Music, Technology and the Law:  
A Discussion of the Problem and a Modest Proposal

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Introduction

This paper is concerned with artistic expression, the rise of distributed, decentralized computing, the business strategies that seek to leverage both for profit, and the laws that are supposed to keep all parties in check. The most recent case to illustrate the dangers present at this intersection, MGM v. Grokster\(^1\) has raised an already acrimonious debate to a fever pitch. The litigants in MGM v. Grokster would have us believe these are dire times indeed. On the one hand, music, this invaluable medium of human thought, emotion and aspiration, is on the precipice of the ultimate demise. This story casts the recording industry as victims of the theft encouraged and facilitated by malicious immoral scoundrels. On the other hand, the progress of innovation upon which our quality of life and our very future depends is at risk of grinding to a halt. This version tells the tale of a greedy, monopolistic and power hungry industry that seeks to deprive our society the benefit of countless unknown innovations that will never see the light of day. The stakes could hardly be higher. On the one hand, “information wants to be free.” On the other, it is not free to produce or distribute, and those that are currently footing the bill are receiving less and less compensation or acknowledgement for their selfless patronage. Hyperbole aside, there are elements of truth to both sides in this debate, which makes finding a compromise both important and difficult. But neither side could be described as wholly serving the interests to which they attest. The long history of this struggle suggests that these particular adversaries will one day become the closest of friends, and both will happily cash the checks made possible by their cooperation. But this future is not set in stone. It depends in large part on all parties being reasonable and innovative, and on society as a whole deciding what the way forward should be.
This is a hard problem and any solution will not be pleasing to everyone in the beginning. The Constitution placed upon Congress the responsibility of insuring that music (via copyright law), and creativity generally, remains with us forever. Congress has tended to this task with great attention over the history of our Republic through numerous changes to copyright law. And today we are presented with yet another challenge to the enforcement of copyright law. The question now is twofold: should Congress do anything to address this problem; and if so, what should it do?

In the pages that follow, you will find a critique of two compulsory licensing schemes that have been proposed to move us out of the current impasse. As I will discuss in greater detail below, these proposals are cumbersome from a regulatory perspective, and make some peculiar assumptions about who should bare the cost of the widespread infringement occurring on P2P networks. The conclusion that I draw from this analysis is that compulsory licensing is not an optimal solution in the immediate future.

The second goal of this paper is to provide an affirmative recommendation for action, although I am not convinced that great changes are required in existing law to address this problem. It is quite possible that “the System still Works,” and that what we are witnessing is the natural evolution of the means by which music and artistic expression are promoted and consumed by society. But some tweaks to the legal code may be required. My recommendation is therefore more concerned with clearing up some legal ambiguities in existing law and doctrine, and increasing the efficiency by which
copyright holders may enforce their rights. I propose we do this by clarifying the parameters of the “staple article of commerce” doctrine established in the Sony vs. Universal Supreme Court case, and establishing an arbitration process that lowers the costs of seeking legal remedies against direct infringers. The stated goal is to promote a respect for copyright in the digital era while enabling and encouraging the growth of novel, profitable business models. Some of these strategies are nascent in today’s economy and quite probably dominant in tomorrow’s economy. This discussion is limited in scope to the music industry because it is the first content industry to be so affected by this latest tangle with technology. If this proposal should be accepted and implemented, perhaps it will provide insight as to how we can address similar problems in related industries. Before I begin my analysis of the current problem, I wish to make some general comments on the background against which this debate is framed.

A Brief History of Music

We frequently think of artists and the record labels that produce, promote and distribute their works as copyright owners. In an historical context, this is a fairly new phenomenon. Modern copyright law was first codified in 1709 under the Statute of Anne, and in the United States in the United States Constitution in 1790. Music per se was not recognized as qualifying for copyright protection until 1831; although earlier printed compositions were recognized as books, and in fact many of the early copyrights in this country were for printed musical compositions. But dating back to the 16th century, the primary ‘business model’ for musical creativity was not premised on a claim
of intellectual property ownership, but rather on the demand for highly specialized skills (musical virtuosity) and creative genius. It was under the patronage system that most of the great works of art that comprise the classical music repertoire were composed. The lucky and talented few who could survive in this environment were like independent contractors who sold their services to those who could afford them. Securing the rights to the distribution of their works was not an issue, since at this time there were no recordings, no radio, and the distribution of printed materials was still largely limited to books. Intermediaries were few, and music by and large was a luxury commodity accessible only to wealthy and educated aristocrats. All of this changed when technology began to enable the distribution of music to a greater proportion of society than those with the highest status.

