

# The SAGE Handbook of Popular Music



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# Power, Production and the Pop Process

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## INTRODUCTION

One striking aspect of the history of the music business is that it has always greeted technological innovation – from piano rolls to radio, from cassettes to CDs, and certainly the internet – with suspicion. This, perhaps, should not be all that surprising since innovation always threatens to alter power relations – at times in the competition among cultural producers themselves and at times in the balance of power between producers and consumers. Indeed, an historical overview of the music industry reveals major periods of transition as new sound carriers and modes of consumption gain acceptance (Garofalo, 1999).

In every era, the goals of the music industry have remained essentially the same: to connect music, but not necessarily musicians, to as many listeners as possible and to turn a profit in so doing. The means to these ends have entailed trying to make music ubiquitous in all aspects of everyday

life including shopping for food, riding in elevators, and being placed on hold during a telephone conversation. Industry technophobia notwithstanding, sound recording has been incorporated into every new communications technology to reach the marketplace since sheet music – records, audio and video tape, CDs, radio, film, television, computers, all manner of hand-held communication devices, and the internet – and music-related corporations have ended up profiting handsomely from every new music technology of the twentieth century. Finally music has been enshrined in a system of intellectual property law that generally favors the economic well-being of major corporations over that of consumers and the vast majority of musicians.

In the latter half of the twentieth century, power in the music business accrued primarily to record companies, often to the detriment of artists and their audiences. But even as the major record companies were reaping unprecedented profits in the transition from tape and vinyl to CDs, they were blindsided

by new technologies associated with MP3 file sharing that transformed the relationship between artists and audiences, and the music that binds them. Rather than embracing the potential of these new technologies and taking the lead in developing convenient, affordable, easy-to-use methods of accessing music, the major labels focused instead on a multi-pronged strategy of extending the reach and restrictive power of corporate copyright, crippling developing technologies, and taking legal action against those who would make creative use of the tools at their disposal. As a result, annual revenues from the sale of recorded music decreased by more than 50 percent in the first decade of the new millennium. As this chapter goes to press, then, the music industry is in a profound state of flux; record companies have begun to cede their place of primacy in the business of music, as technology companies and internet start-ups, management firms and national tour promoters, as well as applications and services designed to encourage direct artist-audience interaction vie for a piece of the action.

### **SHEET MUSIC, SOUND RECORDING AND THE SOUND OF MUSIC**

Before the invention of sound recording, the only way that music could be heard was in live performance – that is, by someone playing a musical instrument in the presence of an audience. In this deceptively simple process, there are a number of aspects worth emphasizing. At the time, as David Suisman reminds us, ‘every sonic phenomenon had a unity of time and space; it occurred once, for a certain duration, in one place, and then it was gone forever’ (2009, p. 5). There was a simultaneity and ephemerality of production and consumption. Sound recording changed all that. By embedding sound in objects, recording enabled time- and space-shifting of music events. By commodifying sound in this way – ‘stockpiling’ in the words of Jacques Attali (1985) – recording turned music not just into

an item that could be bought and sold (sheet music had already done that), but one which separated the production of musical sound from its consumption: ‘Once musical sound is reified – made into a thing’, says Mark Katz, ‘it becomes transportable, salable, collectible, and manipulable in ways that had never before been possible’ (2010, p. 4).

Initially, Thomas Edison’s phonograph competed with Emile Berliner’s gramophone in this endeavor. Edison’s machine, unveiled in 1877, traced patterns of sound on tinfoil (and later wax-coated) cylinders, which could then be played back on the same machine. As this was a purely mechanical process, it was called acoustic recording. Because Edison first envisioned uses such as stenography and books for the blind, rather than recorded entertainment, as the primary applications for his invention, he called it the ‘talking machine’. Still, attendees at early demonstrations of the phonograph were delighted that they could use the same machine to make and listen to recordings of themselves whistling, singing, and playing musical instruments. In this way, Edison’s machine was well suited to home recording for those who could afford it.

Berliner’s gramophone etched sound patterns onto flat discs, but unlike Edison’s invention, could not record and play back sound on the same machine. Interestingly, this turned out to be less important than the fact that Berliner’s discs had a louder playback volume and that they could be more easily mass produced and more efficiently stored than Edison’s unwieldy cylinders. Though Edison became a major commercial player, it was Berliner’s discs that became the shellac-based 78-rpm records that defined mass-scale commercial recording until the late 1940s.

