Reconceptualising Copyright Law for the Creative Economy through the Lens of Evolutionary Economics

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I. Introduction: Can we do better?

Modern innovation theory posits the notion of “information flow” as a key ingredient of innovation. In turn copyright law is a key determinant of “information flow”. While copyright law is meant to incentivise creativity in order to promote the dissemination or flow of information - in recent years - copyright law has acted to inhibit information flow. In this chapter we argue that copyright law needs to be recast in a way that promotes information flow.

The birth of modern copyright law is normally traced back to the Statute of Anne 1709 (UK), a law informed by notions of crown patronage, vested interest, censorship and monopoly business practices. Control of knowledge flow is a central theme in its creation and implementation. It is little wonder that such a law and its progeny are challenged by the social and economic context of the 21st century wherein participative web applications,¹ read/write culture², social network markets,³ and the democratisation of creativity and user-led innovation⁴ rise to the fore. If we are to

harness to the affordances of our age copyright law must do better at understanding and facilitating the flow of information.

As a starting point for our discussion we commence this chapter by introducing the notion of knowledge growth and economic evolution articulated by evolutionary economists. Building on and linked to the work of Joseph Schumpeter, regarded by many as the author of modern innovation theory, evolutionary economists highlight the critical link between wealth creation and knowledge growth. For evolutionary economists, the nature and causes of the wealth of nations “lie not in social governance, nor in national or even private resources, but in the human mind’s ability to originate, adopt and retain generic rules”.

II. Evolutionary Economics

A. Overview

Evolutionary economics is in sharp contrast to classical or neoclassical economic reasoning which begins with the presumption of scarcity of economic resources and rationality of economic agents. Evolutionary economics, inspired by evolutionary biology, focuses on the processes that transform the economy from within and their implications for many issues such as firms and institutions, production, competition, science and technical advance, and human nature.


B. The Principle of Knowledge Growth

From an evolutionary perspective, knowledge growth is a meso trajectory and a population process by which new ideas are originated in the minds of individuals and then actualized into a carrier population. In other words, the growth of knowledge originates from the invention of novel ideas generated in individual human minds; however it eventually results from the use and reuse of the novelties by a population of people.

In the micro-meso-macro analytical framework, evolutionary economics “endeavours to explain how macroeconomic systems evolve through generic change, that is, via the re-coordination of meso rules in consequence of micro generic choice.” Knowledge defined by evolutionary economists is composed of generic rules and ideas that organize actions or resources into operations. Accordingly, the growth of knowledge (and thus the evolution of economy) is a recurrent “three-phase meso trajectory” that is “the process of a novel rule becoming actualized into a carrier population”. It is also a process of “the origination of a rule as a discovery (invention), its adoption into a population of carriers as evolutionary dynamic, and its retention by that population as an (evolved) institution”.

The meso trajectory of knowledge growth is “composed of a series of ‘micro trajectories’ that represent the process by which the novel rule is originated, adopted and retained into each individual carrier composing the population”. The micro trajectories involve tremendous amounts of individual inventors and carriers, who compose the general reading public. The reading public today, of course, are not only reading, but listening and watching through multimedia empowered by the ICTs. In evolutionary economics, the generic micro analysis is the study of how generic rules

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15 Ibid, 12.

16 Ibid, 12.


18 Ibid, 12.

19 Ibid.
are carried by economic agents (individuals) and agencies (organizations and firms), and the process by which a novel rule is originated, adopted and retained by such carriers. It is “a process of imagination, planning and experimental endeavour, for example, or of learning, habituation and other individual behaviours, including of course rationality”.

In both the micro and meso sense, the invention of novel ideas and knowledge is merely a segment of the entire dynamic process of growth. In the whole trajectory of knowledge growth and economic evolution, the value of invention can only be achieved after the accomplishment of the process of adoption and retention. In other words, the significance of knowledge is not only about the invention itself; but more importantly about the use and reuse of the invented knowledge. Accordingly, the growth of knowledge can only come from the adoption and retention of a novel idea into a population of individual carriers, instead of being from the invention of the idea alone.

