An Economic View of Legal Restrictions on Musical Borrowing and Appropriation

Peter DiCola*

I. Introduction.

In 2006 two pop superstars, Shakira and Nelly Furtado, released songs that led to copyright controversies. Both songs employ the musical technique of sampling, which involves incorporating portions of previously released recordings (and the underlying compositions) into new songs.[1] Shakira's "Hips Don't Lie," a collaboration with Wyclef Jean, includes a horn part from a recording by salsa star Jerry Rivera.[2] When Rivera complained that he had not granted permission for the sample, he caused a minor stir—which calmed down when it turned out that Rivera's publishing company and record label had, in fact, granted permission.[3] This illustrates how copyright holders, not necessarily creators, decide when to grant permission for samples. Furtado's "Do It," produced by studio wizard Timbaland,[4] presented a different issue. The song allegedly samples a keyboard line from a remix of a song by Finnish musician Janne Suni. Because Furtado did not obtain a license, Suni may sue.[5] This raises a frequent question: When does unauthorized sampling constitute copyright infringement?

While all musical creation builds sequentially on previous musical ideas, sampling represents a particularly direct form of musical borrowing—or appropriation, depending on one's point of view[6]—that often leads to controversy. Accusations of unauthorized sampling, like those against Shakira and Nelly Furtado, highlight a general point about copyright law. Despite the high-publicity file-sharing wars, copyright does more than police the boundary between record labels and music fans. And it does more than regulate the economic interactions between entertainment companies and telecommunications companies. Copyright also mediates relationships among musicians,[7] giving it the power to affect creative choices directly.

---

* Ph.D. Candidate (Economics), J.D. (2005), University of Michigan. I would like to thank the editors and the participants of the Con/Texts of Invention conference at Case Western Reserve University, April 2006.

[1] Section III.A describes the dual nature of music copyright. This essay uses the colloquial term "song" as an umbrella term to refer to both the sound recording and the musical composition at once, as a unified whole as experienced by listeners.

[2] Shakira, *Oral Fixation, Vol. 2* [re-release with bonus track], Epic 681585.

[3] Andres Guadamuz, "Shakira Don't Lie," *Technollama.com*, July 15, 2006, http://technollama.blogspot.com/2006_07_01_archive.html (accessed August 31, 2007).

[4] Nelly Furtado, *Loose*, Geffen B0006300-02.

[5] Elizabeth Goodman, "Is Timbaland a Thief?" *Rolling Stone,* January 18, 2007, http://www.rollingstone.com/rockdaily/index.php/2007/01/18/is-timbaland-a-thief/ (accessed August 31, 2007).

[6] This essay usually uses the terms "borrowing" and "appropriation" together to highlight the tension between the positive and negative connotations of using preexisting musical works. Borrowing could refer to the use of unprotected elements or of public domain works, while appropriation could refer to infringing uses of copyrighted works.

[7] The term "musicians" here refers to individuals who play instruments, sing, compose, produce, or any combination of those activities.

The broader issues around sampling concern the stories outside the headlines—the songs that musicians choose not to create. Has copyright deterred musicians from using particular sound fragments in new songs? Has the music industry's implementation of copyright foreclosed the commercial release of collage-based music because the licensing burden would be too great? The less visible effects of legal constraints on sampling could have large aggregate effects on musical creativity. Economics provides a way to examine these effects systematically. This essay develops an economic and legal framework to examine the artistic consequences of copyright's regime for musical borrowing and appropriation, focusing on the issue of sampling.

II. A Brief History of Sampling Controversies.

Sampling's roots range across jazz, blues, music concrète, reggae, and early rap. Digital technology greatly facilitated the practice, which expanded in the 1980s.[8] Musically and commercially, sampling has enjoyed great success in many genres, including hip-hop, electronica, and pop, but most prominently in hip-hop. That success has led to much litigation. Over the last two decades, the courts have attempted to work out the contours of copyright's treatment of sampling.