A newer entry, the Columbia Phonograph Company, currently the oldest trademark in the recording business, reckoned early on that its target audience was music consumers – not stenographers or visually impaired readers – and catered to their needs with a catalogue of ‘coon’ songs descended from blackface minstrelsy and brass band music. By 1892,

Columbia had issued about 100 recordings of John Phillip Sousa and the US Marine Band. One of Columbia's best customers was Louis Glass, who equipped phonographs with listening tubes in the Palais Royal Saloon in San Francisco, where patrons could listen to a pre-recorded entertainment cylinder for a nickel. This innovation earned Glass the title Father of the Juke Box and placed some measure of control over determining public taste into the hands of consumers.

By the early 1900s, Berliner had fallen on hard times due to losing a major patent war with Columbia, but not before his machine had spawned the Gramophone Company (later EMI) in the UK, and Deutsche Grammophon in Germany. In the US, inventor/machinist-turned-businessman Eldridge R. Johnson took over Berliner's business interests in the Victor Talking Machine Company (later RCA Victor), as Berliner retreated to Canada. These companies operated as a global enterprise almost from the beginning, building their own pressing plants in the most important markets and operating through a network of local subsidiaries elsewhere. Victor and British Gramophone partnered to literally carve up the world, with the Americas, North and South, and what was called the Far East going to Victor, and Europe, Russia, and the Indian sub-continent going to Gramophone.

Between Edison's invention and the founding of Victor in 1901, another kind of music-related consolidation was also taking place, as previously dispersed music publishers in the US began to converge on the Broadway and 28th Street area of New York City that came to be known as Tin Pan Alley. They were purveyors of sheet music, who paid little attention to the revolution in music that would eventually sweep them aside. Sheet music retailed for about 30–40 cents a copy and major publishers could sell hundreds of thousands of copies. Charles K. Harris' 'After the Ball', written and published in 1892, 'quickly reached sales of \$25,000 a week', and according to Charles Hamm, 'sold more than 2,000,000 copies in only several years, eventually achieving

a sale of some five million' (1983, p. 285). Sheet music was no less a commodity than records, but in its social and technological dimensions sheet music looked backwards to a time when music could be created in the home, encouraged the active participation of those involved, and retained some elements of culture as a lived phenomenon. Records looked to the future – a future in which music listening became increasingly separated from music-making, and consumption became the engine of the economy.

If there was one thing that both publishers and recording companies could agree on it was that, in the new consumer society, their goal was to 'fill the air with music' (Suisman, 2009, pp. 13–17). Gradually their efforts led to a transformation of the soundscape from one that was punctuated by music to one in which music seemed ubiquitous. While this, in itself, was a pretty disruptive cultural change for the population at large, one might have imagined that it was beneficial for musicians. But at the turn of the twentieth century, according to producer Fred Gaisberg, singers were paid a paltry 'two to three dollars per song' (Moore, 1976, p. 24). Artists were clearly exploited by the record industry, which was itself still a fledgling enterprise. Major publishing houses occupied the power center of the industry.

One of the things that distinguished the Tin Pan Alley firms from earlier music publishers was that Tin Pan Alley produced only popular songs – mostly sentimental ballads, lilting waltzes, and spirited marches. Within a short time, Tin Pan Alley built itself into a national powerhouse that defined the broad parameters of popular music culture for the next half-century. If the songwriting style of Tin Pan Alley was distinctive, its success was due in equal measure to its aggressive marketing tactics and single-minded focus on commercial entertainment. 'Songwriters in this regime', Suisman emphasizes, 'were workers, not artists, and their output was the vehicle for the amusement of others, not for personal expression' (2009, p. 12). Tin Pan Alley's 'song pluggers' routinely visited popular venues to convince star performers to

include a particular song in their act, offering everything from personal favors to songwriting credits to outright cash payments. Such investments more than paid for themselves in sheet music sales.

Aiding the music publishers were a number of converging forces, not the least of which was the huge expansion of the national railroad system in the US, which facilitated live touring. By 1890, even isolated rural areas of the South found themselves well served by rail. Touring theater companies based in New York, as well as vaudeville and minstrel shows found rail to be a profitable way to travel, and they often made stops in small towns to provide better routing between larger urban centers. Not surprisingly, the golden age of Tin Pan Alley (1890–1910) coincided with peak years of touring companies.