The first 25 years of the 20th century was a pivotal time for science and technology, and the innovations that gained widespread use during this time had a direct effect on the economy of music. The phonograph, originally invented in the late 1870s, was gaining commercial viability as early as 1902. Innovations in player piano technology were making it easier to program machines to play very complicated compositions, including much of the classical repertoire. By 1908, when the oft-cited White Smith Publishing v. Apollo Co. case reached the Supreme Court, the distribution of ‘mechanical copies’ of copyrighted compositions, in the form of paper rolls, phonograph recordings and early jukeboxes was a new but spreading industry. In 1923, radio communication became a viable distribution network in the United States, enabling copyrighted compositions to be
performed thousands of miles away, available to anyone who owned a radio. This story carries on in frequent intervals all the way into the present day.

Modifications to copyright law track quite closely to this progression of science and innovation as lawmakers attempted to balance the interests of copyright on the one hand and the interests of technology on the other. Sometimes, these legal changes came too early, sometimes they were too late, but most the time they were right on time. At any rate, what history tells us is that some of the technologies that posed such a great threat to artists in the short term became the same technologies that allowed them to prosper in the long term. In the last century, these technologies have afforded some artists an almost royal status in American society today. Other technologies, like the DAT, died off and had very little effect on the music industry.

The first part of this story is similar in narrative to the current problem facing the recording industry and content creators: the distribution of copyrighted works over the Internet and more specifically peer-to-peer networks. The current dilemma is even more problematic than previous versions, as technology now permits the duplication of musical works at a marginal cost approaching zero, consumers and fans have become competitive distributors themselves, and technology is making it increasingly easier to abstract and obfuscate the intermediation role; thus making more difficult the traditional means of enforcement against infringement. In other words, technology has historically caused the growth of the role of the intermediary. To some extent, today’s environment is permitting that role to dissolve. True, some brave souls are cropping up to take a cut of the profits,
and defining new approaches to intermediation. But today, disintermediation is all the rage. We have yet to see what impact this latest innovation will ultimately have on music and the surrounding industries. However, given the historical evidence and the success of recent business models that employ these technologies while giving artists their due, it is reasonable to assume that this effect will be quite positive. The question is how do we get there from here?

**Compulsory Licensing and a Non-Commercial Use Levy**

There are no easy answers to this question. As I stated in the introduction, any solution to this problem might not be embraced by all of the parties involved. Two separate but similar proposals that I find promising in concept but problematic in content are the compulsory licensing models proposed by Neil Netanel and William Fisher. These proposals variously recommend instituting a non-commercial levy on devices, Internet Service Providers (ISPs), a “broadband” tax, and even the general public via a small increase in federal tax. Professor Fisher’s recommendation goes into greater detail about how such a system would work. He envisions a regulatory body that would set the price of the tax and ensures that all works are accounted for and the copyright holders are duly compensated. This is an attractive solution because it claims a win-win for both technological and creative innovation.

To be sure, there are risks in following this recommendation. Imposing a tax or levy too early and investing in a cumbersome regulatory infrastructure could stifle innovation as
much as clamping down on companies that seek to profit from emerging technologies.
Recent experiments with setting a price point in a similar model proved difficult.\textsuperscript{14} If the
tax is too high, it is a barrier to the small companies whose ideas might be most valuable.
If it is too low, the system fails to deliver sufficient compensation to the artists and their
assignees whose creative contributions comprise the content that makes the model
attractive in the first place.

Tracking the content, a necessary requirement to such a system, is not a trivial matter.
The state of the art in this field, while promising, is far from giving us the technologies
we would need to accurately and reliably monitor this traffic. Professor Fisher’s proposal
is to simply establish a unique file-naming convention that would be managed by the
Copyright Office. This suggestion is ill advised, and his stated desire of dismantling
some of the current technical protection measures in the DMCA would preclude the
enforcement of such an approach anyway.

