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SOUND SAMPLING PROTECTION AND INFRINGEMENT IN TODAY'S MUSIC INDUSTRY

BY MOLLY MCGRAW [†]

INTRODUCTION

Should primary artists such as Diana Ross and David Earle Johnson be given legal protection to prevent other members of the music industry from profitting through the incorporation of "samples" of these primary artists' work into second-generation musical creations? Digital sampling, a new technology that is having a major impact on the music industry, allows any sound to be recorded, re-created and manipulated by computer. A digital sample is a computerized data set consisting of a sound or sounds fixated in a digital rather than analog² form. Computer keyboard manipulation allows this digital representation to be altered and/or transformed, resulting in the creation of derivative works of digital sound recordings. This comment will examine the copyright issues involved in the use of digital samples in the music industry.

Initially, this comment will explore the concept of digital sound sampling and the role it plays in today's music industry. Then, sound recordings ("SR's") are examined within the legal framework of the 1976 Copyright Act because it is anticipated that digital sound samples ("DSS's") will be afforded similar treatment. In this context, the following copyright issues will be examined: (1) the procedure for establishing copyright, including authorship and registration requirements, (2) the breadth of ownership rights which accompany the copyright, and (3) issues surrounding infringement. Finally, potential safeguards against infringement are discussed as well as available remedies.

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^{1.} Digital information is data in the form of pieces, *i.e.*, bits of digits. G. MCWHORTER, UNDERSTANDING DIGITAL ELECTRONICS, 244 (1984).

^{2.} Electronic analog information is information represented by a variable property of electricity, such as voltage, current, amplitude of waves or pulses, or frequency of waves or pulses. *See id*.

I. DIGITAL SOUND SAMPLING: BACKGROUND

A. Explanation of Digital Sound Sampling

Music is an analog phenomena: it is a continuous function of time.³ Computers are digital devices: they operate upon one number at a time, and all data fed into a computer must be rounded off to the closest value if they do not come within the range of values accepted by the computer.⁴

The process of transforming a continuous function into a discrete representation, that is, the quantization of the analog phenomena, requires an analog-to-digital (A/D) convertor.⁵ An A/D convertor is a circuit which periodically samples a voltage and generates a digital representation of its value.⁶ In the digital process, a sound is cut up into thousands of separate "samples" each second - each being expressed as a number.⁷ Unlike analog recording, which records and stores the

Every sound has a frequency (rate of vibration) and an amplitude (intensity of vibration). The frequency of sound is measured in cycles per second, called Hertz (abbreviated Hz). One cycle per second is 1 Hz, and a thousand cycles per second is one kiloHertz (1 kHz). A sound's frequency determines its pitch. Pitch is expressed as musical notes (A, A#, etc.). As an example, if you play an A above middle C on a piano, the strings vibrate back and forth 440 times a second (440 Hz). If you play the same sound into a microphone, it produces an electrical current that alternates every 1/440th of a second and would produce a 440 Hz reading on a digital frequency counter.

Each cycle has a constantly changing amplitude and timbre. Timbre is determined by the shape of each wave, called the waveform. A waveform is basically a graphic representation of the variations in amplitude over the time it takes to complete one cycle.

Each note is actually a complex combination of simple waves, each different in frequency and amplitude. The simplest waveform is the sine wave. Digital synthesizers allow the musician to create more complex waveforms by combining various sine waves.

The amplitude of the sound will determine how high a signal the digital representation should be capable of measuring, and the frequency response will determine how many time intervals one second of sound will be broken into. Since the representation of one sound or vibration requires at least these two impulses, to digitally encode a tone of 15,000 cycles per second (most people cannot hear a tone above 15 kHz) would require 30,000 discrete values or samples per second. Understandably, it takes a rather powerful computer with a fast CPU board to achieve this high packing density without distortion. The data rate for any degree of high fidelity must approach the order of microseconds.

^{3.} Howe, The Composer and Computer Music, in THE LIBERATION OF SOUND 276 (H. Russcol, ed. 1972).

^{4.} Id.

^{5.} Id.

^{6.} See, G. VELTON, THE ROCK SYNTHESIZER MANUAL 109 (1986).

^{7.} Franckling, Digital Technology is Changing the Scope of Music, UPI, June 6, 1986. See also, G. Velton, supra note 6; Howe, supra note 3; M.V. Mathews, Technology of Computer Music 2-4 (1969); H. Chamberlin, Musical Applications of Microprocessors 106-8 (1980).

musical waveforms directly in the recoding medium, a digital recording system records a description of the waveforms in a binary code. The musical waveforms are re-created in playback from the digital sound data.⁸

The first person to explore the possibilities of digital sound reproduction was Dr. Max Mathews at Bell Laboratories in New Jersey. His experiments in the mid-Sixties used a general-purpose computer equipped with a digital-to-analog convertor (DAC). A DAC generates analog voltages corresponding to inputed digital signals. The cost and size of computing equipment, however, confined his contribution to the scientific laboratory.

With the advent of the microchip revolution in the mid-Seventies, the economic barriers to digital technology were removed and digital methods began to replace analog methods of recording sound. The earliest sampler was the Mellotron, a popular rock mainstay of the late Sixties and early Seventies. He Mellotron was a polyphonic, analog instrument which recorded sound samples on magnetic tape. The first synthesizer with the capacity to record sounds digitally was the Fairlight CMI in 1975. Sound sampling next became available on New England's Digital's Synclavier II, an expensive instrument well-outside the budget of most musicians. The first sampler with keyboard control appeared in 1981 and the first inexpensive sampler, priced under \$1700, appeared in 1985. Today, a digital sampler with limited capabilities can be purchased for under \$70.17

^{8.} Mitchell, Digital Revolution Comes to HiFi, HIGH TECH., Jan. 1982, at 70.

^{9.} See, Powell, The Challenge of Music Software, BYTE, Jun. 1986, at 145.

^{10.} Id.

^{11.} Mitchell, *supra* note 8, at 70 (the advantages of digital recording over FM and analog methods).

^{12.} G. VELTON, supra note 6, at 16.

^{13.} Id. at 9.

^{14.} Id. at 16, 102. See, Pareles, Digital Technology Changing Music, N.Y. Times, Oct. 16, 1986, at C23, col. 4. When first introduced the Fairlight cost \$30,000; today the same level of sampling technology costs only about \$1,500.

^{15.} Pareles, *supra* note 14. The Synclavier is available today in 8- to 128-voice versions with a 32-track sequencer and a computer stored separately from the instrument itself. Sounds are stored on floppy disks or on optional hard disk drives. It has an impressive 100 kHz sampling rate (the frequency at which a sampled waveform is quantized). The Synclavier, which can cost as much as \$300,000, is used by musicians such as Stevie Wonder and Frank Zappa.

^{16.} Id.