Helping to consolidate Tin Pan Alley's rise to cultural dominance were the Copyright Acts of 1891 and 1909. With the passage of the 1891 Act, publishers in the US were legally bound to honor the copyrights of other nations, which is to say there was no longer a legal disincentive to publishing domestic compositions (Suisman, 2009, p. 25). International copyright arrangements were regulated by the Berne Convention, a series of multilateral agreements beginning in 1886, which provided for reciprocal recognition of copyright laws among sovereign nations. The US was slow to embrace Berne, because prior to the worldwide success of Tin Pan Alley the country would have shown a negative balance of trade on the ratio of music exports to music imports. Still, the US government passed laws and issued executive orders in keeping with periodic revisions to Berne. The 1909 Act, for example, introduced 'mechanical rights', allowing songwriters and music publishers to recover a royalty from the sale of sound recordings. In 1914 the publishers formed the American Society for Composers, Authors, and Publishers (ASCAP) to manage their royalty revenues from all sources.

Tin Pan Alley's ascent also paralleled the peak years of piano production, then the focal point of middle-class home entertainment.

From the turn of the twentieth century until the end of World War I, the number of pianos, including player pianos, manufactured in the US averaged about 300,000 annually (Sanjek, 1988a, p. 296). Tin Pan Alley songs that were light, catchy, easy to play and sing, and unabashedly commercial, readily lent themselves to a profitable reciprocal relationship with the piano trade.

Before pianos were overtaken by phonographs and then radios as preferred leisure-time devices, player pianos served as an important transitional instrument in the inexorable drive toward machine-made music. In cultural terms, player pianos were more akin to phonographs than to the instrument they most resembled physically. Because both reproduced music mechanically, player pianos and phonographs served similar social functions. Indeed, the term Victrola, Victor's classic record player, which eventually became a generic name for phonographs, was taken from the Pianola, the popular player piano manufactured by the Aeolian company. (The same cannot be said, however, about the Rockola jukebox, which was built in the 1930s by David Cullen Rockola, his real name).

The societal reaction to machine-made music was mixed and contradictory. While there was widespread celebration of mechanical reproduction as a tool for promoting cultural democracy, not everyone was happy with the new musical culture created by Tin Pan Alley and the record companies. Critics charged that this new culture leaned toward formulaic creations and vulgar popular tastes and that the advent of machine-made music marked a transition from active music-making to passive music consumption. Paradoxically, there was also an elite defense of mechanical reproduction. This was a period during which class-based hierarchies of cultural taste were established, in which the term 'good music' came to be synonymous with the European classical tradition. Among the most vocal proponents of this position there were two salient issues, according to Katz: 'that classical music was a powerful cultural and moral force to which Americans sadly lacked exposure,

and that technology ... could foster positive social change' (2010, p. 57). These elite boosters of mechanical reproduction embraced the phonograph as an invaluable educational tool for inculcating an interest in 'good music'. Cultural democracy for this group, of course, meant distributing high culture to the masses.

Whatever the effect of machine-made music on music-making, one thing was certain: with the invention of the phonograph, the definition of musicality expanded beyond composing and performing to include 'appreciation' – generally defined as a receptivity to and an understanding of 'good music'. This meant that the boundaries of music education now extended potentially to everyone and that phonographs had to be installed in the schools to accomplish this herculean task.

### **CULTURAL UPLIFT AND THE MASS AUDIENCE**

Record companies welcomed these sentiments, as they had already embarked on what Karl Hagstrom Miller has referred to as a 'campaign of cultural uplift' (2010, pp. 159–167). In the early 1900s, as record companies were just coming into their own, they began to worry that their early success based on the novelty of recorded sound was on the wane and that they needed a product with more substance to achieve greater legitimacy and profitability. Given the elitist bias toward European concert music, British Gramophone, in partnership with Victor, issued recordings of songs and arias from all over Europe, as well as the Imperial Opera in Russia. Victor imported these higher priced 'Red Seal' records as premium offerings in the US and started a Red Seal series of its own, featuring Italian tenor Enrico Caruso and other stars of the Metropolitan Opera. Columbia soon followed suit with a Grand Opera series of its own. At a time when records retailed for about 85¢, recordings in the red label series could bring in anywhere from \$3.00 – \$7.00 each (Gronow and

Saunio, 1999, p. 17). While the music itself was promoted as the hallmark of good taste, it didn't hurt that the technical capabilities of acoustic recording were particularly kind to strong tenor vocals. By World War I, most opera stars of note could be heard on record.