Recent developments in the field of Music Information Retrieval are encouraging. We are
now able to make several inferences about a digital music file based on its acoustical
properties, such as pitch, tempo and timbre.\textsuperscript{15} This is a promising approach, but doesn’t
adequately address the many versions of songs and content out there. Suppose we could
identify that a certain song is the famous jazz standard “All of Me.” These technologies
are still not capable of accurately differentiating between the many and varying backing
musicians that should rightfully be getting royalties for the works’ performance. And
even if technology could solve this problem, it would be necessary to aggregate, organize
and index a daunting volume of detailed data that could translate these acoustical differences into the metadata required to make the necessary judgments as to ownership and rights. Existing music metadata, such as the ID3 tag support in the MP3 standard, is another possible way to track the use of music files. But this metadata is notoriously inconsistent, and like the file-naming idea, subject to easy manipulation. Professor Fisher’s recommendation acknowledges these problems, and proposes that disputed rights would be subject to a “formal ‘opposition’ procedure.” If this procedure was unable to solve the dispute, parties would be subject to federal jurisdiction. This hardly seems efficient, especially since Professor Fisher would like to see the copyright laws, which describe the remedies available to copyright holders, eventually trimmed down.

Additionally, the intermediaries envisioned by Fisher and Netanel who would bare the burden of taxation seem somewhat misplaced. Professor Fisher, for his part, discusses a minor increase in the federal tax that all employed citizens are supposed to pay. He does a nice job of addressing the risks associated with such taxation as well. Professor Netanel proposes a levy on the “goods and services used to gain access to music and film.”16 Included in this class of entities are device manufacturers, media (such as blank CDs) that are used to store the content, services like ISPs that provide the end-to-end communication of the Internet, and finally peer-to-peer services. This approach is predicated on the idea that those who have the resources to absorb the tax, and who are gaining from the distribution of unlicensed works, are the appropriate targets to carry the burden. In his argument for a non-commercial use levy, Professor Netanel referenced as precedent for such a levy the 1992 Audio Home Recording Act.17 As he describes, this bill was a compromise that placed a tax on “consumer devices primarily designed to make digital recordings of music for private use and on blank media on which such
recordings are stored.” This analogy is shaky since the current discussion involves a technology that not only allows “private use,” but also the very public dissemination of these works. It’s also noteworthy that the AHRA came about as single-use home recording equipment was well on its way out. Moreover, computers are not “primarily designed” to do anything except compute. Our consumer devices are already approaching the dream of digital convergence, where they will serve a multitude of purposes. Our telephones, email, calendar, camera, and music player will soon be all wrapped up into one device. Who do we tax then?

The closest thing we have to single use technology in this discussion are the peer-to-peer services that are allowing sharing to happen in the first place. But it seems taboo to suggest that they should solely bare the cost of a compulsory license. Moreover, they lack some characteristics that made earlier successful compulsory licensing models attractive.

Back when the first compulsory licensing model was introduced, it was rather easy to identify and tax the right intermediaries. Radio stations, entertainment establishments, and what we might call device manufacturers all had a direct role in the copying and distribution of musical works. They possessed taxable physical interests in the United States and were receiving obvious financial gain directly from the use of copyrighted works. There were only a few of them, and they had the resources and incentives to cooperate in a compulsory licensing system.\(^\text{18}\) Moreover the most successful of these technologies, radio, emerged as viable tool for distribution after the laws and legal infrastructure of a compulsory licensing model were already in place. This is a point
missed by many proponents of compulsory licensing. It is important because on the one hand, it made it much easier for the recording industry to accept a loss of control of their music. On the other hand, it made it much harder for the aspiring intermediaries of the day to argue they had a moral or legal right to profit without compensating the recording industry.

Today there are no truly analogous gatekeepers. The peer-to-peer technologies used to share music are not ‘hard targets’ with large physical resources and substantial taxable interests in the US. Their business is largely Internet driven, and so they can easily close shop and move out of regulatory reach of the US Government. Technology has enabled these businesses to continue to profit while putting forward a somewhat convincing legal argument of plausible deniability. In some ways, the consumers who have historically been overlooked for practical and intuitive considerations look more like competitors in the distribution network than purely end-users.

