of their loss of control over distribution of their music.

In the digital context, software has some interesting features which have also been studied, independently as well as in the context of piracy.

Baseman, et al. (1994) examined the possible monopoly based on Copyright sought to be created by the first movers in the software industry on the standards developed by them and found that such monopoly leads to a distorted pricing that fails to achieve sufficient dissemination of a software and in fact does not allow the positive network factors to flow to other investors in the system.

*Practical issues studied by researchers*

There has been a thread of economic investigation into Copyright which looks at some practical issues. Newer issues in economic analysis of Copyright were being examined.
One of the better cases of a national government examining the economics of Copyrights in the context of impending reforms occurred in Australia. The Office of Regulation Review of the Industry Commission of Australia conducted a detailed review of the law of Copyright as operating in Australia. The review is useful in identifying some of the basic questions that faced a developed economy around time the digital era was just about starting. 63

Brown (1998) states that the digital revolution has dramatically increased the ability of individuals and corporations to appropriate and profit from the cultural knowledge of indigenous peoples, which is largely unprotected by IPR law. In response, legal scholars, anthropologists, and native activists now propose new legal regimes designed to defend indigenous cultures by radically expanding the notion of Copyright. Unfortunately, these proposals are often informed by romantic assumptions that ignore the broader crisis of intellectual property and the already imperilled status of the public domain. This essay offers a sceptical assessment of legal schemes to control cultural appropriation -- in particular, proposals that indigenous peoples should be permitted to Copyright ideas rather than tangible expressions and that such protection should exist in perpetuity. Also examined is the pronounced tendency of intellectual property debates to pre-empt urgently needed reflection on the political viability of special rights regimes in pluralist democracies and on using Copyright law to enforce respect for other cultures.

Anderson et.al. (2000) find that the economic importance of Copyright industries in developed market economies has been well documented. Although less important in developing countries, this is likely to change with the growing weight of the service sector in these economies and its importance for their closer integration into the global market economy. This paper analyses the relationship between the Copyright and income generation in the audio-visual sector, in particular music, and argues that the appropriate Copyright administration is essential in creating the conditions for a viable music industry in developing countries. However, an effective Copyright regime is not, by itself, sufficient to guarantee a flourishing music industry,

63 These questions continue to retain relevance even today in India because of the fact that rapidly increasing penetration of digital technology which are giving rise to the same questions here as well.
and other institutional arrangements will be needed in countries looking to better exploit their musical resources.

Farchy and Rochelandet (2002) found that purely archeological solutions were not well suited to resolving the free riding problems faced in creative industry. Their main contention is that neither are these technical solutions equally accessible to all right holders nor are they strictly limited within the realm of what constitutes the scope of Copyright law. They criticised the Digital Millennium Copyright Act of the United States and European Union Copyright Directives of 2001.

Csorba (2002) examined the special quality differentiation strategies of a software monopolist where the firm provides degraded version of a proprietary software for free marketing and upper end version with high prices. He finds that with this type of software versioning under certain conditions, may result in a definite Pareto-improvement.

Towse and Watt(2005) picked up the issue of how much time exposures are given to artists in various modes of performance.

In a detailed analysis, Towse and Watt examine the time allocation between royalty generating performances (studio recordings) and spot fee for live performances. It is clear that live performances follow from studio recordings of original work and still traditionally spot performances are developed from the success of studio recordings. It can be a matter of examination if the expected returns from display of movies are allocating between theatres, discs and TV and the optimisation of such review would require allocation of time between the three forms of communication as well as determination of time period in between.

Baker and Cunningham (2004) conducted an interesting exercise based upon the U.S Federal Court decisions to measure the impact of changes in the breadth of Copyright on the market valuation of firm equity. The main conclusion of the Copyright Law is broadened by courts and then one of the two alternative results might accrue:
a. That equity market participants may anticipate a larger flow of new and profitable Copyright works due to the traditional incentives provided to authors; or

b. that the equity market may incorporate into prices the additional monopoly return which firms might derive from the existing body of Copyright work.

Baker and Cunningham (2005) measure changes in the breadth of Copyright protection by tabulating outcomes of important court cases and new statutes pertaining to Copyright protection. Applications vary significantly over time and across countries. They find that the flow of applications exhibits a small but significant positive response to court decisions broadening Copyright protection.