In truth, the cultural uplift campaign was something of a fiction. While Victor's red label recordings brought prestige to the company, the series never accounted for more than 20 percent of the sales of the popular black label recordings, which catered more broadly to the tastes of ethnic immigrant consumers (Sanjek, 1988b, p. 28). As the record companies grappled with the tension between an elite conception of culture and the financial realities of popular taste, it was the breadth of their catalogues that enabled them to operate as a global enterprise. The major companies in the US and abroad not only exported their own domestic products internationally, they also recorded and distributed local artists in the countries where they operated. Indeed, 'by the early 1910s', Pekka Gronow has written, 'the twenty largest immigrant groups in the US', and a similar spread of ethnic populations throughout the world, 'were all supplied by recordings of their own musical traditions' (Gronow, 1983, p. 60).

Even as record companies elevated their rhetoric toward high culture, they kept their ears close to the ground. When a series of dance crazes, such as the two-step, the hesitation waltz, and the turkey trot, among others, swept the US between 1910 and World War I, record companies were quick to provide dance records to make it easier for couples to practice at home. When the cosmopolitan husband-and-wife dance team Vernon and Irene Castle introduced the Argentine tango to US audiences in 1914, Victor hired their music director James Reese Europe's Syncopated Society Orchestra – the first African American instrumental ensemble signed by a record label – to record a series of dance records that remained profitable for years. The addition of a mechanical royalty to the copyright laws opened the door for new collaborations between Tin Pan Alley and the



recording companies such as the discovery of a lucrative market for musical theater albums during and after World War I.

During this period, the recording industry seemed to be in an ascending phase that had no end in sight. In 1909, the US alone manufactured more than 27 million discs and cylinders, with a wholesale value of nearly \$12 million (Sanjek, 1988b, p. 23). German record production was estimated at 18 million copies (including exports) in 1907; Russian sales at 20 million copies in 1915; and the British and French markets at 10 million units each in the same time frame (Gronow, 1983, p. 59). Gross revenues in the US hit an all-time high of \$106 million in 1921, with comparable growth reported elsewhere in the industrialized world. Then the bottom fell out, with serious implications for the power structure of the music industry and the character of the new musical culture. Immediately following World War I, a new device that delivered music for free with better sound quality than records became available as a consumer item.

### **MUSIC ON THE AIR TAKES THE WIND OUT OF RECORD SALES**

Radio – a technology for the ‘wireless’ transmission of text (telegraphy) and sound (telephony) – developed as an international process of shared knowledge among scientists, inventors, and engineers primarily from West Europe and North America. With its origins in point-to-point communication, commercial development suggested a model of one-to-many communication, or ‘broadcasting’. Commercial broadcasting was delayed during World War I to apply all technical advances to the war effort. At the war’s end, the US consolidated these advances in a new holding company – the Radio Corporation of America (RCA) – composed of American Telephone and Telegraph (AT&T), who manufactured transmitters, General Electric (GE) and Westinghouse, who built receivers. Of the three main radio industry types identified by Roger Wallis and Krister Malm – public

service, purely commercial, and government controlled (1984, p. 233) – radio in the US developed as a privately-owned, unregulated commercial enterprise, funded by advertising and the sale of radio receivers.

Commercial broadcasting began in the US in 1920 and within three years some 600 stations were licensed to operate. Given the lack of regulation, however, a pattern of networking – distributing programming to multiple stations simultaneously – quickly took hold and ownership became concentrated in the hands of two giant corporations, the Columbia Broadcasting System (CBS) and the National Broadcasting Company (NBC), a subsidiary of RCA. By the 1930s, coast-to-coast network broadcasting was a reality and NBC and CBS already owned 50 of the 52 clear channels – stations with large transmitters positioned to broadcast over great distances with minimal interference – as well as 75 percent of the most powerful regional stations.

Network radio was programed from the top down, placing inordinate control over the public airwaves into the hands of large private corporations, the only check being that they had to compete for listeners or risk losing advertising dollars. Like the cultural uplift campaign of the record companies, radio went live with the same lofty rhetoric about education and raising the level of culture. In radio, the tension between elite notions of culture and the dictates of popular taste played itself out in a pivotal debate between the more dignified old guard programmers and a new breed of unabashedly commercial advertisers. Consistent with its educational mission, news and dramatic series had been staples of radio programming from the beginning, but the bulk of what was broadcast consisted of music. While the old-line programmers favored concerts of classical or semi-classical music to elevate the cultural sensibilities of the middle-class audience, the advertisers paid more attention to popular tastes, which tended more toward ‘dialect’ comedy and popular song. In this, they were closer to the inclinations of Tin Pan Alley than to those of the programmers.