If we are to consider a tax on ISPs, device manufacturers and the general public, we need to answer a glaring question that must have been raised in the back offices of Grokster and the legal firms that represent them: why would we assign responsibility to entities that are at best tangentially related to the infringement in question? If it is undesirable to increase the costs to those who are clustered so closely around the direct infringers, for fear of a loss in innovation, why wouldn’t that same principle apply to those who are even more removed from the infringement taking place, and arguably serve a much greater public service, and at much greater quantities?
My view is that if we are going to pursue a compulsory licensing scheme, we should consider taxing the businesses that are closest to the infringing activity first, and leaving the ISPs, tax payers, and perhaps the device manufacturers as a fallback option. But if we are willing to entertain this idea, perhaps we can address the matter more efficiently by letting existing law do its job while encouraging the development of new business models. In the following section I discuss how we might go about doing this. In essence, what I recommend is fostering an environment where all kinds of business models may fairly compete for viability, and above all artistic expression is valued and acknowledged.

**Calling a Spade a Spade**

The first step is to clarify the Sony staple article of commerce doctrine. The language of the Sony decision leaves open the question what constitutes substantial non-infringing uses. It was not, as the Grokster team and lower courts interpreted, a blanket protection granted to technical innovators at the expense of creative innovators. While both sides in *MGM v. Grokster* like to view the Sony decision as constituting a ‘clear’ rule, which they each interpret to their benefit, the fact is that the Sony decision is anything but simple. It is a nuanced doctrine. I will not spend time discussing the differences between Sony’s Betamax and Grokster’s P2P network, accept to say that they are substantial and significant by any measure.²² We will have to wait and see what the Supreme Court decides in this case. If we are lucky, the Justices will strike a reasonable balance between the interests of both parties. But should the Supreme Court side strongly with either side
in this case, it is my view that Congress should address the staple article of commerce doctrine and both clarify and quantify, to the extent necessary, what guidelines court should use to determine liability. Fair use is a notorious balancing act, and courts have largely struck an acceptable balance. Yet new technologies, or more accurately, the companies that leverage these technologies for profit, are truly testing the boundaries of this doctrine.

Congress should also consider establishing a rule that businesses based primarily on the infringement of copyright can be held secondarily liable for that infringement. While the so called INDUCE Act\textsuperscript{21} attempted to do this, that Act was overly broad and ultimately failed to survive committee debate. But a narrower rule, one that does not “insulate technology blindly, but protects independent markets against incursions by copyright owners,”\textsuperscript{24} should be considered. It is true that such a law would raise the potential costs of start-up companies looking to take advantage of new innovations, an undesirable effect in most cases. Fear of lawsuits could scare away investors, advertisers and other channels of capital. But we must weigh this risk against all of the other factors. And in the process, we should also remember that the roles in this ongoing battle reverse frequently, and today’s hero might be tomorrow’s monster. Perhaps in the long run it isn’t so bad to discourage shady business models.\textsuperscript{25}

\textbf{An Efficient Arbitration Process}

The second goal of this recommendation is to lower the cost of suing direct infringers of copyrights. If it is true that disintermediation is under way in the music industry, we
should develop a process by which those who most abuse the new environment are made aware of the risks of their action, and pay a price. It’s fairly difficult to find and identify file-sharers on any P2P network. The current arrangement is inefficient, inaccurate and subject to abuse by all parties involved. It is noteworthy that the circuit court for the District of Columbia found in RIAA v. Verizon\textsuperscript{26} that the DMCA did not give copyright owners the power to subpoena Internet Service Providers (ISP) for the names and addresses of copyright infringers if the ISP was acting “solely as a conduit for communications the content of which is determined by others.” Some effort should be made towards establishing a means by which copyright owners can identify alleged infringers and sue them with greater ease. This should be done without directly pitting the ISPs, who are at best tangentially and circumstantially related to the infringement, against the copyright holders. This process should establish guidelines for a qualifying case in terms of proof and degree of actual infringement taking place. A copyright holder would need to present evidence to an arbitrator that a particular individual or group of individuals was in violation of a substantial portion of their copyrighted works. If this copyright holder were an individual artist, the requisite portion maybe as little as four or five songs. If it is a large record company, the numbers are an order of magnitude or more larger. The alleged infringers would be able to contest the allegations that their use of these works were unfair. If the alleged infringer owned or had purchased most of the copies in their possession, then the digital copies that they are alleged to have shared would be considered legitimate as well. What I recommend here is a model quite similar in structure to Professor Lemley’s recommendation to create an online arbitration process. The difference is in the minor details of what will qualify for arbitration process,
and the amount of damages that can be awarded. The damages must be high enough to be a persuasive deterrent to file-sharing, but should not reach the proportions discussed by Professor Lemley.