It took until 1991 for a sampling case to reach trial and receive a judicial opinion, because previous cases had settled out of court. Gilbert O'Sullivan sued the rapper Biz Markie for sampling O'Sullivan's hit song, "Alone Again, Naturally" without permission. Judge Kevin Duffy declared, " 'Thou shalt not steal' " and ruled against Biz Markie.[9] The *Grand Upright* case sent a strong message that samplers must acquire licenses. But the law of sampling remained to some degree unsettled afterwards, because Judge Duffy's opinion does not offer a detailed copyright-infringement analysis. Later sampling cases gradually established that samplee-plaintiffs must show that sampler-defendants' recordings are "substantially similar" to the original, sampled songs to succeed on copyright infringement claims. The law also came to recognize defenses for samplers. Fair use doctrine provides samplers with a nebulous but potentially important legal defense.[10] And courts have deemed some borrowed portions of musical compositions—say, a sample of three notes—to be "de minimis," meaning they are too small for the law to protect.[11]

But, according to a 2005 case, the de minimis threshold of protection for musical compositions does not apply to samples of sound recordings. In *Bridgeport Music v. Dimension Films*, the Sixth Circuit ruled that unauthorized sampling of any amount of a copyrighted sound recording constitutes copyright infringement, based on a questionable interpretation of Section 114 of the Copyright Code.[12] But the *Bridgeport* court also justified its rule of "Get a license or do not

[8] Mark Katz, *Capturing Sound: How Technology Has Changed Music* (Berkeley, CA: University of California Press, 2004), 114–57.
[9] *Grand Upright Music v. Warner Bros. Records*, 780 F. Supp. 182, 183 (S.D.N.Y. 1991).
[10] Section III.E addresses fair use.
[11] Section III.D addresses the de minimis threshold.
[12] 410 F.3d 792, 799-801 (6th Cir. 2005).

sample" by asserting that such a clear rule would encourage sample licensing.[13] The music industry has developed customs and practices for obtaining licenses for samples, known as the sample clearance system.[14]

Bridgeport has sparked protests from the public and earned the condemnation of many commentators on legal and policy grounds. It increases reliance on the arguably inefficient and inequitable sample clearance system. While the decision may not hold up over the long term,[15] for the time being its policy could affect the business practice of copyright licensing and, ultimately, the musical practice of sampling. Because many samples use both a specific sound recording and the underlying composition, the decision's stricter rule for sound recordings has real bite. *Bridgeport* makes sampling without a license much more difficult, even in situations where the use of the musical composition remains de minimis. Subsequent cases have since ordered the removal of sample-based records from stores,[16] and many more lawsuits could follow.

III. Assigning Rights to Music.

Musicians face a complicated regime to determine when and from whom they must obtain permission to use another musician's song. This section surveys the copyright law of sampling, covers, and musical collage by discussing who gets what kind of intellectual property rights. It also addresses the limitations on those rights, such as the compulsory license for cover versions and the doctrine of fair use.

A. The Twofold Nature of Music Copyright.

Musicians often have to acquire two sets of licenses to use one preexisting song. Each song can have, first, a musical composition copyright, for the detailed underlying structure; and, second, a sound recording copyright, for the particular recorded performance based on that structure. The two types of music copyrights are separate, and, like other property rights, are divisible and transferable. Songwriters and composers usually sign contracts with publishing companies in return for fifty percent of the proceeds from licensing. Recording artists typically sign contracts assigning their copyrights to a record label in return for royalties. An example illustrates how this twofold system works. When Bruce Springsteen and Patti Smith wrote "Because the Night," both their publishing companies came to share the musical composition copyright. But only Smith's record label owns the sound recording copyright in her famous 1978 recording of the

---

[13] *Id.* at 800-01.

[14] Section IV.B discusses the sample clearance system in greater detail.

[15] A different federal appellate court could, for instance, rule differently on the issue, perhaps leading the Supreme Court to resolve the conflict and to reject the *Bridgeport* rule.

[16] Susan Butler, "The Low-down on Damages: Juror Explains the Thinking in $4.3 Million Decision Against Diddy, UMG," *Billboard*, April 8, 2006, 14(1); Jonathan V. Last, "The Samples: A Tale of Morality, Biggie, and the Law," *The Daily Standard*, March 31, 2006, http://weeklystandard.com/Content/Public/Articles/000/000/012/036sxlir.asp (accessed March 31, 2007).

song.[17] Unless their use fell under a limitation or exception to copyright, musicians who sample "Because the Night" would need licenses from both musicians' publishing companies as well as Smith's record label.