^{17.} The Casio SK-1 sells for under \$70 list price. The more serious model, Casio FZ1, priced at \$1,800, will store up to 64 sounds on a built-in 3 1/2-inch floppy disk and play them back over five octaves on a full scale keyboard. Sound segments up to 14 seconds long can be captured and the signals are sent back out in MIDI (Musical Instrument Digital Interface) standard. MIDI is a hardware standard which lets synthesizers share information with other instruments regardless of the manufacturer.

Samples themselves are made from live performances during recording sessions or taken from existing recordings. As an example of the creation and use of a sample, imagine a musician who wishes to include a certain kind of drum beat in his recording. In the past, he could hire a drummer for a studio session, explain the beat he is seeking, record the session and hope the drummer comes through. Sampling, however, provides other options. Now the musician can hire a drummer but only record a string of fifteen to twenty drum beats on the studio tape recorder. 18 When reviewing the tape he can choose one that sounds closest to the ideal. This data would then be input into the sampler's memory using an A/D converter. 19 The digitized signal could then be transferred to a floppy disk or hard drive. 20 After the recording session, the musician could electronically edit the digitized sounds. For example, he can remove any extraneous noise that may have been picked up during the session or replace the sound of a defective instrument. The edited signal would then be transferred back to the disk for storage and later inputted into a computerized drum machine or triggered from an existing acoustic drum track and added to the mix.²¹ Over time, our musician might soon compile a sizable sample library, for example drum hits with different intensities and snare sounds, or in different percussive instruments.

Frequently, a sample is used as a base sound which can be processed and manipulated into a more desired sound.²² For example, a sampler can regenerate a one-note sample on any note of the scale.²³ By changing the numbers of the converted sound, an engineer can raise or lower its pitch, give it more or less echo, repeat it in any rhythm, or combine it with other sounds.²⁴ Samples of various instruments can be combined for "quasi-orchestral" sounds.²⁵

The musician is not limited to his own sounds. With a sampler and a handful of record albums, for instance, a keyboardist can fabricate

^{18.} The musician could also discover the sound he wants on someone else's CD, or the sound could be taken from a prior recording, or from a sample given to him by a friend.

^{19.} A relatively sophisticated sampler's memory would be filled in a matter of seconds as digital sound is cut up into about 41,000 separate "numerical samples" each second. Digital Technology is Changing the Scope of Music, INFOWORLD, Apr. 30, 1984, at 32.

^{20.} Id.

^{21.} Id.

^{22.} Dupler, Digital Sampling: Is It Theft?, BILLBOARD, Aug. 2, 1986, at 1.

^{23.} Pareles, supra note 14.

^{24.} Miller, High-Tech Alteration of Sights and Sounds Divides the Arts World, Wall St. J., Sept. 1, 1987, at 1, col. 1.

^{25.} Pareles, supra note 14.

a "performance" from the sounds of John Coltrane's saxophone, Gene Krupa's drums, Paul McCartney's electric bass, Carole King's piano and the voice of Billy Holiday. ²⁶

B. Use of Digital Sound Sampling in Today's Music Industry

There are examples of the widespread use of sampling in the music industry; however a consensus on the appropriateness of this behavior has not been reached. The Art of Noise is reported to have used Buddy Rich's and Alan White's drum sounds in their works.²⁷ Alan White, the drummer from Yes, agreed to be sampled as part of a producer's library.²⁸ However, Yes' singer was reported to be surprised and angry when he heard his voice on another track of the album produced by the Art of Noise.²⁹

A celebrated case of sampling involved David Earl Johnson who allowed computer-keyboardist Jan Hammer to sample his drum sounds on rare, eighty-year-old Nigerian conga drums. Later, after Johnson recognized his drum sounds running through the entire Miami Vice soundtrack, he sought payment for what he perceived to be his contribution to the composition. He was told by Hammer's manager that he wanted "money for doing nothing" and the American Federation of Musicians refused to take his case.³⁰

A more traditional application of digital sampling is the splicing of a short digital phrase into a mix.³¹ Tom Lord-Alge, who won a grammy in 1987 for sound engineering, is a recognized master of musical cutand-paste. At last count, his sample library consisted of more than ten reels of tape.³² He recently used James Brown's scream, taken from another recording, in a record by Orchestral Manoeuvres in the Dark.³³ For a song by The Cars, he pasted in the sound of TV's cartoon character Road Runner running.³⁴ And in his grammy-award-winning work

^{26.} See supra notes 19-22, and accompanying text.

^{27.} Dupler, supra note 22, at 74; Pareles, supra note 14.

^{28.} Pareles, supra note 14.

^{29.} Id.

^{30.} Id.; Dupler, supra note 22, at 1; see also Miller, supra note 24, at 25, col. 2.

^{31.} See Drake, Digital Sampling: Looming Copyright Problems, BC Cycle (UPI), May 8, 1987. Rap music, for example, is based on appropriating bits of music by having a DJ repeatedly play a section of other records as background. In 1986, the Beastie Boys tried to use the Beatles' "I'm Down" as a basis for rap. They were warned to abandon the idea by Michael Jackson, who owns the publishing rights for that song. It is not clear whether the sampling issue for red part of their decision, but the Beastie Boys backed down

^{32.} Miller, supra note 24.

^{33.} Id.

^{34.} Id.

for Steve Winwood, he pasted in the sound of Diana Ross and the Supremes clapping and stomping their feet in "Where Did Our Love Go." Asked about the current industry practice of sampling, Lord-Alge stated, "We're all blatantly stealing from everyone else . . . That's just the way it's done in the '8Os." Arthur Baker, described as one of the kings of audio cut-and-paste, has echoed Lord-Alge's sentiments. Baker is quoted as saying, "This is a new form of music, just like collages. The technology has developed to the extent that if you like the sound, you can have the sound."

Not all agree, however -- James Brown, for one. Not only was his scream taken for Orchestral Manoeuvres, but another New York engineer, Frank Doyle, took a horn blast from one of Brown's song and turned it into a lush, mellow tone for a Japanese singer's love ballad.³⁹ Although Doyle says, "I didn't feel at all like I was ripping James Brown off," Brown sees it differently: he states, "Anything they take off my record is mine. Is it all right if I take some paint off your house and put it on mine? Can I take a button off your shirt and put it on mine? Can I take a toenail off your foot -- is that all right with you?"⁴⁰

Nor are all session musicians pleased with the way things are developing. With the realistic sounds of instruments at a single player's disposal, there is less need to hire musicians on individual instruments. Economically, sampling threatens the employment of studio and concert performers.

At a policy level, the balance is a struggle between the right of artists to control their own work and that of unencumbering the creative opportunities inherent in a new technology. This comment examines many of the issues that will have to be faced when this policy decision is brought into the judicial arena.

^{35.} Id.

^{36.} Id.

^{37.} Id.

^{38.} Id. Baker's allusion to collages is less fortunate than he might think. Collages, that is montages (artistic compositions of juxtaposed heterogeneous images) are not clearly unprotected by copyright law. Infringement actions have been brought against such artists such as Robert Rauschenberg, Larry Rivers and Andy Warhol for incorporating previously published images into their own works of art. These cases were settled before trial. Note, Copyright, Free Speech and the Visual Arts, 93 YALE L.J. 1565, 1568 (1984).