Increasing the efficiency by which copyright holders may sue direct infringers, in this case their own consumers, will have two positive effects. The first will be to give copyright holders an avenue to seek remedies for infringement without directly involving whatever intermediary is involved (although they can still do this in extreme cases). The second effect is more subtle, but important. Providing a mechanism for suing direct infringers will put the issue of how artists and their fans wish to manage their relationship front and center in this debate. I believe that artists who pursue this legal course will find it increasingly detrimental to their relationship with their fans. And fans will be forced to reevaluate the normative question of music sharing in the digital context. In other words, such a legal environment should foster more discussion around the normative and social repercussions of music sharing and the distribution associated with it.

The environment described above should permit copyright holders to continue to pursue traditional business strategies and retain some control over their creative works. Some data suggests that these strategies are recovering some of the losses of recent years, and so perhaps they have life left in them yet. It sets the pace of change in the industry to an appropriate speed by not prematurely enforcing a levy and enabling responsibility for infringement to rest where it should. Frankly, these suggestions probably won’t be popular with the companies and individuals who are gaining the most from the current
legal environment. But I believe this arrangement would be a reasonable compromise that protects both technological and creative growth. After all, the vast majority of high tech companies and many artists today are not especially concerned with either infringing copyright or wielding unreasonable control over their works. Those that fall outside of these parameters should seek their remedies via the ample protections already afforded to them in law.

Part of my agenda in this paper was to address the normative question of whether we should discourage or sanction the unlicensed use of copyrighted works. Clearly the answer is, it depends. So my response is to keep the copyright infrastructure in tact and make it more efficient, rather than forgoing this consideration altogether. Yet it might be that interested parties would accept a compulsory licensing system over my recommendations. If that is true, it is a perfectly acceptable solution, notwithstanding the problems I described above.

Artists that wish to pursue traditional means of compensation for their contribution to society ought to be enabled to do so. At the same time, artists that wish to pursue alternative avenues of remuneration for their artistic works ought to be encouraged to do so without unfairly jeopardizing the contributions that they have made. In all cases, entities that seek to profit from this contribution to society ought to burden some of the costs and risks invested by the copyright owners. This last assertion may best be addressed in the future by a compulsory licensing scheme (or some system more efficient
that the legal system). But this remedy should burden the most aggressive intermediaries first, and leave the giants on whose shoulders they stand alone until later discussion.

Conclusion

In summary, I have presented a critique of a compulsory licensing system that is perhaps the most persuasive model available today, and presented a less severe alternative that removes some of the obstacles to making the laws that are already on the books operate more smoothly. I have tried to articulate a model that allows two opposing business strategies to compete on even ground in a free market economy. The ultimate goal of my proposal is to facilitate the widest possible set of alternatives to artists that wish to get their creative works to their prospective audiences.

In the long and storied struggle between artists and their patrons, we have witnessed a sea change in how artists have supported themselves. For centuries, it was patronage. For the last century, it has been via intermediaries that marketed and promoted their work, profiting in the process – but also paying compensation where it is due (sometimes, anyway). It may be that the incumbents in this conflict are struggling to find a way to profit from new technologies; but perhaps emerging artists and some forms of business models in use today are already finding ways out of this morass. We should not be too hasty in overhauling the machinery of the copyright system to accommodate either artists or innovators. Instead we should seek guidance from the wisdom offered by our Founding Fathers, and acknowledge a basic right to artistic creativity while fostering an
environment where creative minds might equitably find their way in this peculiar and brave new world.