B. Exclusive Rights.

Both types of copyright holders receive several exclusive rights. In the context of recordings involving musical borrowing or appropriation, three of these rights are relevant: reproduction, distribution, and preparation of derivative works.[18] In sampling cases, courts often list or mention all three of these rights.[19] By definition, sampling involves reproducing parts of a preexisting work. Distributing a sample-based song, therefore, means distributing part of the sampled work. That accounts for two of the exclusive rights. But courts also characterize sampling as "derivative work," implicating the third of these exclusive rights.[20] Samplers obtaining licenses should seek contract language that covers all three rights.[21]

C. Property Rules and Liability Rules.

As a general default, copyright law protects the exclusive rights it grants with what law-and-economics scholars call a property rule.[22] This means that copyright holders can transfer their rights freely, insist on any price they wish before selling, require permission for anyone to exercise one of their aforementioned exclusive rights, and sue when others do not respect these privileges. There are important exceptions, some applying to individual exclusive rights and some applying across the board. But in some sampling cases, like *Grand* Upright and *Bridgeport*, courts have not applied exceptions. Such decisions effectively grant full property-rule protection to copyright holders in sampled works, giving them strong bargaining power in licensing negotiations.

The counterparts to property rules are liability rules, under which the law recognizes rights only by requiring others to pay right holders for use of the right, at a rate set legislatively. Musical compositions are subject to liability-rule protection, under what is called a "compulsory license." Once a song or composition has been recorded once with the permission of its copyright holder, other musicians can "cover" the song—without permission—in return for a statutory fee and

[17] Patti Smith Group, *Easter*, Arista 4171 LP.
[18] 17 U.S.C. § 106(1)–(3) (2000).
[19] See, for example, *Jarvis v. A&M Records*, 827 F. Supp. 282, 288 (D.N.J. 1993).
[20] The derivative-work right is nearly co-extensive with the reproduction right, since adapting a work generally requires copying parts of it. *Williams v. Broadus*, No. 99 Civ. 10957 (MBM), 2001 U.S. Dist. LEXIS 12894 (S.D.N.Y. August 27, 2001): 5–6.
[21] For an example of licensing-contract language that arguably covers all three rights, see *Newton v. Diamond*, 388 F.3d 1189, 1191 nn.1–2 (9th Cir. 2003).
[22] Guido Calabresi and A. Douglas Melamed, "Property Rules, Liability Rules, and Inalienability: One View of the Cathedral," *Harvard Law Review*, 85, no. 6 (1972): 1089–1128.

adherence to certain administrative procedures. A cover must be sufficiently faithful to the original, not disrupting the "basic melody or fundamental character of the work."[23]

D. Downstream Creators' Rights

Some rights remain outside copyright holders' possession, leaving them to downstream creators instead. For example, copyright's subject matter includes tangible expressions of ideas but not the abstract ideas themselves. Combinations of three notes, individual chords, and I–IV–V chord progressions, to name a few examples, are closer to ideas than to expression. These musical ideas have existed for centuries, and all musicians should have the right to use them. *Newton v. Diamond* illustrated this idea.[24] The Beastie Boys sampled three notes from a James Newton song, having licensed the sound recording but not the underlying musical composition, which Newton owned. The Ninth Circuit held that the three-note sequence did not cross the de minimis threshold for copyright protection. In a sense, the de minimis threshold helps implement the boundary between ideas and expression. Although *Bridgeport* suggests that small fragments of sound recordings always qualify as protected expression, *Newton* vindicates the principle that all musicians can freely use abstract musical ideas.

E. Public-Law Provisions

Fair use is a case-by-case doctrine that recognizes exceptions to copyright protection. As an affirmative defense, fair use does not fit comfortably into a property-rights paradigm. Rather, it operates as a broad, public-law provision for the benefit of readers, listeners, educators, critics, and others. For instance, *Campbell v. Acuff-Rose* recognized that even commercial works can constitute fair use if they are "transformative," a category that includes parody. In that case, the Supreme Court vindicated rap group 2 Live Crew's unauthorized sampling from Roy Orbison's composition "Pretty Woman" as fair use. (The sound recording copyright owner was not a party.) But samplers and collagists could benefit from this doctrine if case law, industry practices, and norms of fair use developed over time, providing practical guidelines to musicians.[25] Unfortunately, the music industry has not yet done so. For now, the case-by-case nature of fair use renders it unpredictable and expensive, limiting its utility for samplers and collagists.