^{39.} Miller, supra note 24.

^{40.} Id.

^{41.} Pareles, supra note 14.

II. THE LEGAL FRAMEWORK: THE COPYRIGHT ACT OF 1976

To date, there has been no test case on any of the myriad of issues involved in sampling. However, there has been a great deal of litigation concerning the related area of sound recording protection under existing copyright laws. Because of the similarities between sound recording and digital sound sampling, it is anticipated that when the courts are faced with digital sound sampling protection, they will adhere to the doctrines laid down in the area of sound recording. Therefore, the following is an examination of sound recording protection under existing copyright laws.

A. Establishing Copyright in Sound Recordings

The Patent and Copyright Clause of the Constitution gives Congress the power to enact legislation to provide copyright protection for limited periods. ⁴² The primary purpose of copyright is not to reward the author, but to secure "the general benefits derived by the public from the labors of authors." ⁴³ Thus, the law of copyright seeks to balance the public desire for free access to intellectual and creative works against the concerns of the author or artist to be financially rewarded for his creativity, with the ultimate goal being to encourage creative endeavor and its dissemination. ⁴⁴

The first Congressional enactment of statutory copyright protection for sound recordings occurred in 1971 as a result of widespread record "piracy" (i.e., unauthorized duplication of sound recordings). Sound recordings are defined as "works that result from the fixation of a series of musical, spoken, or other sounds, but not including the sounds accompanying a motion picture or other audiovisual work, regardless of the nature of the material objects, such as disks, tapes, or other phonorecords, in which they are embodied." The requirement of fixation

^{42.} U.S. CONST., art. I, § 8, cl. 8.

^{43.} Fox Film Corp. v. Doyal, 286 U.S. 123, 127 (1932). See also Twentieth Century Music Corp. v. Aiken, 422 U.S. 151, 156 (1975) ("The immediate effect of our copyright law is to secure a fair return for an 'author's' creative labor. But the ultimate aim is, by this incentive, to stimulate artistic creativity for the general public good."); 1 M. NIMMER, NIMMER ON COPYRIGHT § 1.03 at 1-32 (1987).

^{44.} The law of copyright is codified in 17 U.S.C. §§ 101-118 (1987).

^{45. 1} M. NIMMER, NIMMER ON COPYRIGHT, § 2.10 at 2-141 (1987). See also Act of Oct. 15, 1971 (P.L. 92-140, 85 Stat. 391).

^{46. 17} U.S.C. § 101 (1987).

in a "tangible medium of expression" 47 is met when the sound is embodied in a magnetic tape or a diskette.

Under the current Copyright Act, sound recordings fixed on or after February 15, 1972 constitute protected works.⁴⁹ Sound recordings fixed prior to February 15, 1972, are ineligible for statutory copyright, but may remain the subject of common law copyright or other state law protections.⁵⁰ Prior to January 1, 1978, the only sound recordings eligible for statutory copyright were those which had not only been fixed on or after February 15, 1972, but which also had been published (bearing a proper copyright notice) on or before such date.⁵¹ Thus, a pre-1978 publication of a post-February 15, 1972, sound recording injected it into the public domain absent the required notice.⁵² Such recordings are ineligible for statutory copyright under the present Act, but are still protected under state law.⁵³

Copyright protection subsists only in "original works of authorship." A sound recording copyright does not attach to the underlying work per se, but only to the aural version of such work as fixed on the material object. Prof. Nimmer reads the House Report to suggest that "the required originality may emanate from either 'the performers whose performance is captured,' or from 'the capturing and electronically

^{47.} Id.

^{48.} *Id. Cf.* Innovative Concepts in Entertainment, Inc. v. Entertainment Enterprises Ltd., 576 F.Supp. 457 (E.D.N.Y. 1983) (a computer chip may constitute a sound recording if sounds are fixed therein).

^{49. 17} U.S.C. §§ 102(a)(7), 301(c) (1987). Public distribution constitutes publication. See 1 M. NIMMER, 1987 NIMMER ON COPYRIGHT, § 406[A][1] at 4-34, § 401[A][1] at 4-3 (1987).

^{50.} See Dawling v. U.S., 473 U.S. 207, 211 n.4 (1985) (dictum) (Congress extended federal copyright to sound recordings fixed after February 15, 1972).

^{51.} See 1 M. NIMMER, NIMMER ON COPYRIGHT, § 2.10[A] at 2-143 nn.15-19, § 4.06[A] at 4-34 (1987). See also The Sound Recording Amendment, P.L. No. 92-140, § 3, 85 Stat. 391 (1971) [hereinafter The Sound Recording Amendment]. Publication required public distribution of the recording. Furthermore, to trigger statutory copyright protection the copies also had to bear a form of notice. This form of notice was the same as that required under the current Act: the letter P in a circle, the year of first publication of the sound recording, and the name of the owner of the copyright. But note, such a recording could obtain statutory copyright by registration as an unpublished work.

^{52. 1} M. NIMMER, NIMMER ON COPYRIGHT, § 14.06[A] at 4-35 (1987).

^{53.} Id. If such recordings were published and did bear the proper notice, they will continue to be protected under statutory copyright until 75 years after publication, or until 50 years after the author's death. 1 M. NIMMER, NIMMER ON COPYRIGHT, § 4.01[B] at 4-6 nn.29-30 (1987). For common law protections, see Ringer, The Unauthorized Duplication of Sound Recordings, U.S. Copyright Office Study No. 26.

^{54. 17} U.S.C. § 102(a) (1987).

^{55. 1} M. NIMMER, NIMMER ON COPYRIGHT, § 2.10[A] at 2-143 (1987).

processing the sounds, and compiling and editing them to make the final sound recording, or more generally, from both."⁵⁶

B. Authorship of Sound Recordings under Copyright Law

The right to claim copyright protection resides in the author of an original work.⁵⁷ "Authorship" of a sound recording, according to the House Report, can be established by acts of "capturing and electronically processing the sounds, and compiling and editing them to make the final sound recording."⁵⁸

The creator of the sound that is to be reproduced (the performer) must usually give his or her permission for the creation and copyrighting of the sound recording, although such rights can be waived via contract.⁵⁹ Once the creator of a sound recording has acquired the requisite permissions, he or she can create an independently copyrightable "fixation" and claim author status for that work.⁶⁰

However, the author of a sound recording is not necessarily the one who claims the copyright. Frequently the relationship between the record producer and the performers is that of independent contractor. Absent an employment relationship or the express assignment of copyright from the performers to the record producer, the resulting ownership of a sound recording copyright will either be exclusively in the performing artist or, where there is an original contribution by the sound engineers as employees of the producer, a joint ownership between the record producer and the performing artists. A producer for a record company will usually undertake a blanket assignment of the rights to his or her work to the label. Similarly, a musician who is recorded specifically for the purpose of producing samples will normally assign all the rights in the recording to the company or individual producing the samples.