They state that Copyright law has significantly changed over the past 30 years. Prior evidence suggests that a stronger Copyright law increases the stock market value of firms in creative industries but there is limited evidence that stronger Copyright law translates into increased output of creative works. They found some empirical support for the notion that court decisions which broaden Copyright increase the flow of creative activity and somewhat weaker evidence that stronger statutes increase innovations. They have also found evidence that creative activity: 1) moves counter-cyclically 2) has a strong seasonal component 3) has weak persistence and 4) may increase as computing technology is adopted. Their main finding was that the strong response of creative activity to the cost of registering new works. Copyright bureaucracies have indirectly encouraged creative innovation by keeping nominal application fees constant for long periods of time. Low Copyright registration fees may be one of the most effective means of encouraging creative innovation. They see a number of potentially fruitful extensions to this research. It seems that stronger Copyright law encourages additional creative activity. They suggest a more detailed theoretical framework which could allow greater insights into the relationship between legal changes, creative innovation, pricing in excess of marginal cost, and stock market valuation.

Scherzinger (2005) finds disturbing impact of consolidation, both horizontal and vertical in the music industry in the U.S. He states such consolidation
is leading to a loss of choice before the consumers. He also finds evidence of Sorkin, Andrew Ross, “Software Bullet is Sought to Kill Musical Piracy,” New York Times, May 4, 2003, A1 reading. Sorkin has found evidence that the world large conglomerate companies in the music industry have started financing the development of software that computer and internet connections of people who download pirated music can be sabotaged. This means that this is not just enforcement by private parties but also imposition of penalty by them for infringement of private rights is highly likely.

Robledo (2005) states that usually any litigation tends to be wasteful. However, he goes on to show that litigation about intellectual property may be welfare enhancing. After an innovation or a piece of work is created, the patent or Copyright may be challenged in court. This litigation contest decreased the expected Copyright rent, therefore, reducing the incentive to be creative in the first place leading to a negative effect on social welfare. Yet the legal contest may have the positive welfare effect of breaking the Copyright monopoly and allowing an entrant into the market, thus lowering prices and reducing the welfare loss of monopoly. If the welfare effect of increasing competition outweighs the first effect of reduced creative effort, a “wasteful” litigation contest is welfare increasing. It turns out that the legal dispute has to effects. In the first place, the contest reduces the potential creation (monopoly) rent of the creative firm, thus deviating further from the socially efficient creation effort level. This reduces social welfare. But the litigation, if the plaintiff prevails, breaks the creator’s monopoly on the new work and allows a new entrant into the market. This lowers prices and increases quantities, thus increasing social welfare. There may be situations where the second, competition increasing effect dominates the effect of reduced creative effort expenditures. A litigation contest where resources are “wasted” in principle may turn out to be welfare enhancing. This effect is counterintuitive to most of the contest literature, where contest effort is usually associated with waste.

Savirimuthu (2007) finds that the decentralised environment of Digital Music requires a substantially different set of revenue generating strategies as compared to that of traditional music market. The two key features of the traditional
business models relate to the strategy for controlling the supply and distribution channels and the critical role played by incentives and licensing system under the law of Copyright. Strategies under the digital environment need to be considerably different simply because it is well nigh impossible to control the supply and distribution channels as it would require a complete overhaul of the licensing and incentive systems in the internet.

Longdin (2007) recognised Market Segmentation as playing an important role in the price discrimination that can be carried out for films in various markets of the world. In fact, she states that one of the important features of the TRIPS Agreement is to ensure the prevention of price arbitrage of goods protected by copyright across International borders. She also recognised that copyright owners have several mechanisms available to them to decide how to charge differential prices for their products and prevent the low value consumers from engaging arbitrage in the same country by re-selling to high value consumers at a higher price. She finds the Copyright owners in direct contractual nexus with the consumers that carryout works at lower prices would be made available only if they agree to know the re-sale or in other mode of supply to anyone else can prevent such arbitrage. Further, the right owners can punish the low value consumers by reducing to provide them low value products in subsequent period if they engage in arbitrage. The third method product she finds can be effective is to restrict resale or re-supply in particular geographical territory or to particular classes of users.