To make the adoption and retention possible, the invented knowledge must be communicated among economic agents (carriers of rules and knowledge), and for the purpose of communication it must first of all be encoded as information by an agent and then decoded into knowledge by other agents. In most cases, it is a process of production, distribution and then interpretation of expressive works.

Evolutionary economics highlights the importance of sharing ideas to knowledge growth and the opening up of new endeavours and markets. The free flow of information and knowledge is essential because communication of novelties among individual agents is a prerequisite to the trajectory of knowledge growth. To make the dynamic process of knowledge growth possible, the invented novelty must be communicated among the economic agents and agencies. The creative works are the most dominant medium into which the novelty is fixed and by which the knowledge can be disseminated and communicated. These works play a critical part in the trajectory of the growth of knowledge, enabling novel ideas to be diluted and actualized into a population of agents and agencies. If we could posit a copyright law that promoted and facilitated access to and sharing of knowledge as well as incentivised creativity then we would be heading in the right direction. The

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20 Ibid, 27-44.
21 Ibid, 27.
traditional paradigm of controlling access to and reuse of creativity stands in the way. What we aim to do is highlight some key examples of how copyright control is thwarting the opportunity to share ideas and grow knowledge in the digital landscape of today and then propose some solutions for the future.

III. Recent Controversies

There are many instances over the last ten years where established industries have attempted to use copyright law in order to limit the impact of new digital technologies on existing business models. These campaigns are of concern because in most cases they are aimed at reducing the capacity of the (Internet based) “network” which has been built over the last ten years.22 This network represents a truly unique and monumental change in social interaction. Never before have we seen communication on this scale and with such informality; millions of people forming an instantaneous and worldwide network for sharing knowledge. This is the very engine of creativity that an innovation system would crave yet established industries are quick to try and limit its significance. To use copyright law and copyright ownership as a means for convincing courts to judicially modify the architecture of the network is dangerous. Yet this kind of “copyright overreach” remains a real possibility the longer we perpetuate the myth that a copyright law based on controlled distribution can work in harmony with a network model that is driven by access and use.

The actions of established industries in trying to neutralise new and disruptive technologies is to some degree expected. As Joseph Schumpeter suggests this is the natural course towards the evolution of new opportunities and markets; it is the very substance of a capitalist economy. He explains: “But in capitalist reality, .....it is not the kind of competition which counts but the competition from the new commodity, the new technology, the new source of supply, the new type of organisation … competition which commands a decisive cost or quality advantage and which strikes not at the margins of the profits and the outputs of the existing firms but at their foundations and their very lives”.23

This is also very much the history of copyright over the last 100 years. The move to each new publishing or communication technology or format has met with resistance by the established industry. The battles between publishers and recording companies,

recording companies and broadcasters and cable companies make up the story of 20th century copyright law. Now at the dawn of the 21st century we see this battle again. Established industries firstly software but now film and recording industries seeking to control the emergence of internet based technologies and services. Key distributors have long seen the value in tying copyright to their distribution models. The publishing, recording and film industries have traditionally controlled reproduction and communication (= distribution) through their copyright in the underlying product.24

New internet based technologies and the vast network of the Internet have challenged established industries and most particularly their approach to distribution and reuse of their material. The response of established industries has been to engage in copyright litigation however the tide of social practice suggests that litigation (whether successful or not) will have little real impact on user behaviour.

Starting with A & M Records Inc v Napster Inc 239 F. 3d 1004 (9th Cir. 2000) (Napster) through to Universal Music Australia Pty Ltd v Sharman License Holdings Ltd (2005) 65 IPR 289; [2005] FCA 1242 (Kazaa) and MGM Studios Inc v Grokster Ltd 545 US 913 (2005) (Grokster) we have seen the recording industry successfully pursue intermediaries that developed and/or distributed P2P file sharing technology or software. The defendants in these cases for the large part were not knowingly or intentionally reproducing or communicating unauthorised copies of songs but rather providing the facilities and services for others to do so. However under copyright law you can infringe copyright not only by actually “doing” the infringing act (primary liability) but also by authorising, inducing or assisting another person to do an infringing act (authorisation or secondary liability). In the US secondary liability is spoken of in terms of contributory, inducement or vicarious liability. In a user generated distributed Web 2.0 world the notion of intermediaries assisting end user infringement seems a little far fetched.25 The whole idea of this network model is to allow the end user to drive the system. The value of this network is in its “flow”; its decentralised and distributed nature that allows all kinds of technologies to be connected.