^{56.} *Id.* quoting H.R. REP. No. 94-1476, 94th Cong., 2d. Sess. 1 (1976) [hereinafter H.R. REP.].

^{57. 1} M. NIMMER, NIMMER ON COPYRIGHT, § 2.10[A][3] at 2-149 (1987).

^{58.} H.R. REP., supra note 56, at 56.

^{59.} Barry, Legal Aspects of Digital Sound Sampling, Recording Engineer/Producer, Apr. 1987, at 60-61.

^{60.} Id

^{61. 1} M NIMMER, NIMMER ON COPYRIGHT § 210[A][3] at 2-150.

^{62.} Id.; See also 17 U.S.C. §§ 201-05 (1987).

^{63.} Barry, supra note 59.

^{64.} Id. As an example, Frank Zappa hires musicians at \$100 an hour to play samples into the Synclavier. The musicians sign releases which describe the purpose of the session. Album information credits the musicians who were sampled. See Torchia, Sampling Realities: Frank Zappa's Experience With His Recent 'Jazz From Hell' Album, Recording Engineer/Producer, Apr. 1987, at 64.

An author is automatically protected by statutory copyright when he fixes the work in a tangible medium.⁶⁵ Unlike patent protection, neither failure to register or post deposit will destroy a subsisting copyright.⁶⁶ Nevertheless, registration and deposit have legal significance: namely, an owner cannot sue for copyright infringement until he or she has registered the copyright.⁶⁷ Registration is accompanied by submission to the Copyright Office of a copy of the sound recording (two copies are required if the work has been published), along with a completed Form SR and a check for the registration fee.⁶⁸

C. Rights Granted Under Copyright Law to the Sound Recording Owner

The rights which may be claimed by the copyright owner of a sound recording are more limited in scope than those which may be claimed in connection with other types of copyrightable works.⁶⁹ These rights under the 1976 Copyright Act are as follows:

To reproduce the copyrighted work in copies or phonorecords (the right to duplicate the sound recording in a fixed form that directly or indirectly recaptures the actual sounds fixed in the recording);

To prepare derivative works based on the copyrighted work (the right to create a derivative work in which the actual sounds fixed in the sound recording are rearranged, remixed, or otherwise altered in sequence or quality);

To distribute copies or phonorecords of the work to the public by sale or other transfer of ownership, or by rental, lease or lending.⁷⁰

The duration of the rights under copyright for sound recordings created after January 1, 1978 is the life of the author and fifty years after the author's death.⁷¹ If the work is made for hire (a sound recording made in the course of a producer's employment by a record company), the rights endure for seventy-five years from the date of publication or one hundred years from the date of creation, whichever is shorter.⁷²

^{65. 17} U.S.C. § 102(a) (1987).

^{66. 17} U.S.C. § 408(a) (1987).

^{67. 17} U.S.C. § 411(a) (1987). It is a defense to an infringement suit that the plaintiff has failed to register prior to instituting the action. Furthermore, statutory damages are not recoverable for infringement that occurs prior to registration. 17 U.S.C. § 412(2). Registration also plays an important function under 17 U.S.C. § 405(A)(2) in curing a failure to properly affix notice of copyright to publicly distributed copies.

^{68.} Barry, supra note 59, at 62.

^{69. 2} M. NIMMER, NIMMER ON COPYRIGHT, § 8.05 (1987).

^{70. 17} U.S.C. §§ 106 and 114 (1987). See also, 17 U.S.C. § 109 (1987) (other limitations on these rights). There is no public performance right.

^{71. 17} U.S.C. § 302(a) (1987).

^{72. 17} U.S.C. § 302(c) (1987). For duration of copyright, generally, see 17 U.S.C. §§ 301-05 (1987).

D. Infringement Elements Under Copyright Law

The threshold of "originality" required for copyrightability is very low. Originality is undefined in the 1976 Act, but the legislative history makes clear that the pre-existing case law on originality was meant to apply without change.⁷³ Quoting from the House Report: "This standard [of originality] does not include requirements of novelty, ingenuity, or esthetic merit, and there is no intention to enlarge the standard of copyright protection to require them."

Under originality case law, a work need not be artistic or novel to achieve protection.⁷⁵ Originality denotes only enough definite expression so that one may distinguish authorship, *i.e.*, there must be an identifiable element of personality.⁷⁶

In discussing copyright eligibility, Nimmer writes the following: However, it must be recalled that even most commonplace and banal results of independent effort may command copyright protection provided such independent effort is quantitatively more than minimal It appears, then, that there is a reciprocal relationship between creativity and independent effort. The smaller the effort (e.g. two words) the greater must be the degree of creativity in order to claim copyright protection. ⁷⁷

Thus, in Smith v. George E. Muehlebach Brewing Co., the court rejected the plaintiff's claim to copyright in the words "Tic, Toc, Tic, Toc, Time for Muehlebach" for lack of the requisite degree of originality. The court found the jingle "too simple" to be copyrightable. However, the dictum in the opinion reveals the court's hesitancy to grant copyright was in part based on the use of material in the public domain rather than simply the brevity of the composition. "[The jingle] is a mere copy of what has been in the public domain of all music for centuries, and that it may be reproduced, mechanically, by a clock, and is, therefore, standing alone, not fit material or subject for copyright, should need no fortifying authority." However, the court also acknowledges that if there had been some originality in the arrangement of the musical notes, they would have found for the plaintiff. 81

^{73.} H.R. REP., supra note 56, at 51; Hutchinson Telephone Co. v. Fronteer Directory Co., 770 F.2d 128, 131 (8th Cir. 1985); Toro Co. v. R & R Products Co., 787 F.2d 1208, 1212 (8th Cir. 1986).

^{74.} H.R. REP., supra note 56, at 51.

^{75.} Mazer v. Stein, 347 U.S. 201 (1954).

^{76.} Lithographic Co. v. Saron, 111 U.S. 53 (1884).

^{77. 1} NIMMER, NIMMER ON COPYRIGHT, § 2.01[B] at 2-15 (1987).

^{78. 140} F. Supp. 729 (1956).

^{79.} Id.

^{80.} Id. at 732.

^{81.} Id. at 732.

III. APPLICATION OF COPYRIGHT LAW TO DIGITAL SOUND SAMPLES

A. Are Digital Sound Samples Subject to Copyright Protection?

An examination of copyright law reveals that there is no clear-cut language that refers to digital sampling. Nor have there been any test cases which would serve to define the bounds of protection afforded the copyright owner when his sounds have been sampled without his authorization. One commentator suggests that when the issue does arise, the courts will apply a genesis test for determining whether a block of data is a sound recording. Under the "genesis test" suggested by Barry, if the data "began life" in the analog world as a pattern of sound waves, the data will be considered a sound recording for copyright purposes. A digital representation of a waveform generated within a computer by an operator using a synthesis program would be a literary work, a signal processing program would be a computer program, [and] a sample of an acoustic piano would be a sound recording."