**Enforcement**

The Harvard Law Review (1999) argues that digital technology has challenged the feasibility of criminal Copyright law by undermining many of its conceptual underpinnings, and that Congress’s response to the new technology causes more problems than it solves. By overdeterring private users, increased criminal penalties for Copyright infringement will be inhibit the free flow of information and thus impose costs that outweigh the benefits from discouraging piracy.

Chen and Png (1999) show that the incentive to copy software depends on publishers’ price and monitoring strategy. This paper analyses how a publisher’s strategy depends on the penalty for Copyright violation and the cost of copying. It
shows that changes in price and monitoring have qualitatively different effects on potential users. Both affect users’ choice between copying and buying. Only monitoring reduces the expected benefit of those who copy and affects users’ choice between copying and not using. Hence, society should favour dealing with piracy through price rather than monitoring.

More intensive Copyright enforcement reduces piracy, raises prices, and lowers consumer surplus, found Harbaugh and Khemka (2001). When enforcement is targeted at high-value buyers such as corporate and government users, the Copyright holder has an incentive to charge super-monopoly prices thereby encouraging piracy among low-value buyers. Extending enforcement down the demand curve broadens the Copyright holder’s captive market, leading to lower prices and higher sales that can increase both profits and consumer surplus. The standard trade off between incentives to generate intellectual property and costs of monopoly power is therefore avoided. Private enforcement by Copyright holders may be insufficiently extensive since consumers can also benefit from more extensive enforcement. Similarly, new technologies which lead to stronger control over illicit use can paradoxically benefit consumers.

Broad-based enforcement reduces piracy by directly increasing the cost of buying or using pirated copies, but they find that targeted enforcement can paradoxically increase piracy to relative to no enforcement under the standard Besen and Kirby (1989) assumption that pirated goods are inferior substitutes for legitimate copies. Targeted enforcement gives the Copyright holder to raise prices rather than complete with pirated copies for sales to lower-value buyers. Since lower-value buyers face higher prices for legitimate copies, but do not face higher piracy costs under the targeted policy, they are induced to switch to inferior pirated copies. They further find that enforcement sufficiently concentrated on high-value buyers leads to more piracy than no enforcement. And if pirated copies are valued by consumers proportionately to legitimate copies as assumed by Besen and Kirby, any reasonable enforcement level leads to more piracy than no enforcement.
The trade off between incentives to generate intellectual property investment and the costs of monopoly power has long been recognised as the central issue in intellectual property rights.

Ben-Shahar and Jacob (2001), look at a multi-period equilibrium in which the authors selectively approach her own Copyrights to safeguard her economic interests. By this selective enforcement, the author is seen to be involved in predatory pricing thereby raising barriers to entry. They conclude that according to conventional law and economic analysis, two major economic forces determine the optimal level of Copyright enforcement. One, which supports complete enforcement, is designed to motivate creators ex post by assuring a maximum return for their efforts. The other, which supports on enforcement, is aimed at both providing the work with as many consumers as possible and facilitating the creation process ex ante by allowing a creator to rely on works created by others.

Completing the ex post argument, they claimed in this article that a creator may use the violation of his or her Copyrights as a mechanism to effectively induce a price break in a sub-set of the market, which, given sufficiently high entry costs, deters competitors from entering the market. Thereby, the creator may, in fact, maximise long-term profits by promoting an optimal level of Copyright infringement.

Chen and Png (2003) model two kinds of consumers: the first one never copies (i.e. has an infinite copying cost) and the second one has finite copying costs. Within each group, consumers are heterogeneous in their valuations for the good although originals and copies are identical. The expected utility from illegal copying depends on the probability of detection.

(i) High-value and low-value consumers (those who are willing to pay a high premium for the original and those who are essentially not willing to pay for original); for the high-value case, a targeted Copyright policy is possible Broad-based versus targeted Copyright enforcement.

(ii) A broad based enforcement policy affects all consumers in the same way, whereas a targeted enforcement policy concentrates on a certain kind of
consumer, typically high-value consumers or those more predisposed to piracy.

Boyer (2004) examined efficiency gained supposingly coming the way higher protection for Copyright work might be illusory. He suggests that the best protection for Copyright work may come about from stronger Copyright laws. He feels it may generate more activities in the market for such work by reducing transactions cost and will make these works better available.