Because commercial advertising placed musical broadcasts within the public-performance-for-profit provision of the 1909 Copyright Act, radio added measurably to the publishers' coffers. From 1923 to 1924, ASCAP's income from radio royalties jumped from \$35,000 to \$130,000 (Sanjek, 1988b, p. 81). But radio introduced yet another element of passivity into the new musical culture. With sheet music and records, the listener was at least actively involved in selecting the music to be heard; radio eliminated even that element of interaction. And because music programming on radio consisted of live music – that is, broadcasts of tuxedoed orchestras performing for live studio audiences – radio devastated record sales. After peaking in 1921, record sales plummeted steadily for the next decade, bottoming out at \$6 million in 1933, at the height of the Great Depression.

Anticipating the challenge from radio, record companies had begun a search for new audiences, which led to the construction of domestic markets for blues and country recordings (dubbed 'race' and 'hillbilly' at the time) and to a segmentation of the record-buying public into race- and class-based groupings that mirrored the social divisions in society-at-large. Earlier, the music business hadn't given that much thought to targeted marketing strategies or to categorizing music by style. As Elijah Wald reminds us, "After the Ball" was performed by amateur parlor players, string quartets, brass bands, Appalachian fiddlers, African-American guitarists, blackface minstrels, and vaudeville sopranos' (Wald, 2009, p. 89). In this sense, the audience for sheet music was treated like an undifferentiated mass. Initially records were handled the same way, the only distinction at the time being classical record buyers.

As David Brackett discusses elsewhere in this collection, in separating race and hillbilly into catalogues of their own, the record companies attempted to create a general catalogue for the white middle class, a 'race' market for nationally dispersed African Americans, and a 'hillbilly' market for poor white southerners. This strategy defined the marketing structure

of the recording industry and shaped music programming on radio from that moment on, even though it flew in the face of the realities of cultural mixing across lines of class and race. Conservatory trained Vernon Dalhart, initially an aspiring light opera singer, specialized in coon songs for Edison, before becoming a country music star on Victor. All-black string bands like the Mississippi Sheiks could handle country material and the latest Tin Pan Alley hits as well as anyone, but the record companies pushed them toward their blues repertoire in the studio (Wald, 2004, pp. 47–53). As a result, musics and musicians that enjoyed considerable cultural interaction and overlap were documented and discussed as if they had separate histories. Audiences, in turn, were directed toward a limited range of cultural offerings.

There are also ways in which the technology itself shaped and limited musical development. Jazz developed as a substantially improvised dance music with expandable arrangements as warranted by a given situation. And jazz recordings provided as many opportunities for learning to play the music as observing it in clubs. Until the introduction of the long-playing record in 1948, however, more than thirty years after the first jazz recordings, jazz on record was limited to the three-minute capacity of a 78 rpm record, which forced 'composers and performers to compress formal structures and limit improvisation' (Katz, 2010, p. 93). To the extent that the history of popular music has become the history of *recorded* popular music, the historical record has presented a distorted view of prevailing cultural practices. Recent scholarship has only begun to recover the history of what and how musicians actually played and what audiences – across lines of class, race, gender, and ethnicity – listened (and danced) to.

The new markets for race and hillbilly were accompanied by a deeper investment in international repertoire that provided the record companies with enough of a hedge against radio to limp toward the Great Depression. As Okeh was discovering the power of classic blues, it also acquired the distribution rights



to seven foreign language labels, representing thousands of songs in over twenty languages that had broad appeal among the 30 million immigrants living on US soil (Miller, 2010, p. 204). Victor sent Ralph Peer to Mexico where he set up an operation that expanded to the Spanish Caribbean and as far south as Argentina. Still, the Depression decimated the ranks of the small independent blues, jazz, and country music labels. Among the major companies, Edison ceased production in 1930. Victor and Columbia were acquired by radio corporations RCA and CBS, respectively.