On the other hand, a computer program is defined under the 1976 Act as a "set of statements or instructions to be used directly or indirectly in a computer in order to bring about a certain result." Because samples are merely data and do not "bring about" a result, they are probably not programs under the Copyright Act, no more than are word processing files or musical notation files. Furthermore, the congressional policy regarding sound recordings dictates against a court finding that a digital sample is analogous to other digital representations of literary works (such as a word processing file containing a short story.)

^{82.} Barry, supra note 59, at 62.

^{83.} Id.

⁸⁴ I*d*

^{85.} Barry, supra note 59, at 62. See 17 U.S.C. § 101 (1987); Apple Computer, Inc. v. Franklin Computer Corp., 714 F.2d 1240, 1248 (1983).

^{86.} Barry, supra note 59, at 62.

^{87.} See, e.g., H.R. REP., supra note 56, at 56.

B. Elements of Infringement

SOUND SAMPLE ORIGINALITY

Not every sample will possess the requisite degree of originality to demand copyright protection, even where the author places notice of the intent to do so. The sample taken from the live performance of a drummer, using a standard drum set, which is then edited and used as musical structure (i.e., background rhythm,) is unlikely to stand on its own as an identifiable work of authorship. But the "signature sample", an identifiable sound of an artist taken live or from a recording, which is then dropped into a new musical composition, may possess the required degree of personality to warrant copyrightability. One note sung by Maria Callas might serve as an example of a signature sample, that even if altered (for example, raised an octave) might be clearly identifiable as her creation. In this context, the question is whether the use of such a sample, clearly possessing the required degree of originality, should be actionable if its use in another's musical work is unauthorized.

One of the critical factors concerning originality is the setting in which the use of the sample appears. The commercial nature of the rock music industry may deserve consideration, especially when many "rock standards" are finding their way into the commercial jingles. Commercial sounds, however they may be defined, should be accorded less protection than those of greater merit. A commercial sound, such as Phil Collins' snare drum sound, may possess the requisite degree of originality to be copyrightable within the context of his own composition, but taking them from its element and transplanting them into a commercial jingle as an isolated feature, it may not constitute an actionable infringement.

An apt analogy is to commercial documents. Nimmer states that "with respect to commercial documents, for example, the similarity probably must be more extensive than in the case of more artistic works in order to justify a finding of substantial similarity." He follows with a footnote observation that "if the quantum of originality is very modest, it may be that more than a 'substantial similarity' should be necessary for a finding of infringement." ⁸⁹

^{88. 1} M. NIMMER, NIMMER ON COPYRIGHT § 143.2 (quoting Universal Athletic Sales Co. v. Salkeld, 511 F.2d 905, 9087 (3rd Cir. 1975)).

^{89. 1} M NIMMER, NIMMER ON COPYRIGHT § 143.2 n.107 (quoting Thomas Wilson & Co. v. Irving J. Dorfman Co., 268 F.Supp. 711 (S.D.N.Y. 1967), aff'd 433 F. 2d 409 (2d Cir. 1970)).

In making such a distinction between commercial and noncommercial sounds, a familiar question in copyright returns in a different guise. While the courts will not require a high level of creativity to identify a creation as a "work of art" deserving copyright protection, they are still given wide leeway in determining that an object is not a "work of art."90 A cardboard star with a circular center (for insertion of a photograph) did not constitute a "work of art" while a lace design of a different plaintiff in a different court was held to be a "work of art."92 The simulation of an antique telephone was held a "work of art," but an arrangement of a plastic flower corsage was not. 93 Thus, Nimmer concludes, "no very precise standard can be evolved which will determine in advance with any certainty whether certain board-line objects will be regarded as works of art 'A thing is a work of art if it appears to be within the historical and ordinary conception of the term art." A paraphrase of this standard is likely to be used to distinguish commercial from non-commercial sounds. Since commercial sounds may be more readily identifiable than their non-commercial counterparts, the suggested paraphrasing of the standard would be that a musical work is commercial if it has been so regarded within the historical and ordinary concept of the term commercial.

2. SOUND SAMPLE OWNERSHIP

The tests for establishing copyright and avoidance of infringement are not the same. To establish infringement, a plaintiff must prove his or her ownership of the copyright and copying by the defendant. With respect to ownership, the copyright registration certificate constitutes prima facie evidence in favor of the plaintiff. The exclusive rights of the owner of copyright in a sound recording do not extend to the making or duplication of another sound recording that consists entirely of an independent fixation of other sounds, even though such sounds imitate or simulate those in the copyrighted sound recording. Unlike the copyright protection extended to other works under the Act, only those sound reproductions that directly or indirectly recapture the actual

^{90. 2} NIMMER, NIMMER ON COPYRIGHT § 2.08[B] at 2-84 (1987).

^{91.} Bailie v Fisher, 258 F.2d 425 (D.C. Cir. 1958).

^{92.} Thomas Wilson & Co. v. Irving J. Dorfman Co., 433 F.2d 409, 411 (2d Cir. 1970).

^{93.} Gardenia Flowers, Inc. v. Joseph Markovits, Inc., 280 F. Supp. 776 (S.D.N.Y. 1968).

^{94. 2} NIMMER, NIMER ON COPYRIGHT § 2.08[B] at 2-85 (1987) (quoting Bailie v. Fisher, 258 F.2d 630, 635 (9th Cir. 1953)).

^{95. 3} M. NIMMER, NIMMER ON COPYRIGHT, § 13.01[A] at 13-4 (1987).

^{96.} Id.

^{97. 17} U.S.C. § 114(b) (1987). See Barry, supra note 59, at 62.

sounds fixed in the recording are prohibited.⁹⁸ Imitation or simulation of a sound recording is expressly excluded from the definition of infringing activities.⁹⁹ A literal copy of a sound recording must be made in order to constitute infringement.¹⁰⁰ Samples are literal copies.

3. COPYING SOUND SAMPLES AND THE REQUIREMENT OF SUBSTANTIAL SIMILARITY

Copying is an essential element of infringement, and substantial similarity between the plaintiff's and defendant's works is an essential element in establishing copying. ¹⁰¹ Considering the unique nature of sound samples and the possibilities for alteration by digitally reprogramming the stored data through keyboard manipulation, establishing literal copying is not always a simple task. Frank Zappa suggests the use of a Synclavier to print out 3-dimensional graphic depiction of a given sound: ¹⁰² "Even with echo modification and so forth, there could be enough tell-tale waveform intonation to identify a given sample." ¹⁰³ The determination of the extent of similarity which will constitute infringement has been left to the courts to define, resulting in considerable confusion in the use of terminology.

Under general copyright law (which applies to literary works, musical works, and the like), a finding of infringement requires (1) absence of independent production, and either (2) nonverbatim use at an impermissibly low level of abstraction, or (3) excessive verbatim quoting of the copyrighted work. Of Some courts use the single term "copying" as a shorthand for both the first and second issues. Others use the term "copying" to stand only for the first issue and refer to "substantial similarity" when investigating the second and third issues. Hertman, there is widespread uncertainty as to an appropriate test for establishing substantial similarity. Among the various tests that have been applied by the courts are the "pattern test," the "demand test," the "ordinary observer test," the "audience educated to the medium test," the "iterative test" -- and all of these are subject to the court's interpretation of

^{98. 17} U.S.C. §§ 106, 114 (1982).