The frightening aspect of the P2P litigation has been the ease with which the recording industry has got its way and the inability of the judges (with the exception of Justice Stephen Breyer in the US Supreme Court in *Grokster* 545 US 913 at 949-966 (2005)) to see the big picture. If the law is to sponsor creativity in the vast networks of the Internet we need to see a much more sensible approach. There is no better example of this than in the multi billion dollar law suit Viacom (representing the interests of Hollywood) has taken against YouTube (owned by Google) for alleged copyright infringement. Google Inc who has suggested that this litigation will determine the future of the Internet, is the leader of a new breed of what we might term “access corporations” that profit from greater access to knowledge – the more access there is the more money they make. YouTube is a classic example of this being built around freely accessible short user generated videos that are situated in a giant advertising scheme that earns Google enormous amounts of revenue. Should Google through YouTube be able to provide these services regardless of the fact that the user generators are appropriating material from Hollywood? This is a difficult dilemma for the law to resolve. However if as practice shows that we are moving from a control mode of distribution to an access model how much value can the law add by constantly denying this shift in the way we live and act.

How might we solve this dilemma? On the one hand we have a tremendous new network or technology driven by people all over the world that can provide wide ranging and economically efficient distribution. On the other hand we have established industry saying we do not want to play in this new space unless we have control. We will sue whoever we have to in order to keep the status quo regardless of the damage that may cause to the purity and operation of the network. One answer appears to be that we should decouple production (and copyright ownership) from the right of people to distribute copyright products. In other words we should let copyright products (on publication) flow unhindered in the network in a way that promotes information flow but also provides revenue streams for creators and those that invest in the production of copyright material. We should not only incentivise

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creativity but we should also incentivise competition in distribution in order to open up new opportunities that networked technology can provide. Is this idea possible? Is it too radical?

IV. Reforming Copyright Law for the Network

If we rose above the current landscape of vested interest and imagined a digital utopia then the notion of decoupling production and distribution would seem sensible. It would allow the creator to reach the broadest possible online audience through the fact that anyone can distribute anything. Yet such an approach would require a revenue model for both the creator and the entity that invests in the creative product that is more appealing than what they have now. In a digital utopia we could imagine technologies that would produce a way of identifying revenue streams and returning money to the relevant parties. Privacy might become an issue but let us assume we can deal with that appropriately. This all sounds doable but a little unrealistic at least in this point in time.

What then if we revert to the here and now and the subject matter of the online distribution of music. Today it is suggested that 80%-90% of the peer to peer file sharing market is beyond the reach of the recording industry.28 If someone is making money directly from the “darknet” then it certainly is not the recording industry, although they may be gaining rewards from associated services or products. Apple’s iTunes is held out as the leader of the authorised mp3 market yet it is supposedly tapping into only 2% of the market. Hence the area of online music creates a space where people should be incentivised to explore new distribution models.

What if we suggested that in relation to the online distribution of music copyright law should decouple production and distribution rights. To some extent in the past it has attempted to do this through compulsory licensing. For nearly 100 years copyright law has permitted the recording of a musical work (the “mechanical right”) and for over 40 years the broadcasting of sound recordings under compulsory licence subject to the payment of a prescribed fee. They are supplemented by a range of voluntary “blanket” licences negotiated and managed by collecting societies. But all of these licenses have not solved the issues raised by the Internet environment nor are they necessarily the perfect instrument of the future. If we simply said that anyone could

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distribute recorded music (e.g. mp3 files) online that would legitimise the P2P market and allow information to flow for a range of lawful purposes. However it would not necessarily create revenue streams for the creator and investor in the creative product. Copyright law would need to delineate on what basis revenue should flow to the relevant parties (more like a compulsory licence)\(^{29}\) or somehow incentivise parties to engage in a market based and collaborative benefit sharing of profits.