IV. An Economic Model of Sequential Musical Innovation.

All music uses preexisting musical conventions, ideas, and sounds, and in this sense, all musical innovation can be considered sequential. Musicians may add new elements, but they always combine and re-arrange existing elements. Copyright law overlays a system of rights onto the

[23] 17 U.S.C. § 115(a)(2) (2000). No cases known to this author have ruled on the meaning of sufficient faithfulness to the original.
[24] 388 F.3d 1189 (9th Cir. 2003).
[25] Patricia Aufderheide and Peter Jaszi, *Untold Stories: Creative Consequences of the Rights Clearance Culture for Documentary Filmmakers* (Washington, DC: Center for Social Media, 2004), http://www.centerforsocialmedia.org/files/pdf/UNTOLDSTORIES_Report.pdf (accessed March 31, 2007).

set of all preexisting songs. The rights assigned to copyright holders and downstream creators and how law protects those rights determine the relative cost of different types of musical borrowing or appropriation. Given these rights, musicians make decisions about musical production, and also how to engage with the commercial music industry, if at all.

A. Inputs to Musical Production.

Economists describe the production process for any good as a function of capital (that is, the physical plant and equipment) and labor. The specific production function for converting capital and labor into goods represents the state of technology. Technology—a broadly interpreted concept in economics—includes scientific, organizational, or any other variety of knowledge that applies to producing goods. Other raw materials beyond capital and labor, such as land or intermediate goods, are often "suppressed" in simple economic models, meaning that they are held constant and left implicit in the specific mathematical form of the production function.

Modeling musical production under the rules of copyright requires "unsuppressing" some of the raw materials that musicians use to create songs and recordings. Specifically, musicians use the already-existing musical compositions and sound recordings of other musicians. Copyright law divides musical inputs into several categories, based on the type of copyrighted work, its copyright status, and how it is used:

1. Public-domain works, meaning works that are not under copyright protection. This category includes, for instance, works that have exhausted their copyright term, works not renewed in a timely fashion, and voluntary donations to the public domain.

2. Non-infringing elements of copyrighted works, including musical ideas like notes, chords, compositional forms, instruments' sounds, and so on. This category also includes de minimis uses of musical compositions and fair uses of either musical compositions or sound recordings.

3. Entire copyrighted musical compositions, used for purposes of sufficiently faithful cover versions—that is, covers that qualify for a compulsory license.

4. Portions of copyrighted musical compositions that infringe. Primarily, this means samples that are not de minimis and do not constitute fair use. This category also includes uses of large portions of musical compositions for insufficiently faithful cover versions.

5. Portions of copyrighted sound recordings that infringe. In the Sixth Circuit, after *Bridgeport*, this means samples of any length that are not fair use.

Each category has a unique character. A single sample, however, can implicate two different categories at once, because of the dual nature of music copyright. Each type of preexisting copyrighted work, or element thereof, enters the musical production function as a separate input, alongside capital and labor. Correspondingly, each category has a different input price in the musical production function. Just as labor's input price for producers is the wage, prior songs' input prices are their licensing fees. Categories one and two have associated licensing fees of

zero, although it remains useful to distinguish the categories for other reasons.[26] Category three is subject to the compulsory license described earlier in Section III.C. Finally, categories four and five are distinct and separate, but both require licenses through the music industry's sample clearance system.

If musicians sought to maximize profits based on perfect information, then one could predict their behavior. Based on the form of their particular musical production function, the input categorization, and the input prices they face, individual musicians would choose what inputs to use and how much. This model of production provides a way to understand how copyright and licensing affect creativity. As licensing fees increase, musical borrowing should decrease, all else equal. If copyright law shifted preexisting works into less expensive categories of inputs, however, musical borrowing should increase.