^{99.} Id.

¹⁰⁰ Id.

^{101. 3} M. NIMMER, NIMMER ON COPYRIGHT, § 13.03[A] at 13-20 (1987).

^{102.} Torchia, Sampling Realities: Frank Zappa's Experience with His Recent 'Jazz From Hell' Album, RECORDING ENGINEER/PRODUCER, Apr. 1987, at 64.

^{103.} *Id.*

^{104.} Comment, Copyright Fair Use - Case Law and Legislation, 1969 DUKE L.J. 73, 78-9 (quoting M. NIMMER, COPYRIGHT (§ 141.1 (1966)).

^{105.} Id.

^{106.} Id.

what constitutes "fair use," a concept no less hazy in its application than that of "substantial similarity." ¹⁰⁷

Since only literal copying constitutes sound recording infringement, it is not necessary to apply the various tests to determine the level of abstraction at which the line between idea and expression has been crossed. By definition, the similarity of expression is complete. The question is at what point does the appropriation constitute infringement? Although it is clear one cannot copyright a musical note, is it true that an unauthorized use of a sample of a note sang by Maria Callas is unactionable? What of the unauthorized use of four notes sung by Callas? What if these four notes are comparable to the opening phrase of Beethoven's Fifth Symphony? "Substantial similarity," while still the applicable test, becomes something of a misnomer. The similarity is evident and intended; the question is whether such copying is an infringement of the author's rights, given the brevity of the material taken. Nimmer refers to this problem as that of "fragmented literal similarity". 108

4. FRAGMENTED LITERAL SIMILARITY

Although quantitative tests have been applied in musical infringement cases in the past, the disparity in results warn against finding any

^{107.} See, e.g., Nichols v. Universal Pictures Corp., 45 F.2d 119 (2d Cir. 1930) (pattern test); Smith v. Little, Brown & Co., 245 F. Supp. 451 (S.D.N.Y. 1965) (pattern test); Rosemont Enterprises, Inc. v. Random House, Inc., 366 F.2d 303 (2d Cir. 1966) (demand test); Southern Bell Tel. & Tel. v. Associate Tel. Directory Publishers, 756 F.2d 801 (11th Cir. 1985) (demand test); Harold Lloyd Corp. v. Witwer, 65 F.2d 1 (9th Cir. 1933) (ordinary observer test); Arnstein v. Porter, 154 F.2d 464 (2d Cir. 1946) (modified ordinary observer test, expert analysis entertained only on the question of copying, not on substantiality); Sid & Marty Kroft Television v. McDonald's Corp., 562 F.2d 1157 (9th Cir. 1977) (further refinements to ordinary observer test); Atari, Inc. v. North American Philips Consumer Electronics, 672 F.2d 607 (7th Cir. 1982) (audience educated to medium test); and E.F. Johnson Co. v. Uniden Corp. of America, 623 F. Supp. 1485 (D.C. Minn. 1985) (iterative test). See also Sherman, Musical Copyright Infringement: The Requirement of Substantial Similarity, 22 Copyright L. Symp. (ASČAP) 81 (1977); Metzger, Name That Tune: A Proposal for an Intrinsic Test of Musical Plagiarism, 29 Copyright L. Symp. (AS-CAP) 139 (1984). On the issue of fair use, see generally 3 M. NIMMER, NIMMER ON COPY-RIGHT § 13.05 (1987); Comment, Copyright Fair Use - Case Law and Legislation, 1969 DUKE L.J. 73; Lawrence, Fair Use: Evidence of Change in a Traditional Doctrine, 27 Copyright L. Symp. (ASCAP) 71 (1982).

^{108. 3} M. NIMMER, NIMMER ON COPYRIGHT, § 13.03[A][2] at 13-35 (1987).

rule of thumb for determining what is and what is not "de minimis." 109 Most courts and commentators have taken a qualitative approach to the question:

The qualitative measure of substantial similarity has been phrased in various ways: that the court should determine whether the defendant appropriated 'the meritorious part of the song,' or 'material of substance and value in plaintiff's work,' or 'the very part that makes [the complaining work] popular and valuable,' or 'that portion of [the complaining work] upon which its popular appeal, and, hence its commercial success depends,' or 'what is pleasing to the ears of lay listeners.' 110

In the Miami Vice theme song dispute, Jan Hammer's manager was quoted as saying that David Earle Johnson "didn't do anything." ¹¹¹ Depending on the length of the sample and the actual music recorded, Johnson may have contributed the artistic keystone to the piece, even though it was but a small motive. ¹¹² Or, if only samples of different beats were taken and later re-edited and rendered into a composition by Hammer, Johnson might still maintain that the sounds from his unique instruments were in his control. Whether possession of a rare instrument would imbue a sample with sufficient personality to meet the minimum originality of copyright is just one question raised.

In the first instance, whether the frequent repetition of a motive throughout a piece can support an infringement suit has not been completely resolved by the courts. In *Davilla v. Harms, Inc.*, ¹¹³ the court held that where the similarities in a small motive are slight, frequent repetition throughout the work will not support an infringement suit. However, in *Boosey v. Empire Music Co.*, ¹¹⁴ a phrase consisting of only six notes was deemed to be the prominent musical feature in the plaintiff's work; copying it constituted infringement. The holding in *Boosey* has been interpreted to mean that if "the portion copied is the portion of plaintiff's work that makes it valuable - artistically and commercially - the accused work will be deemed substantially similar to the

^{109.} See, e.g., Marks v. Leo Feist, Inc., 290 F. 959, 960 (2d Cir. 1923) (responsible for the "Six Bar Rule"; case implies that a taking of only six bars is not actionable); Northern Music Corp. v. King Record Distributing Co., 105 F. Supp. 393 (S.D.N.Y. 1952) (similarity relating to four bars actionable); Gingg v. Twentieth Century-Fox Film Corp., 56 F. Supp. 701 (S.D. Cal. 1944) (similarities related to one line, approximately two to four bars, no actionable infringement); Robertson v. Batten, Barton, Durstine & Osborn, Inc., 146 F. Supp. 795 (S.D. Cal. 1956) (similarity in two to four bars actionable). See also Sherman, supra note 107, at 104.

^{110.} Sherman, supra note 107, at 104 (footnotes omitted).

^{111.} Dupler, supra note 22, at 74.

^{112.} A motive is a short musical figure that is not quite a melody.

^{113. 36} F. Supp. 843 (S.D.N.Y. 1940).

^{114. 224} F. 646 (S.D.N.Y. 1915).

complaining work." ¹¹⁵ In *Brodsky v. Universal Pictures Co.*, ¹¹⁶ and *Carew v. R.K.O. Radio Pictures, Inc.*, ¹¹⁷ the repetition of a motive did not result in it being found substantial enough to be protected.