One direction to consider would be to set in place a structure where access intermediaries are allowed to access and distribute music online on the basis of revenue sharing. These access intermediaries would provide music online in a way that suited their business model but one would suspect that their base business model would be free distribution with revenue generated from associated services. The trick here would be to incentivise the parties to join together in a “communication strategy” for the digital age. The collaborative effort should reap rewards for each party and provide the consumer and society with an information flow that matches the capacity of the technology. Here the law and technology would flow in the same direction.

Incentivising the “communication strategy” might seem difficult but we have some tools that might be employed. We could set up a compulsory licence as the default mechanism yet this might create a disincentive for the access intermediary to seek a market based (rather than statutorily imposed) solution. Therefore the statutory licence would need to have limitations embedded in it. To incentivise the copyright owner we might remove or water down the right to control distribution online. The lure of monetizing the “darknet” should also act as a strong incentive to do a deal.

The only other way we could conceive of moving the recording industry into the digital age would be to impose obligations for the negative externalities it produces in trying to “hinder” the network. A clear analogy exists in real property law. One hundred years ago real property or land owners had the right to use their property as they wished. The rise of environmental law over the last 60 years has seen this sovereign right of the landowner subjected to a series of obligations to ensure land use does not pollute the existing environment to the detriment of the general public.

Large entertainment companies holding intellectual property (particularly copyright) have steadfastly refused to promote new modes of exchange. They have asserted their sovereign right to exercise their property rights in any way they wish regardless of negative externalities. However the information environment like the natural environment is an ecosystem. As the argument would go, by trying to stifle the emergence of new communication structures established industries have polluted the stream of the information ecosystem. Although we need to capture the sentiment of this argument its immediate acceptance (in its crudest form) is unlikely to happen in the near future.

While we might like to see the implementation of our vision for a digital utopia in which all content can be distributed online by anyone so long as it is adequately monetized we are realistic in suggesting that copyright law could at least incentivise a new approach to distribution in the case of online music. Films may also be able to be included yet this raises the issue with any or all of the content in question whether a period of exclusive distribution should be included. Books are another possibility and now that Google has digitised over 10 million books in its Google Book project perhaps we should be turning to them to support this new model of non exclusive distribution in the area of “digitised in copyright but out of print” books.

To reiterate, an access intermediary would implement a revenue sharing model with the content owner supported by a copyright law that provides freedom to access and distribute the creative product. However the access intermediary would need to meet certain requirements to be eligible to be an “authorised access provider” including some security for revenue streams. The model would need to be careful in not excluding small, leading edge and diverse actors. This would be difficult but not impossible to address. We imagine content producers/aggregators would arise such as the existing recording and publishing industries and new content producers/aggregators such as Google Books.

As we wrote this book chapter our attention was drawn to a new approach to online music that was emerging in China known as Google Music China. This project achieves through a privately negotiated agreement the reform we anticipate here. Our suggestion would be that this example will provide a firm basis on which to argue for

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copyright reform in this area. It shows us a working model in one of the most
dynamic and populous markets in the world. The Google Music China project is
based on a system of access intermediaries and has strengthened our belief that such a
model could work on a global scale. As outlined below it shows what we have known
all along. There are real benefits for content owners joining with the specialists in
online distribution to provide new products and meet the growing demands of
consumers.

V. Google Music China

In March 2009, Google along with its partner, the Whale Music Network
(www.top100.cn), launched an online music search service at www.music.google.cn,
providing free access to licensed music for users in China. It is an advertising
supported service allowing users to search, stream and download high-quality songs
free of charge. The service offers a catalogue of 1.1 million tracks from more than
140 labels, including the world’s four biggest: Warner Music Group Corp., Vivendi
SA’s Universal Music, EMI Group Ltd., and Sony Corp.’s Sony Music
Entertainment. The service earns revenue from advertising on pages that let users
stream or download songs. The income generated from the webpage advertisements is
split (50:50) between the record labels and Top100, while Google presumably
benefits from the increase of traffic on its site.