As strong as the domestic markets for race and hillbilly records were, African American artists, unlike their white counterparts, were seldom heard on radio. Of course, there were exceptions such as the late night broadcasts of popular African American jazz bands such as Duke Ellington at the Cotton Club in Harlem or Earl (Fatha) Hines from Chicago's Grand Terrace. Significantly, these broadcasts were aimed at a mainstream audience, using African American bands that were often listed in the general catalogues of their record companies. In film, which by this time, had added sound, there was a thriving, if circumscribed, African American market. But in Hollywood films, African Americans appeared only in the most demeaning roles. In contrast, broadcasters and film producers gave country music a considerable boost. On radio, the 'barn dance' format quickly became the most popular, with Nashville's *Grand Ole Opry* on WSM eventually becoming the longest-running show in the medium. As country music began to incorporate more western themes, radio and film were there to promote the new singing cowboys. In addition to having his own radio show, Gene Autry also starred in over one hundred cowboy movies.

### **TECHNOLOGICAL ADVANCES AND THE NEW MUSICAL CULTURE**

For the record industry, the long road back to prosperity began with a machine that had been laid to rest more than two decades

earlier – the jukebox. Once Prohibition was repealed in 1933, thousands of newly (re) opened clubs looking for low-cost entertainment were happy to consider the jukebox. By 1935, 150,000 jukeboxes were operating in the US, accounting for 40 percent of the record trade. One interesting feature of jukeboxes is that, unlike radio, they are programmed by the consumer. Soon, the major entertainment industry trade magazines such as *Billboard* and *Variety* began charting jukebox hits; song-pluggers paid more attention to records; and radio producers used the charts to shape live programming. Together these developments enabled the mass audience to play a more significant role in determining public taste. In the tension between high and popular culture in music programming, the new musical culture had taken a turn toward the popular.

This, of course, was music to the ears of the Tin Pan Alley publishers that owned most of the copyrights on the music played in clubs, theaters, and on network radio. But the term 'popular' in this sense was a bit of a misnomer, for this was not music 'of the people'. This was music written by professional songwriters, working for large corporations, represented collectively by their own performing rights association, ASCAP. There were, however, a number of factors that pushed the new musical culture toward music from the grassroots. By 1939, ASCAP had sufficiently alienated radio with its excessive licensing demands so the broadcasters decided to boycott the publishers and form a performing rights organization of their own – Broadcast Music Incorporated (BMI). BMI challenged ASCAP's monopoly on copyrighted music by signing up all the blues and country writers that had been ignored by ASCAP's more elite Broadway/Hollywood membership. At the same time, the population migrations associated with World War II spread these grassroots musics across the country, creating national markets for what had been regional sounds.

Because materials shortages during the war had forced cutbacks in record production, the major labels had lost touch with new musical developments at the grassroots level, particularly in the African American community. As the era of big jazz bands declined, advances in sound reinforcement technology encouraged the formation of smaller combos playing rhythm and blues (r&b), described by Amiri Baraka (aka Leroi Jones) as 'huge rhythm units smashing away behind screaming blues singers' (1963, p. 168). Passed over by the major record companies because of its insistent rhythms, unbridled energy, and suggestive lyrics, countless independent labels entered the market to fill the gap – among them, Atlantic in New York; Savoy in Newark; King in Cincinnati; Chess in Chicago; black-owned Duke/Peacock in Houston; and Aladdin, Modern, Specialty, and Imperial in Los Angeles.

A number of technical advances – magnetic tape, the transistor, high fidelity, microgroove 45 and 33 rpm records, and the introduction of television – enabled new independent labels and radio stations to compete successfully with major labels and network radio affiliates for listeners. Magnetic tape utilized a plastic tape coated with iron oxide as its recording medium. It could be edited and spliced; it allowed the possibility of overdubbing; and it was more durable, portable, and less expensive, with better sound reproduction, than the wire recording it replaced. The transistor incorporated all the functions of the vacuum tube into a solid-state environment; devices using transistors could be made smaller, less power hungry, and more durable than the cumbersome vacuum tube amplifiers then used in electronic recorders and radio receivers. The new record configurations made of 'unbreakable' vinylite could be shipped faster and cheaper, with less breakage, than the older shellac-based 78s. Finally, the introduction of television in the late 1940s broke the back of network radio, but strengthened small, independent stations, which proved to be the perfect vehicle for disseminating the new sounds.