Maffioletti and Ramello (2004) attempted to get new insights on consumers by paying special attention to their willingness to pay and to purchasing behaviour even as they tried to find out whether strong legal against consumers by right owners actually lowered Copyright infringement and raised Copyright demand. Their conclusion was that while strong enforcement reduced the rate of copying because of higher risks of getting caught and punished. There was no evidence that legal sales would increase since the willingness to pay was generally lower than the market price for legitimate products. Their conclusion is that increased Copyright enforcement only leads to demand withholding.

Moohr (2005) viewed the cost–benefit analysis to examine whether the law of Copyrights was overcriminalising the offences related to Copyright infringement. This, she does because any criminal legislation also imposes substantial cost on the society in terms of its requirement for enforcement and related legal activities. If any infringement is overcriminalised, then the cost of ensuring pursuit of law may be more than the benefits if the nature of the infringement did not impose major cost on the society.

Banerjee (2006) found that entry deterrence attitude of the incumbent monopolist will work only in conditions of government sensitivity to piracy. Entrant such sensitivity, the incumbent monopolist may be better off accommodating piracy.

Sawicki (2006) finds the problem of online Copyright infringement complex and Digital Millennium Copyright Act is inadequate to address it in its entirety. He suggests that there is a need for extra statutory cooperation between internet service providers and authors–rightholders.
Waterman et.al (2007) viewed the strategy adopted by Movie distributors to cope with piracy copying and sharing of movies in the U.S. under conditions of commercial piracy, theft of TV signals and file sharing. They viewed that most of the effort was focused on increasing the cost of engaging in these activities by increased legal action effective PPM and reducing original sources of supply. While, these seem to have worked in non-digital context, the costs of such strategies are likely to be much higher and, therefore, the impact is more uncertain.

Trade and Copyright

As noted by Posner (2002) that IP is one the largest exports of the United States (and indeed of the entire developed world), it is but natural that trade in Copyright works would also be a matter of economic analysis.

Samuelson (1999) says many national IPR laws contain provisions that reflect cultural values and have trade significance. Although cultural value defences have generally been rejected by GATT and WTO panels, they may be more likely to succeed in IP disputes because many culturally-laden rules are widely accepted in the international IP arena. Moreover, intellectual products are less completely commodified than other products. Cultural economists can provide valuable insights to aid WTO in distinguishing between those culturally-laden IP rules than should be or should not be permitted when they have an impact on trade.

Wang (2003) makes a few startling points:

1. 65% of Hollywood Revenues are generated from International Box Office sales.

2. Copyright becomes “the main form of capital” since the major share of the profits from the Copyright industries comes from the copying and selling of Copyright.

Issues of piracy and Copyright protection have always been closely connected to technology. The origin of literary property rights, in the sixteenth century, was tied
to the development of the printing press. But just as the development of technology is instrumental in establishing capitalist market expansion, technology can also seriously undermine and challenge the critical need to command space and control time when used by pirates. Power, in this mode of late capitalist expansion, thus lies in the capacity to overcome constraints of both time and space. That digital technologies have the capability to erase space and reward speed has significant implications for issues of control and power. Wang quotes a study of Ronald V. Bettig 1996 study of Copyright and the political economy of IP, where he listed some of the factors contributing to video piracy in Asia and the Middle East as lack of IP laws and weak enforcement of existing laws; minimal participation in bilateral and multilateral international IP agreements; a proliferation of recording technologies; underdeveloped local production industries; and public demand for content resulting from screen quotas, state-controlled broadcasting, or censorship.

She states that when information is stored digitally, content is liberated from the medium and all that flows (or floats) to the recipient is the information. The costs of reproduction accordingly decreased and the volume and speed increase, while quality remains unchanged with each generation of duplication. Optical disc and online piracy have become major threats to the film, music and software industries precisely because of the low cost, high speed and extraordinary quality of the copies and the ease of distribution. Furthermore, as the potential for digital production and online delivery and distribution has increased, the need for intermediaries (e.g., distributors, publishers, etc.) has decreased, creating the possibility of “disintermediation” whereby creators (and pirates) and consumers are able to connect more directly. Digital information and technologies as well as computer networking logic are revolutionizing and radically transforming the economics and character of information production, distribution and reception/consumption.