In reality, musicians must deal with imperfect information about preexisting works and their licensing fees, as the next sub-section explores. Furthermore, in addition to giving profits some weight, musicians consider artistry, enjoyment, political and social views, and other factors in their decisions, to degrees that vary by individual. Finally, collectives like groups, record labels, and management teams—not just individuals—make decisions about musical production. Despite these complications, choices about usage of musical inputs and the resulting costs of musical production will be a salient factor in musicians' (and their affiliates') decision making.

B. The Sample Clearance System

Licensing fees, however, are not the only costs of musical inputs that musicians face. Each input category also comes with information costs and transaction costs. Information costs include the time and money spent verifying the status of any other musicians' works that are used and searching for the copyright holders. Transaction costs include paying a lawyer or sample-clearance professional to negotiate licenses, the time it takes to clear samples (or meet the administrative requirements for cover versions), and the hold-up costs when negotiations do not proceed easily.

Membership in some of the input categories will be more uncertain than others. Determining the category of a preexisting song can cost money and time—and might not result in finality or certainty. Some works, like Beethoven's symphonies, are easily identified as public-domain works, classified in category one, because of their age. But the unprotected musical elements that make up category two are frequently uncertain. Whether a musical element is an unprotected idea, a de minimis portion, or fair use can result in controversy, as in *Newton v. Diamond*. When it comes to samples, category two necessarily has a fuzzy, imperfectly predictable boundary with categories four and five. The uncertainty of some inputs' categories is an unusual feature of musical production functions. Usually, economists assume the ability to distinguish capital from labor and other inputs. The lack of clarity increases musicians' information costs.

[26] For instance, public domain works and non-infringing elements of copyrighted works will differ in their search costs—how costly it is for musicians to identify them for use.

The transaction costs involved in sample clearance depend partly on a musician's position in the music industry. Recording artists signed to major record labels have access to relationships and resources that facilitate obtaining licenses and that independent artists often lack. But some costs weigh heavily for all artists. The dual nature of music copyright means that many samples require two licenses. Moreover, copyright holders can divide and sell their interests to multiple parties, further increasing the number of potential parties a would-be licensee must negotiate with to clear a sample fully. The complexities, pitfalls, and transaction costs of participating in the sample clearance system must also factor into decisions about musical production.

C. Multiplicity of Musicians' Responses.

Musicians make a number of economic decisions. Before they even decide which musical inputs to use in production, musicians must allocate their time between studio recording and performing live on tour. At the same time, musicians must choose a business model with which to engage the commercial music industry—or decide to operate outside the commercial sector. Each business model will put different weight on recording versus touring. And each model entails a different approach to licensing and the sample clearance system.

Two questions divide musician's choices into four basic business models. First, will the musician distribute recordings commercially, that is, will they sell CDs? Second, will the musician spend the time and money to obtain the proper licenses for samples and cover versions? Figure 1 is a two-by-two matrix displaying the options formed by these questions.

Figure 1: Musicians' Business Models.

		Distribute Recordings Commercially?	
		Yes	No
Obtain Licenses?	Yes	**Commercial**	**Live Performance**
	No	**Underground**	**Noncommercial**

In commercial business models—whether with a major or an independent label—musicians who use samples or do covers pay for licenses so that they can retail their own recordings legally. Moreover, musicians adopting a commercial business model can reap licensing revenue when other artists sample or cover them. This type of business model accounts for the bulk of music industry revenue.

Yet the standard commercial model does not account for the bulk of musicians. Many musicians want to opt out of licensing transactions entirely. They can either distribute their recordings for free—the noncommercial model—or sell their recordings through small outlets—the underground model—while hoping to avoid detection, litigation, or prosecution. Musicians might adopt the noncommercial model early in their career, perhaps taking advantage of web distribution to develop a fan base. Sometimes fans help the noncommercial model along, as when DJ Danger Mouse's fans distributed free copies of *The Grey Album* over the Internet.[27]

[27] Joanna Demers, *Steal This Music: How Intellectual Property Law Affects Musical Creativity* (Athens, GA: University of Georgia Press, 2006), 139–42.