By the late 1940s, records had become the staple of radio programming and live studio orchestras gradually became a thing of the past. As national broadcasts gave way to hundreds of locally programmed stations, the independent deejays who became pivotal figures in the music business often found their greatest successes spinning r&b records, attracting a substantial mainstream audience in the process. The success of this music spoke to what Nelson George has referred to as 'an aesthetic schism between high-brow, more assimilated black styles and working-class, grassroots sounds' in the black community (1988, p. 168), as well as to its crossover appeal among young middle-class whites. Unlike dance halls, record stores, and jukeboxes, the airwaves could not be segregated. White teenagers, about to become an identifiable consumer group, could turn their radio dials to the local r&b station if they so chose. By the late 1940s, then, social forces had set in motion a major change in the structure of the music business that paved the way for rock 'n' roll.

## THE ROCK 'N' ROLL RUPTURE

One of the reasons that major labels had been able to keep their hold on the mainstream market in the early 1950s was that they controlled the entire production process from beginning to end. Artists were held to long-term contracts and kept on a relatively short artistic leash. It was expected that audiences would respond well to incremental changes in style, making the market easier to control. At the independent labels that produced rock 'n' roll, aesthetic standards and the division of labor were much less rigid. Recording artists and other creative personnel enjoyed greater latitude for experimenting with new sounds and styles. Their efforts changed the face of popular music.

Rock 'n' roll conquered the mainstream, as records became the central product of the music business. For historian Carl Belz, there

was a connection. 'Rock has existed primarily on records', said Belz. 'In this, the music is rather different from jazz and from the traditional folk music to which it is related. ... Records were the music's initial medium' (1972, p. viii). While Belz's depiction of rock 'n' roll can certainly be challenged one thing was clear: as records displaced sheet music, record companies moved to the power center of the industry, edging aside the Tin Pan Alley publishing houses, and establishing a symbiosis with radio that promised inexpensive programing in return for free promotion.

Whether born of records or not, rock 'n' roll's connection to technology was different from other popular musics. Initially, sound recording was thought of as a documentary process intended to preserve the quality of a live performance. But, rock 'n' roll, like certain avant-garde experimental musics, incorporated the capabilities of the technology into the creative process itself, using such effects as echo, editing, overdubbing, multi-tracking, and other technical effects to distort or enhance the live performance. 'Technical processes,' as musicologist Peter Wicke has said, 'became musical opportunities' (1990, p. 12). Thus, the emergence of rock 'n' roll was characterized by a progressively more intimate and creative relationship with the technologies used in its production, something explored in more detail in Patrick Feaster's chapter on 'Phonography'. This relationship deepened in the 1960s.

If the social and political movements of the 1960s provided the themes for the emerging youth culture, rock (its name now shortened) provided its soundtrack. In this context the music incorporated a number of elements that suggested a self-conscious turn toward *Art*: lyrics as poetry; music as composition; studio wizardry as artistic expression. The quintessential moment for this development was the release of the Beatles' *Sgt. Pepper's Lonely Hearts Club* album in 1967. Logging a then unheard of 900 hours in the studio, the Beatles and their producer George Martin paid meticulous attention to every detail of composition, balance, and technical

execution. Gone were the days when this or any other rock group could release six best-selling albums in one year. Rock artists now labored over every cut in the studio, experimenting with new sounds, adding special effects, and layering, multi-tracking, overdubbing, cross-fading, and mixing to perfection. If it had been the goal of recording to faithfully reproduce a live performance, it was now the goal of the live performance to duplicate what was possible in the studio.

Technological developments also had an impact on the reception of this music. By the late 1960s, high-fidelity stereo records had become the industry standard (with various tape configurations vying for acceptance). These products had increased the public's desire for high-quality sound, and the playback equipment needed to reproduce it. During the same time frame, two Federal Communications Commission (FCC) rulings transformed rock radio. Radio signals can be sent either by modulating, or varying, their amplitude (size) or their frequency (rate of propagation). Early technical limitations favored the development of amplitude modulation (AM) over frequency modulation (FM), even though FM delivered a higher quality signal. In the 1960s, the FCC ruled that FM programing could not duplicate AM programing and it authorized FM 'multiplexing' – a process of broadcasting two signals simultaneously on a single channel, which makes possible a stereo broadcast. Station owners promptly decided to use their FM properties to explore the higher quality output of 'progressive' rock, as this music was called. At first the music programing on FM was a truly eclectic mix, but gradually the music fragmented into a number of sub-genres, each of which became lucrative cogs in a well-oiled corporate music machine.