She mentions the DMCA and its two anti-circumvention regulations: (1) an access-control provision, which outlaws circumventing technical protection measures used by rights holders to control access, thereby making it illegal to break an encryption and (2) anti-device provisions, which outlaw devices designed to circumvent technical protection measures. In this way, the DMCA indirectly
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encourages the entertainment industries to use encryption to protect their products while criminalizing efforts to break codes and to possess tools designed for that purpose.

Another point made by her is that global audiences (and indeed local audiences) are less willing to wait for theoretical releases. The speed of digital technology makes the global pirate show greater efficiency than the legitimate channels of movie distribution. Thus, she posits that there is a need for transnational Copyright regimes to control piracy at a global level. She also identifies two opposing models on information flows:

a. Based on developments such as the new World Information and Communication (NWICO) along with the UNESCO and WIPO.

b. Based on trade such as TRIPS at the WTO, IMF and the World Bank. In reality the NWICO was defeated when the U.S. withdrew from the UNESCO and thus, the trade dimension seems to have become the dominant model for governance of Global IP issues.

Instead of defining the changes in international Copyright governance solely in terms of competition for dominance between the development and the trade models, it might be more fruitful to treat such a crucial shift as a move toward the convergence and integration of functionalism and linkage-bargain models. The WIPO, being a function-specific U.N. agency, is the “law creation mill,” while the WTO, as a linkage bargain trade regime, fixes the breakdowns.” Further, because the making of international IP laws is viewed as both function-specific and linkage-bargain diplomacy, it makes sense for policy makers to use both the WIPO and the WTO forums.

As Copyright industries increasingly become the leading economic sectors in the West, more and more IPRs would be being traded. What ensures the proper functioning of the global information economy, then, is Copyright protection. Consequently, piracy becomes a major, if not the major, threat to the Copyright industries.
Finally, the increasing emphasis on Copyright protection also points to the
pivotal role digital technologies play in global trade. The rapidly changing
spatiotemporal dynamics and configurations afforded by these new technologies have
radically changed the nature of “property” and market, the balance of power, and the
relations and means of production, distribution and reception/consumption.

McCalman (2004) sees that while Hollywood studios are likely to service
a foreign market through an affiliate if the standards are either low or high, they are
more likely to enter into a licensing agreement if a country offers a moderate degree
of IPR protection. This pattern characterizes Hollywood’s behaviour in both feature
film distribution and video distribution markets. Further, support is added to these
results as a number of ancillary predictions of the theory relating to market size and
potential threat from pirates also find strong support in the data.

An important general point to emerge from a comparative analysis of the
feature film and video markets was that even though these markets are characterised
by a similar general behaviour, there are marked differences between these markets in
how responsive studios are to changes in IPR. Thus, even within industries, the
responsiveness of firm behaviour to IPR is likely to be critically dependent on both
the nature of the product and the degree of completion it encounters. These results
argue against any simple prediction about the implications of IPR reform for FDI,
suggesting instead that the nature and magnitude of the impact of IPR reform will
depend not only on the characteristics of an industry but also on the initial standard of
IPR.

*International dimensions in Copyright issues*

There are other international dimensions to Copyright which fall in the
realm of realpolitik.

In his early comments on the TRIPS negotiations, Reichman (1998) states
that the progress in the negotiations on Intellectual Property Rights under the TRIPS
Agreement was initially dependent on the minimum standards that the United States
was adhering to. He states the specific case of how the new rental rights introduced by
the TRIPS Agreement for computer programs and cinematograph films were not
absolute in the case of films. The specific exemptions were allowed to Members who could show that such rental activities did not lead to widespread copying was presumably to address the concerns of the United States.

He pre-empted the resistance that was visible in the US China Dispute (DS-362) on Copyright issues when he stated that the delicate phase of the Cross Border Enforcement of Rights is likely to begin when rightholders start pressuring the Government to raise disputes on extra territorial violation of Intellectual Property Rights.