The underground model describes the early days of sampling. But it also describes the "mix tape" phenomenon, recently brought to the headlines with the arrest of DJ Drama, whose business sold albums with unlicensed samples but had been hired by the major record companies to promote major-label artists.[28] These recent stories illustrate the significance of business models that involve opting out of the sample clearance system.

Some musicians might also adopt a live-performance-only model, in which they create sound collages live, as many DJs do, but do not release recordings of their work. Live sampling need not implicate the reproduction or distribution rights of copyright holders, because live performance need not involve recording. But live sampling would require licenses for use of the derivative-works right (of sound recordings and musical compositions) and the public-performance right (of musical compostions only).[29] Licenses to create derivative works might be more affordable than typical sample licenses, since they involve fewer rights. As for performance licenses, musicians who engaged in live sampling in concert venues with blanket licenses from the performing rights organizations (ASCAP, BMI and SESAC) might be licensed indirectly. The specific contract language would determine whether performances of portions of musical compositions qualified for the blanket license.

D. Economic Implications

The multiplicity of available business models emphasizes that musicians have agency to react along many dimensions to the categorization of musical inputs, the licensing fees for those inputs, and the information and transaction costs of the sample clearance system. For example, when *Bridgeport* put more samples into a category that required licensing (by eliminating the de minimis threshold for sound recordings), this raised the direct cost of those samples from zero to some positive dollar amount. As the music industry absorbs the news that more samples require licenses, the overall costs of licensing might change. Fees could increase, since licensors gained leverage from courts' copyright enforcement and since demand for licenses might increase. On the other hand, fees could decrease because of increased volume, the shorter duration of samples being licensed, or reduced demand as musicians sample less or opt out of licensing. Similarly, transaction and information costs could increase because the sample clearance system becomes overburdened. Or they could decrease if transaction-facilitating innovations develop in the face of that burden.

In the wake of *Bridgeport*, musicians who had been employing a commercial business model can respond in a number of ways. They might: stop using samples altogether; engage in more (sufficiently faithful) covers instead; use fewer samples per song; use more obscure samples that will cost less; use replays more often; switch to a noncommercial or underground business model; or, finally, record less often and tour more, perhaps even switching to a live-performance business model. Assessing the effects of *Bridgeport* and other changes or clarifications to copyright law on creativity, then, requires a complex approach. The decision might or might not

[28] Samantha M. Shapiro, "Hip-Hop Outlaw (Industry Version)," *New York Times Magazine*, Feb. 18, 2007.

[29] Copyright only grants sound recording copyright holders a public-performance right for "digital audio transmisions," not for in-person performances. 17 U.S.C. § 106(6) (2000).

stifle creativity; musicians' options in the face of legal changes are too numerous for a simple prediction. And, as the next section explores further, musicians might find a way around the boundaries set up by law.

V. Distorted Incentives and Transgression.

Copyright's regime over the use of preexisting music creates legal boundaries where no musical or technological boundaries exist. This could distort creativity as musicians respond to the economic incentives created by law. But changes to the background legal arrangements of the music industry might also open up new creative possibilities, which may temper the severity of the problem.

A. Creativity and Boundaries.

Most samples require two licenses, or more if the copyright owners have divided and transferred their interests. But from a musical perspective, the sound recording–musical composition duality does not have the same salience. Sampling a song and covering a song involve different practices and technologies. On the other hand, even though the songwriter and recording artist are often separate, samplers use each recording as a musical whole. Copyright's overlaid distinction between songwriter and recording artist serves a useful economic function, providing a pair of revenue streams for distinct groups of people. Nonetheless, imposing a dual regime on a unitary process like sampling has consequences for creativity.

Rather than looking at preexisting songs in terms of the separate copyrights that inhere within them, one can look at them in terms of musical practice. Figure 2 maps musicians' uses of musical compositions and sound recordings on two axes. Each axis runs from "none" to "all" to denote how much of the composition or sound recording is used.

In cases when musicians do not use the sound recording of a song, there is a spectrum from originals to covers, with musical developments (a positive connotation) or rip-offs (a negative one) in between. If a musician uses some fragments of a sound recording, this usually constitutes making a sound collage or "mash-up."[30] But there is no sharp distinction between using none of the musical composition, a tiny amount, or a larger amount in a collage. When musicians create compilations of previously recorded works or simply re-release works in a slightly new form, this involves using an entire sound recording and, necessarily, the entire underlying musical composition.