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1 Metro-Goldwyn-Mayer Studios, Inc. v. Grokster, Ltd., 380 F.3d 1154 (9th Cir. 2004). Case heard before Supreme Court March 29, 2005
3 Sony Corporation of America et al. V. Universal City Studios Inc., et al. 464 U.S. 417
5 Harold C. Shonberg, The Lives of the Great Composers, Third Edition “Like all composers of the period, Monteverdi looked for a church job after his apprenticeship had ended. He had proved himself. He was an expert violinist, and had published four works…” Chapter One “Pioneer of Opera: Claudio Monteverde” at p.24.
6 While the in the later 18th and 19th centuries, musicians did publish their compositions in printed form and made arrangements with publishers to print and distribute this work, the real money was still in the original composition and the live performances of this work.
7 Leonard DeGraaf, “Confronting the Mass Market: Thomas Edison and the Entertainment Phonograph.” Journal of Business and Economic History, v24, number 1, Fall 1995. This is a brief historical synopsis of early developments in the phonograph, complete with sales and manufacturing data.
9 White-Smith Music Pub. Co. v. Apollo Co., 209 U.S. 1 (1908). This was the first case in US Supreme Court history that dealt with the problem that a new technology (player piano rolls) posed to a copyright holder. Previous cases in lower courts in the U.S. dealt with this subject. The Court also cites an English case: Boosey v. Wright 1 Ch. 836, 80 L.T.N.S. 561
Steven Craig “How America Adopted Radio: Differences in Set Ownership Patterns Reported in the 1930, 1940, and 1950 U.S. Censuses" Presented at the Popular Culture Association Convention, April (2003): 1. By 1922 “people were buying radio receivers as fast as they could afford to.” Licensed broadcasters grew in number from 5 to 500 in the years 1921-24, and by 1930, 40-45% of all US households had radios.

Act of March 4, 1909 § 23, 35 Stat. 1075-88. The 1909 Act was signed into law by Theodore Roosevelt on his last day in office. The Act expressly prohibited unauthorized manufacture or distribution of “Interchangeable parts, such as discs or tapes for use in mechanical music-producing machines adapted to reproduce copyrighted musical work.” But the 1909 Act also legislated a ‘compulsory license’ scheme that struck a balance between the interests of innovation and the interests of copyright holders.


Jane C. Ginsburg, How Copyright Got a Bad Name for Itself, 26 Colum. J. L. & Arts 61 (2002) at p5. “The rates that the Copyright Arbitration Royalty Panel initially proposed have been rejected by the Copyright Office, following an outcry from smaller webcasters hard put to pay the fees.


Fisher ibid, p. 5


In conversation with Professor Downes in response to my IS237 final paper, December 2004.

Many companies are already outside of the US states and territories.


Lemley & Reese, ibid. However, I disagree with the authors that secondary liability theories are in practice a bad idea. In some cases, as the present, they may be appropriate. But it is not surprising the authors would espouse such a theory, considering one of them represents Grokster.
Frequently analysts like to say that the “take away” from the Sony opinion was that companies that were “merely capable of substantial non-infringing uses” were immune from liability. But the opinion goes to great lengths to describe the quantity and primacy of fair-uses of the Betamax. As has been noted, this suggests that the Court was performing a normative, balancing test of the factors in the case. For a smarter and more detailed analysis of this perspective, see Stacey Dogan, Is Napster a VCR? Implications of Sony for Napster and Other Internet Technologies, 52 Hastings L J 939 (2001).


Stacey Dogan, ibid.

Jane Ginsburg, Copyright Use and Excuse on the Internet, Center for Law and Economics working paper at p37: “it seems troublesome to rule that one who deliberately builds an online system in a way that confounds the distinction should escape liability. The copyright owner may have the burden of discovering and notifying about infringement, but is the potential contributory infringer entitled to make that burden insuperable?”

RIAA v. Verizon Internet Services, 351 F.3d 1229 (D.C. Cir. 2003).