The available music files are embedded with a digital watermark that enables the
record companies to track how often and which of their songs are downloaded; however, for users, the files are totally free of Digital Right Management (DRM) or
Technological Protection Measures (TPMs). It means that the songs can be played,
copied, and shared through any computer or MP3 digital device. During the
negotiation for this collaboration with Top100.cn and the record labels, the issue of
DRM was a key issue. Google believed that DRM which limits copying and sharing
of music files would be inconvenient for users and damage user experience. Google
therefore required Top100 to obtain authorisation for the music to be distributed

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31 McDonald, J. (30 March 2009). Google, Music Labels Launch China Download Service [Electronic
33 Ibid.
without DRM. Consequently, the only technological restriction of the service is the use of IP geo-location, making the service only accessible from inside China. Nevertheless, the IP geo-location can be circumvented and thus users outside China may also access the service.

![Diagram: Google Music China and Enhancement of Access to Music]

It is a “content, access and enhancement” business model and a paradigm for the distribution of digital content on the web. The Whale Music Network (www.top100.cn) is an online digital store maintaining an extensive music catalogue which covers licensed songs from a large number of record labels. In this case, Whale provides a searchable catalogue of content. Google music search merely takes the role of an access enhancement platform; in this way, the service enriches the way people can find desirable music with Google’s advanced search engine and technology.

What Google Music Search offers is the enhanced access to and facilitated distribution of music files. Apart from Google’s brand which is an advantage to attracting more users, the Google Music Search Engine also provides a significant enhancement in music access and user experiences. First of all, the Google service provides a specified and enhanced music searching capacity and a variety of ways in which users can search, choose, listen to or download the song. The search page displays a blank search box and lists of top songs and their artists, along with links enabling users to stream or download the tracks. Users can find a song through the search box and also through the names of artist, title of the song, album, sentence of a lyric, etc.

In addition, the Google Music Player and Playlist not only allow users to stream and listen to the tracks online, but also enable users to choose, archive and save their

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favourite songs online. If integrated into user’s Google account and the next generation of service, Google Wave, it will generate tremendous potential for users to enjoy and share music through the web.

Even more importantly, the system can also recommend similar songs according to the nature and the difference of the tempo, tone, timber, genre, language of specific songs and singer’s gender. It also has a “song screener” which is an automated system and suggests new music based on a listener’s preferences for tempo or sound saturation. This is important as Lachie Rutherford, president of Warner Music Asia Pacific, says: “You have to realize that not all consumers are musically knowledgeable. A lot of people need help to find out what they want.”

This project evidences a win-win reality which makes it possible (and most importantly, legal) for copyright owners to benefit from their copyright while allowing other and complementary businesses to manage and enhance information flow through an access based rather than control methodology.

VI. Conclusion - The Future of Copyright in the Creative Economy

As we have shown the key question that evolutionary economics asks of copyright law – especially in light of the behaviour of copyright owners over the last ten years in trying to deny the value of information flow through the network - is to what extent copyright law should allow copyright owners the right to control reproduction and communication to the public?

We argue that copyright law must ultimately not only incentivise the opportunity to create but that it must also incentivise the opportunity to distribute and communicate creative material to the broadest possible audience. For the last ten years we have been held ransom to the legacy business models of established industries and this has chilled new opportunities and markets.

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35 Google Wave is an online tool for real-time communication and collaboration. A wave can be both a conversation and a document where people can discuss and work together using richly formatted text, photos, videos, maps, and more. See the potential Google Wave at www.wave.google.com.
37 Ibid.
We consider that at least in the area of online music copyright law could provide much more incentive for information flow while still retaining a sensible and workable model for remunerating creators and investment in creativity.