[30] Under this taxonomy, this category would also include other kinds of musical output, such as the backing music for karaoke performances, as noted on the chart.

Figure 2: Musical and Technological Perspective on Using Preexisting Songs.

Use of Copyrighted Sound Recording (SR)	**All**	Compilations, Re-releases
	Fragments	⇐ C o l l a g e ⇒ Karaoke Machine Recordings
	None	Originals; Developments (and Rip-offs); Covers

None	**Fragments**	**Major Elements**	**All (i.e. Faithful Cover)**
Use of Copyrighted Musical Composition (MC)			

Figure 3: Distorted Incentives in the Use of Preexisting Songs.

Use of Copyrighted Sound Recording (SR)	**All**	(not applicable)			1 voluntary SR license & 1 compulsory MC license
	Fragments	1 voluntary SR license for sample	2 voluntary licenses: 1 for SR & 1 for MC		
	None	Public domain & non-infringing elements	1 voluntary MC license for sample	1 voluntary MC license for insufficiently faithful cover	1 compulsory MC license (Section 115)

Fewer licenses if uses of SR, MC, or both are de minimis or fair use

None	**Fragments**	**Major Elements**	**All (i.e. Faithful Cover)**
Use of Copyrighted Musical Composition (MC)			

Contrast the picture of Figure 2 with that of Figure 3, which uses the same axes but, rather than mapping regions of musical practice, delineates copyright's rules and licensing requirements. Boundaries appear where, musically speaking, no boundaries exist. Consider the theoretical boundary between faithful and unfaithful covers created by Section 115, described above. If a musician does a cover version that reworks the original too much, then they will require a voluntary license to reproduce, distribute, and prepare a derivative work of the song. But if the musician covers the entire song faithfully, then the compulsory license of Section 115 becomes available, making the licensing easier and the fees less expensive. The bottom row of Figure 3 illustrates this bizarre incentive to mimic preexisting compositions more closely.

Distorted incentives arise with respect to sampling as well. Musicians who sample three notes, like the Beastie Boys in *Newton v. Diamond*, will often need only one license for the sound recording, since the use of the composition would probably be de minimis. But musicians who sample five notes may need to acquire two licenses, if the de minimis threshold has been crossed and fair use does not apply. Musically, the distinction between a three-note phrase and a five-note phrase may exist, but it is not as stark as the difference between acquiring one voluntary license and acquiring two. Moreover, the boundaries of de minimis use and especially fair use are neither quantitative nor sharp. A thirty-second sample might be fair use—for instance, in a parody—but a one-second sample might not. Case-by-case determinations of fair use and the de minimis threshold may produce rough guidelines for licensing practices, but not hard and fast rules. So copyright creates enough boundaries to affect creativity, but does so in a way that adds uncertainty, which may further deter musicians from borrowing.

The legal mapping for the use of preexisting songs in Figure 3 looks complicated, constricting, and even perverse, compared to the looser mapping of musical practice in Figure 2. The contrast suggests that copyright law distorts creative musical activity, since activities on either side of the somewhat arbitrary lines drawn by copyright law have very different costs. Moreover, this adversely affects musicians in particular genres (like hip-hop and electronica, in which many musicians use samples) more than those in others (like country music, which involves more faithful covers than samples). On the other hand, as the previous section emphasized, musicians have multiple responses available to them. That copyright law imposes a number of boundaries on musicians' use of preexisting songs still seems like a negative outcome—an unfortunate result of the twin edifices of copyright law and the sample clearance system. But this analysis does not yet account for one of art's main attributes: transgressing boundaries.

B. Complicating the Economics of (Intellectual Property) Crime.

Economic theories usually assume that boundaries—what economists would term constraints, as in the mathematical constraints of a utility- or profit-maximization problem—reduce well-being. The context of musical creativity, however, requires adding some complications to this standard framework. If boundaries and constraints have benefits for those subject to the boundaries, it would temper somewhat the conclusions from the previous section about distorted incentives.