In all of the cases discussed above, the decisions did not ultimately turn on whether the motive was in and of itself "de minimis;" but rather, whether it had merit in and of itself (i.e., whether the motive was musically significant in its own right). It is likely that under the audience or ordinary observer test, ¹¹⁸ a jury would find the lead-in drumbeats of Miami Vice important, or "what is pleasing to the ears of lay listeners". ¹¹⁹ To quote Prof. Nimmer, "In such circumstances the defendant may not claim immunity on the ground the infringement is such a little one." ¹²⁰

The question remains, however, as to what happens with such motives when they are not originally contained in a larger piece. If it is a "catchy" sample, will this suffice to afford its author statutory copyright protection if the other requirements of copyright are fulfilled (registration and notice)? Theoretically, the question turns on whether the similarity relates to a substantial portion of the plaintiff's work, not whether the material constitutes a substantial portion of defendant's work. ¹²¹ In the typical case, the trier of fact is instructed not to inquire into the value of the allegedly appropriated portion standing alone, but rather into its importance to the effect of the complaining song. ¹²² The oft-quoted rule is "no plagiarist can excuse the wrong by showing how much of his work he did not pirate." ¹²³ Whether this rule will be imported into cases where the "complaining song" is little more than a phrasing remains to be seen.

Furthermore, because the sampled motive is only "catchy" by right of hindsight now that it has been incorporated into a winning piece, the author of this work might well protest a finding of infringement since

^{115.} Sherman, supra note 107, at 106.

^{116. 149} F.2d 600 (2d Cir. 1945).

^{117. 43} F. Supp. 199 (S.D. Cal. 1942).

^{118.} See supra note 107, and accompanying text.

^{119.} Arnstein v. Porter, 154 F.2d 464, 473 (2d Cir. 1946).

^{120. 3} M. NIMMER, NIMMER ON COPYRIGHT, § 13.03[A][2], at 13.38 to 13-38.1 (1987) (footnote omitted).

^{121.} Id. at 13-37. If it were otherwise, the defendant would always have a defense if the work were long enough.

^{122.} Sherman, *supra* note 107, at 111. Sherman urges that in such cases expert witnesses should be called upon to advise the court about which portions of the complaining work are musically significant. Most commentators are critical, with good reason, of the ordinary observer test. Regrettably, the audience-educated-to-the-medium test has rarely been employed by the courts.

^{123.} Sheldon v. Metro-Goldwyn Pictures Corp., 81 F.2d 49, 56 (2d Cir. 1936).

without his effort the motive would never have had anything more than potential. One possibility is that even where infringement is found, the damages will be limited to the statutory minimum.¹²⁴

C. Defenses

ELECTRONIC ALTERATION OF A DIGITAL SAMPLE AS A DEFENSE

Where there is literal copying, there is substantial similarity. Subsequent electronic alteration of the copied portion provides no defense. In *U.S. v. Taxe*, ¹²⁵ four defendants were convicted of willful infringement of copyrights for profit. Richard Taxe and his co-conspirators purchased stereo records of eight-track stereo tape recordings manufactured by major record companies on the open market. ¹²⁶ The defendants used specially modified electronic tape equipment to re-record the music. They added new sounds produced by synthesizers and eliminated or reduced the volume of other sounds. The altered music was then sold on eight-track tapes to the public via a national advertising campaign. ¹²⁷

The Court of Appeals upheld the criminal conviction, explaining that although the owner of the sound recording copyright is not expressly vested with the right to produce derivative works, he can protect his right of reproduction from persons who produce an audibly equivalent work by re-recording. 128

Thus, if copyright protection was extended to cover such samples, the alteration of James Brown's horn blast into a lush, mellow tone 129 would be deemed a derivative work. Given the possibilities of this new technology, it is conceptually possible to so alter a given sample that any

^{124.} Such was the decision in Fred Fisher, Inc. v. Dillingham, 298 F. 145 (S.D.N.Y. 1924) which involved a copying of an accompaniment rather than a melody. Judge Learned Hand, finding note-for-note similarity and the repetition of the copied phrase in the accused work, felt obliged to find for the plaintiff. However, he also found that the plaintiff's piece won its success because of its melody, not because of the copied accompaniment. He called the case "a trivial pother" and awarded only the statutory minimum damages of \$250. Sherman, supra note 107, at 106-07.

^{125. 380} F. Supp. 1010 (C.D. Cal. 1974), aff'd 540 F.2d 961 (9th Cir. 1976), cert. denied 436 U.S. 918 (1978). For a discussion of the fixation issues in this case, see 1 M. NIMMER, NIMMER ON COPYRIGHT, § 2.10[A][1], at 2-142 n.15 (1987).

^{126. 540} F.2d at 964.

^{127.} *Id.* The court continued: "The jackets for the individual tapes described the enclosed recordings as 'Today's hits as done by your favorite artists. Custom simulated by Sound 8 singers and musicians." *Id.*

^{128.} *Id.* at 965 n.2. This unexpected holding on the right to create derivative works is due to the expanded concept of fixation applied by the Court. 3 NIMMER, NIMMER ON COPYRIGHT, § 13.03[A][2] at 13-35 (1987).

^{129.} See supra note 39, and accompanying text.

marked similarities to the original sound would be lost. Nevertheless, if through the use of extrinsic evidence, the plaintiff could show that the altered sounds were his own, a suit for infringement would protect his right of reproduction. Even so, the courts in considering the use of the sample within the context of the derivative work could deem its importance trivial and limit recovery, if any, to the statutory minimum.

FAIR USE AS AN AFFIRMATIVE DEFENSE

The doctrine of fair use has been called "the most troublesome in the whole law of copyright." One definition of fair use is "a privilege in other than the owner of the copyright to use the copyrighted material in a reasonable manner without his consent, notwithstanding the monopoly granted to the owner by the copyright." The 1976 Copyright Act transformed the common law defense of fair use into a statutory right. However, this codification was "intended to restate the present [i.e., pre-1978] judicial doctrine of fair use, not to change, narrow, or enlarge it in any way." 133

The legislative history of the copyright statute suggests that Congress intended the defense to be a flexible doctrine to accommodate rapid technological change. Nevertheless, the scope of fair use under present judicial doctrine is narrower in the commercial context than in the realm of non-profit activity. In short, "any commercial use tends to cut against a fair use defense." 136

In marshalling a fair use defense, a defendant's strongest argument would be found in the economic component of fair use analysis which examines the effect of the allegedly infringing use on the potential market for or value of the copyrighted work.¹³⁷ Arguably, splicing a

^{130. 3} M. NIMMER, NIMMER ON COPYRIGHT, § 13.05 at 13-63 (1987) (quoting Dellar v. Samuel Goldwyn, Inc., 104 F.2d 661 (2d Cir. 1939)). "The [fair use] doctrine is entirely equitable and is so flexible as virtually to defy definition." Time, Inc. v. Bernard Geis Assocs., 293 F. Supp. 130 (S.D.N.Y. 1968).