He also recognised that the process of integrating IP Laws in International Economic Law making would necessarily impose social costs on developing countries. Interestingly, he also stated “meanwhile, the developed countries are unlikely to relax their efforts to elevate international minimum standards of intellectual property protection even after the TRIPs Agreement takes effect. In particular, they will press the developing countries with regard to scope of protection issues not expressly covered in the TRIPs Agreement, under the theory that both non-violatory state actions and changing circumstances can nullify and impair benefits otherwise conferred. Moreover, higher international minimum standards that developed countries espouse in the course of harmonization exercises in other fora will add to the pressure on developing countries, on the grounds that emerging new standards make it necessary further to reduce trade distorting intellectual property practices.” He recognised that developed countries would be required to give more market access based concessions in lieu of higher standards of protection by developing countries.

Neigel (2000) found that the United States pursues Copyright abuses in China more aggressively than in Russia. Since 1996 no special 301 reference had been made against China until 2000 probably because of fear of Chinese retaliation.64 She further observed that:

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64 However, Copyright dispute case at the WTO was brought by the U.S. which resulted in China needing to carry out and make legislative changes and upgrade its enforcement mechanism. Refer Annex 2.1
1. China is a more significant trading partner than Russia, as though Russia appears on the Watch List and China does not, the U.S. remains bilaterally and multilaterally more aggressive towards China;

2. The negative human rights image of China in the U.S. seems to be reinforced by instances of Copyright violation;

3. U.S. appears to want good relations with Russia for seeking disarmament and permitting it as a counter point to China.

4. Chinese Pirates target not only the domestic consumers and the foreign consumers also whereas Russia by and large seeks to address domestic demands for pirated goods only. Hence, U.S. faces competition in their country markets from pirated Chinese goods.

Correa (2000) found unilateral action not missing even under the TRIPS Agreement. He cites the case of how Argentina was forced to amend its patent law and introduce the law on confidential information even before the transition period of five years under the TRIPS Agreement was over. Further, despite these changes United States carried out a partial withdrawal of benefits of Argentina under the generalised system of preferences as a sanction based on Argentine failure to protect IPRs in accordance with the international standards. He cites the justification in the submission of President Clinton to the U.S. Congress which states “if Members of the Dispute Settlement Understanding (DSU) do not comply with their obligations at the end of the dispute settlement process, trade action under section 301 of the Trade Act of 1984 will be legitimized and there will be no risk of counter-retaliation.” Thus, unilateral action could not be ruled out even after coming into existence of the TRIPS Agreement.

Barcovits (1998) found the absence of consensus on exhaustion of rights intriguing. He attributes this lack of regulations to the imbalance in the TRIPS Agreement in the interests of developed countries and those of developing countries.

Brennan (2002) finds fault with the use of the 3 step test as the sole criterion for establishing acceptable free use under the TRIPS Agreement. He states that the use of the three step test for dispute adjudication under the TRIPS Agreement
is fraught with risks of overestimating the power of the test since it can be manipulated on economic considerations of not affecting the 'normal exploitation' or the 'legitimate interests' to establish free of charge exceptions.

Muñoz Tellez (2009) finds the current agenda on IP enforcement reminiscent of the agenda on IP itself of 1970s and 80s which resulted in the TRIPS Agreement. She finds traces of a coordinated approach towards actualisation of this agenda in the forum-shifting takes place not only between the WIPO and the WTO but also the WCO, Interpol, Universal Postal Union, WHO as well as unilateral and plurilateral processes of Special 301 and the ACTA. One of the reasons for this enhanced focus on enforcement cited by her is that developing countries have become better organised against upward harmonisation of international IP laws which has led to hardening of stance by developed countries on the effectiveness of enforcement of existing laws by negotiating higher enforcement standards.

Li (2009) identifies ten common misconceptions that are routinely used to make a case for higher enforcement standards. His scheme is as follows:

<table>
<thead>
<tr>
<th>Misconceptions</th>
<th>Characteristics</th>
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<tbody>
<tr>
<td>1. Counterfeiting and piracy includes patent infringement</td>
<td>Definition</td>
</tr>
<tr>
<td>2. Counterfeit medicines equates IP infringed medicine</td>
<td>Definition</td>
</tr>
<tr>
<td>3. IP infringement poses health threat</td>
<td>Effect</td>
</tr>
<tr>
<td>4. Magnitude of IP infringement is enormous</td>
<td>Methodology</td>
</tr>
<tr>
<td>5. Government should take primary responsibility of enforcement</td>
<td>Responsibility</td>
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<tr>
<td>6. Government should bear the cost of IP enforcement</td>
<td>Responsibility</td>
</tr>
<tr>
<td>7. WTO Members are obliged to provide border procedures for all types of transactions and all forms of IPRs</td>
<td>Responsibility</td>
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<tr>
<td>8. WTO Members are bound to provide judicial systems for IPR</td>
<td>Responsibility</td>
</tr>
<tr>
<td>9. Criminal procedures are obligatory to be established for IP-infringing products</td>
<td>Responsibility</td>
</tr>
<tr>
<td>10. Customs administrations have the authority to determine IP infringement</td>
<td>Authority</td>
</tr>
</tbody>
</table>
Li’s assertion is necessary in the context of the constant effort of some of the developed countries to work towards protecting their IP interests in the garb of the acceptable and reasonable level of enforcement of IPRs that should be the international norm. Li and Correa (2009) detect three basic characteristics of the current enforcement agenda; viz. extending the definition of counterfeiting to all forms of IP infringement, forum shifting even to non-IP organisations such as the WHO and the UPU, and shifting the burden of enforcement on to the state and defendants from the rightowners. They identify three challenges before the developing countries: maintaining an effective IP enforcement regime even with scarce resources, balancing the interests of the rightowner and the general public, and prevent abuse of the IPRs by misuse of the enforcement regime by rightowners.

65 Each of the misconceptions is explained below:

1. Counterfeiting relates to trademarks infringement and piracy to copyrights
2. Counterfeit medicines are those which claim to originate from a given enterprise when they may not. They may or may not have the correct composition of the medicine. In the latter case they are spurious as well.
3. Trademark infringement alone does not constitute health threat.
4. Methodology used by rightowners is neither transparent nor theoretically rigorous
5. IPRs are private rights whose first and foremost enforcement takes place when the rightowner seeks to assert her right. Even in the TRIPS Agreement under Article 41, the onus placed on the national Governments is to provide for adequate laws to allow for effective IP enforcement.
6. The main beneficiary of IP enforcement is the rightowner. Once the laws are adequately framed then the Government’s responsibility rests on providing for a reasonably police and judicial structure which would be in general agreement with the overall standards in the prevailing enforcement regime in the country.
7. There is as yet no consensus in the WCO on this issue.
8. This is not included in any multilateral instrument or process
9. Under Article 61 of the TRIPS Agreement, this is obligatory for trademark counterfeiting and copyright piracy
10. Ex-officio action by Customs is severely circumscribed by the need to reach a court for confirmatory orders. However, the working of the EC Directive 1383/2003 was seen to have severely impeded the business of Indian generic drug manufacturers who lost on business owing to the delays the customs and related procedures caused in the supply of drugs to the destination countries

66 An oft-cited complaint made in India is the threat of criminal action by the copyright society of sound recording companies, M/s Public Performances Limited (PPL) against concerts by relatively new and upcoming western music bands even though the PPL does not have any authorization to collect royalties on behalf of the foreign rightowners.
Blakeney (2009) finds no problem with the need to go TRIPS plus in bilateral and plurilateral agreements for the obvious reason that if TRIPS was to be the standard then would have been need to replicate its standards on border measures in new instruments. He finds the justification for new instruments stemming from the cumbersome nature of the TRIPS Council and other WTO processes which prevent smooth acceptance of newer realities on counterfeiting and piracy.

Miscellaneous literature

Certain interesting vignettes emerge from research that provide insight into some of the perplexing mysteries of the world such as the use of the word pirate for the infringer of rights of reproduction and distribution in a Copyright work.

Loughlan (2006) looks into how the term pirate though popular, may be an overkill. Although the term ‘pirate’ certainly conjures up connotations of utter lawlessness, it should be noted that in fact the use of the term in intellectual property discourse is not limited to instances of unlawful copying by the pirate. While the trope would still arguably be excessive in relation to the act to which it refers, if that act were restricted to illegal copying, it could at least be defended as an image of lawlessness designed to point to an act of lawlessness. But the work ‘pirate’ is in fact used much more widely than that in standard intellectual property discourse and it extends to instances where despite the actions of the ‘pirate’ not being against the law, it is contrary to what the writer thinks ought to be the law, or contrary to the writer’s view of what the ‘natural rights’ of the intellectual property owner in question are.