The standard economic view describes punishments for certain behaviors as constraints. They limit individuals' options if they occur, leaving individuals with less money, time, and overall well-being when they are punished. For example, Gary Becker's economic theory of crime rests

on utility maximization by criminals and cost-benefit analysis by society.[31] Becker assumed that, as the severity of punishment and the probability of being punished increase, the number of criminal offenses committed should decrease. In short, when crime becomes more expensive, criminals should commit fewer crimes, all else equal.[32] Applying Becker's approach to intellectual property crime implies that musicians who decline to obtain the proper licenses have implicitly weighed the risks and rewards of copyright infringement. Such musicians' particular expected cost of using the sample clearance system has outweighed their expected cost of a copyright infringement lawsuit against them (where the expected cost of a lawsuit incorporates its probability of occurring).

But what if boundaries paradoxically increase one's options? What if punishments are not all bad? Intellectual property crimes may present just this situation, running contrary to standard economic assumptions. Amy Adler has pointed out that "[t]he very richness and proliferation of 'illegal art' in response to copyright law suggests that restrictive legal rules not only crush artistic production, but also stimulate it."[33] In light of postmodernism, Adler argues, boundaries have become scarce; artistic production could benefit from even the most misguided legal boundaries, whether in the context of obscenity law or copyright. If so, then violating a boundary has some positive utility for musicians, offsetting the disutility of copyright's legal penalties. Rather than refraining from using a sample because of either high licensing costs or the risk of an infringement lawsuit, some musicians would use the sample anyway. They gain utility from creating more interesting music by violating a boundary. Alternatively, they might have an artistic commitment to transgression—a commitment that copyright restrictions gave them an opportunity to fulfill.

No one would advocate, preposterously, for Congress and the courts to purposely craft ever-increasingly arcane, boundary-laden, and arbitrary copyright rules. The point is rather that copyright law's boundaries might have some benefits for musicians who sample or create collages, rather than solely carrying the costs described in previous sections. *Bridgeport* set up a harsh rule, but it immediately inspired artists to create hundreds of sample-based works in protest, using the very sample from George Clinton's "Get Off Your Ass and Jam" that N.W.A. infringed. Many other creative musical responses may evolve in the case's wake.

In sum, although the economic and legal framework of this essay provides a useful conceptual baseline, it comes with a caveat. Musicians will find ways around copyright, turning restraints on creativity into new forms of creativity.[34] But that should not diminish concerns about the

---

[31] Gary S. Becker, "Crime and Punishment: An Economic Approach," *Journal of Political Economy* 76, no. 2 (1968): 169–217.

[32] Even a risk-loving (but still economically rational) criminal would not prefer a greater probability of being punished, as long as the punishment and the reward to crime stayed constant.

[33] Amy Adler, "Invention and Originality in the Law of Obscenity," (paper presented at the Con/Texts of Invention conference, Case Western Reserve University, Cleveland, OH, 2006).

[34] Kembrew McLeod, *Freedom of Expression ®: Overzealous Copyright Bozos and Other Enemies of Creativity* (New York: Doubleday, 2005), 124–35.

negative impact of copyright on music or about unjustified discrimination against particular genres or particular techniques of musical borrowing.

VI. Conclusion

Copyright law stems from a social choice to compensate and provide incentives for creators, ostensibly for the public's benefit. But innovation in music and the public's enjoyment of the benefits flowing from such creativity also depend on musicians' ability to use preexisting works by other musicians. This essay has provided an economic view of copyright's regulation of musician-to-musician interactions. Musicians have multiple avenues available in response to copyright's categorization of preexisting works, including transgression of copyright itself. As a result, assessing the overall efficiency of copyright's regime for sampling, cover versions, and collage presents a difficult problem. Future work, however, might benefit from the organization that an economic approach to musical borrowing and appropriation offers.

Commentators have offered many policy solutions in reaction to *Grand Upright* and *Bridgeport*, cases that may have oversimplified the issues. Suggestions range from enhancing property rights to restoring the de minimis threshold for sound recordings, and from developing transaction-facilitating institutions to making fair use more practically useful. Each policy option involves tradeoffs among musicians with different styles and preferences, among samplers and samplees, and among different music-industry institutions. Economics provides a systematic way to investigate such tradeoffs. This essay has aimed to set down some foundations for further progress toward that goal.