^{131.} H. BALL, THE LAW OF COPYRIGHT AND LITERARY PROPERTY 260 (1944).

^{132.} See 17 U.S.C. § 107 (1987).

^{133.} H.R. REP., supra note 56, at 66.

^{134. &}quot;The bill endorses the purpose and general scope of the judicial doctrine of fair use... but there is no disposition to freeze the doctrine in the statute, especially during a period of rapid technological change. Beyond a very broad statutory explanation of what fair use is and some of the criteria applicable to it, the courts must be free to adapt the doctrine to particular situations on a case-by-case basis." H.R. Rep., supra note 56, at 55-56.

^{135.} See 3 M. NIMMER, NIMMER ON COPYRIGHT § 13.05[A] at 13-70, and nn.24-26.

^{136.} Triangle Publications, Inc. v. Knight-Ridder Newspapers, Inc., 626 F.2d 1171, 1175 (5th Cir. 1980).

^{137.} See, e.g., Rosemont Enterprises, Inc. v. Random House, Inc., 366 F.2d 303 (2d Cir. 1966), cert. denied, 385 U.S. 1009 (1967) ("the public welfare will not be defeated if the use of the copyrighted work by another does not in fact reduce the economic benefit

digital sample of another performer's work into a new creation may actually generate additional demand for the "infringed owner's" work. More importantly, to deny a fair use defense would be to effectively eliminate the use of digital splicing as an avenue of creative expression. To do so would go against the dominant purpose of the Copyright Act which is to encourage creative endeavor and its dissemination.

The clearest expression of this concern with the underlying constitutional policies is to be found in *Berlin v. E.C. Publications, Inc.*:

While indeed broad, the area in which a copyright proprietor is permitted the exclusive commercial benefit of his copyrighted work is clearly not without limit. In the words of Article I, Section 8, of the Constitution, copyright protection is designed "To promote the Progress of Science and the useful Arts," and the financial reward guaranteed to the copyright holder is but an incident of this general objective, rather than an end in itself. As a result, courts in passing upon particular claims of infringement must occasionally subordinate the copyright holder's interest in a maximum financial return to the greater public interest in the development of art, science and industry. ¹³⁸

The decision in *Berlin* has been interpreted to mean that if the initial inquiry shows that non-consensual use has caused no diminution in demand, the use will be fair, eliminating the need to consider the nature of the use. ¹³⁹ If diminution in demand did occur, only then will the court consider the nature of the use to determine whether the economic interest of the copyright holder is to be subordinated. ¹⁴⁰ As a general rule, if the defendant's work, although containing substantially similar material, performs a different function than that of plaintiff's, regardless of medium, the defense of fair use may be invoked. ¹⁴¹ Showing that one's work performs a different function and effects no diminution in demand for the plaintiff's work, however, may pose provocative questions. This is especially true where the plaintiff's work is found in a context the artist finds insulting or disparaging. If the plaintiff's work is

to the individual copyright holder"). See also, Flick-Reedy Corp. v. Hydro-Line Mfg. Co., 351 F.2d 546 (7th Cir. 1965); Mathews Conveyor Co. v. Palmer-Bee Co., 135 F.2d 73 (6th Cir. 1943); Addison-Wesley Publishing Co., Inc. v. Brown, 23 F. Supp. 219 (E.D.N.Y. 1963) all holding that an important factor in the determination of fair use is whether the unauthorized use causes a diminution in demand for the copied work.

^{138. 329} F.2d 541, 543-44 (2d Cir. 1964), cert. denied, 379 U.S. 822 (1964). Berlin concerned reproduction of a rhyme scheme and some lines verbatim in a Mad Magazine spoof. Fair use as a defense has frequently been upheld in parody cases.

^{139.} Comment, Copyright Fair Use - Case Law and Legislation, 1969 DUKE L.J. 73, 95-96. See also, 3 M. NIMMER, NIMMER ON COPYRIGHT, § 13.05[B] (1987). 140. Id.

^{141. 3} M. NIMMER, NIMMER ON COPYRIGHT, § 13.05[B], at 13-86 (1987).

used in a satirical manner, defendant might argue fair use on this ground as well.

3. CLEAN-HAND DOCTRINE AS A DEFENSE

Samples are receiving their widest use in the world of rock music. If Lord-Alge is correct in saying that all the artists are "stealing" from one another, 142 it stands to reason that principles of estoppel should come into play where one artist sues another for infringement of his copyrighted sounds. If that artist is likewise using the sounds of other artists without authorization, then he or she should not be heard to complain that others are treating his work similarly. Thus, something of the "clean hands" doctrine would be imported into this area of copyright law as a potential affirmative defense.

D. Remedies

The remedies for infringement are injunctions against further copying, actual damages and recovery of the infringer's profits, and/or statutory damages. 143 Section 506(a) of the Copyright Act provides that "any person who infringes a copyright willfully and for purposes of commercial advantage or private financial gain" has committed a criminal offense. 144 The prescribed penalty depends upon the nature of the work infringed and on the particular acts of infringement involved. 145 Statutory damages (ranging from \$250 to \$10,000) may be awarded in lieu of actual damages and defendant's profits, but only if the plaintiff has registered the work with the Copyright Office within certain time limits 146

However, as previously stated, courts may limit awards in this area to statutory minimums.¹⁴⁷ This would likely serve as a de facto judicial acknowledgement of non-copyright protection to musicians, because awards would not justify the cost of the litigation.

CONCLUSION

Although only a few of the major issues involved in digital sampling have been explored within this comment, the complexities of the problems presented by this new technology show that no easy

^{142.} See supra note 36, and accompanying text.

^{143.} See 3 M. NIMMER, NIMMER ON COPYRIGHT, ch. 14 (1987).

^{144. 17} U.S.C. § 50b(a) (1987).

^{145.} See 3 M.NIMMER, NIMMER ON COPYRIGHT, § 15.01, at 15-1 (1987).

^{146.} Barry, supra note 59, at 67.

^{147.} See supra note 125.

conclusions can be reached. It is necessary to strike a balance between the right of the artist to control his work and the unencumbering of creative opportunities made possible through this new technology. It remains to be seen how this new technology and its applications will be treated by the courts. In the interim, artists wishing to protect their work against illicit sampling should be encouraged to follow Frank Zappa's example. Zappa's "Jazz From Hell" album is the first album that claims copyright protection against unauthorized sampling. His notice, which he designed, reads:

1986 Pumpko Industries, Ltd. All rights reserved. Unauthorized reproductions/sampling is a violation of applicable laws and subject to criminal prosecution. Manufactured and distributed by Capitol Records, Inc., a subsidiary of Capitol Industries-EMI, Inc. Printed in U.S.A.

Zappa believes "If you're going to do sampling, you have to give some consideration to the people who have already gone through a lot of time and trouble to put specialized sounds on records, and not be a bandit and steal those things from somebody else." But then again, according to Picasso, "Good artists copy; great artists steal." Unfortunately, the law is no more decided.

^{148.} Torchia, supra note 102, at 64.

^{149.} Id.