Guibault (2003) conducted a detailed study on the mode of Limitations and Exceptions in Copyright Law in the context of transmission of knowledge. Heard conclusions at that stage were that the directions of the Copyright law towards the protection in digital environment was generally created. However, she proposed that owning to rapid changes in technology that were taking place, it would be appropriate to build in revision mechanism in the law at frequent intervals.

It is admitted that the literature on the subject is much more exhaustive than what has been listed above. However, some of the most representative literature
was culled out from the large body available that would be of help in understanding the contours of this research.

It is also to be readily appreciated that while in India we are still grappling with piracy of the physical medium of entertainment goods, many countries have already found this issue passé and have been directing their research into the area of Net-based piracy and efforts to find better models of appropriability than just DRMs.
Annex 2.1

There was a landmark case brought to the WTO Dispute Settlement Body by the United States against China. The following brief note leads directly to the conclusion that Copyright is not as mundane as it would appear owing to its subject matter.

China – Measures Affecting the Protection and Enforcement of Intellectual Property Rights

The Measures at issue in this dispute were as follows:

1. Thresholds for criminal procedures and penalties.
2. Disposal of goods confiscated by customs authorities that infringe intellectual property rights.
3. Denial of Copyright and related rights protection and enforcement to works that have not been authorized for publication or distribution within China.

The United States claimed that China acted inconsistently with its obligations under the TRIPS Agreement by denying the protection of its Copyright Law to creative works of authorship (and, to the extent Article 4 of the Copyright Law applies to them, sound recordings and performances) that have not been authorized for, or are otherwise prohibited from, publication or distribution within China. The Dispute Panel accepted the complaint on the first point but mostly rejected the other two. The Panel Report is interesting because it suggested an unexpected degree of the flexibility in the WTO Member’s compliance with the TRIPS Agreement. It may also have blurred both the traditional distinction between “as such” and “as applied” claims and the line separating TRIPS violations from non-violations.

The Dispute panel concluded that the Copyright Law, specifically the first sentence of Article 4, is inconsistent with China’s obligations under Article 5(1) of the Berne Convention (1971), as incorporated by Article 9.1 of the TRIPS Agreement; and Article 41.1 of the TRIPS Agreement.

With respect to the Customs measures, the panel determined that Article 59 of the TRIPS Agreement is not applicable to these measures insofar as they apply to goods
destined for exportation and that the United States has not established that these measures are inconsistent with Article 59 of the TRIPS Agreement, as it incorporates the principles set out in the first sentence of Article 46 of the TRIPS Agreement. The panel also determined that the Customs measures are inconsistent with Article 59 of the TRIPS Agreement, as it incorporates the principle set out in the fourth sentence of Article 46 of the TRIPS Agreement and that the United States has not established that the criminal thresholds are inconsistent with China's obligations under the first sentence of Article 61 of the TRIPS Agreement.

The panel exercised judicial economy with respect to the claim under Article 5(2) of the Berne Convention (1971), as incorporated by Article 9.1 of the TRIPS Agreement, the claims under Article 61 of the TRIPS Agreement (with respect to the Copyright Law) and the claims under Article 41.1 of the TRIPS Agreement and under the second sentence of Article 61 of the TRIPS Agreement (with respect to the criminal thresholds).

The panel concluded that, to the extent that the Copyright Law and the Customs measures as such are inconsistent with the TRIPS Agreement, they nullify or impair benefits accruing to the United States under that Agreement, and recommended that China bring the Copyright Law and the Customs measures into conformity with its obligations under the TRIPS Agreement.

China informed the DSB that it intended to implement the DSB recommendations and rulings for which it sought a reasonable period of time to do so. Both the parties subsequently informed the DSB that they had agreed that the reasonable period of time for China to implement the DSB recommendations and rulings shall be 12 months from the adoption of the report. Accordingly, the reasonable period of time expired on 20 March 2010.

China had completed all necessary domestic legislative procedures for implementing the DSB recommendations and rulings. China and the United States notified the DSB of Agreed Procedures under Articles 21 and 22 of the DSU.