As revenues skyrocketed in the 1970s, the music industry became bloated and complacent, relying on proven artists to generate gold or platinum sales as a matter of course. It was left to new artists and producers to incorporate technological innovations into

the creative process: synthesizers in art rock; voltage regulators and vocal distortion boxes in heavy metal; drum machines and synthesizers in disco. In hip hop, creative artists and consumers transformed existing tools of reproduction – notably, the turntable and the cassette deck – into creative technologies and challenged the music industry's stranglehold on production and its ability to absorb innovation. Hip hop DJs – 'performative DJs' as described by Mark Katz (2010), turntablists in common parlance – turned dual turntable rigs into full-fledged musical instruments through the use of techniques such as back-spinning and scratching. Boomboxes with double cassette decks became localized radio stations, capable of recording, duplicating, and disseminating the music, in the absence of official recognition by the industry.

Cassette technology, introduced by Philips in 1963, provided the transnational music industry with an efficient format for expansion into remote areas. Following the introduction of the Sony Walkman in 1979 (and other similar players shortly thereafter), cassettes became the preferred configuration for music consumption internationally, still outselling all other configurations combined by a substantial margin at the end of the 1980s. But precisely because the technology was portable and recordable, it was also used by consumers to duplicate and disseminate their own musical mixes, thereby decentralizing control over the reproduction and distribution of music and visiting upon the music business two of its worst nightmares – piracy and home taping.

## RECESSION AND RECOVERY

In the early 1980s, the international music industry experienced a worldwide recession, which began in the US in 1979. From an all-time high of \$11.4 billion in 1980, international sales figures from the two dozen or so reporting countries declined some 18 percent to \$9.4 billion in 1983. While recovery began

in 1984 in the US, the international industry as a whole did not fully return to its 1980 level until 1986 (Hung and Morencos, 1990, p. 85). In an industry thought to be recession-proof, this was a seismic event. Trade associations such as the International Federation of the Phonographic Industry (IFPI) and the Recording Industry Association of America (RIAA) argued that losses from piracy and home taping could go a long way toward explaining the downturn.

In 1982, IFPI estimated piracy at 11 percent of the total market in the US and Canada, 21 percent in Latin America, 30 percent in Africa, and 66 percent in Asia (Frith, 1988, p. 117). The organization had begun to deal with the threat as early as 1971, when they convened the Phonograms Convention to curb piracy. Initially aimed at protecting the larger markets, IFPI had made significant progress by the early 1980s. When they began targeting pirates in the developing world, the genteel system of international conventions was superseded by trade sanctions against offending nations (Laing, 1993, pp. 31–33). By treating music as an 'export industry', the more powerful nations used their economic and political clout to include musical copyright issues in trade agreements such as the North American Free Trade Area (NAFTA), the EC's Single European Market Program, and the international General Agreement on Tariffs and Trade (GATT).

As regards home taping, IFPI argued that the decline in industry revenues during the recession was directly related to the rising sales of cassette tape recorders and blank tape. With little hard evidence to support this claim, IFPI initiated an international campaign to levy a tax on blank tape and equipment that could be used to compensate copyright holders for their alleged loss of income. After years of wrangling, the hardware manufacturers and record companies finally came to terms in the IFPI-brokered Athens Agreement of 1989. The resulting memorandum of understanding provided a blueprint for legislation like the US Audio Home Recording Act of 1992, which levied

a tax on digital audio recording devices and media and required all digital audio tape (DAT) recorders to be equipped with the Serial Copy Management System, which prevented unauthorized duplication. By imposing such limitations on digital audio tape, the music industry effectively killed DAT as a consumer technology. Notably, computer companies were exempted from these requirements.

Ultimately, it was the runaway success of Michael Jackson's 1983 LP *Thriller* that pointed the way out of the recession. Achieving worldwide sales of 40 million units within a few years of its release, *Thriller* ushered in an era of international superstars and blockbuster albums as the model for bailing out the industry. Accordingly the major labels laid off personnel, trimmed artist rosters, and limited the number of new releases. Over the next several years a few dozen superstar artists – Michael Jackson, Lionel Richie, Madonna, Prince, Bruce Springsteen, Whitney Houston, Tina Turner, Wham!, Phil Collins, Steven Winwood, Huey Lewis and the News, the Pointer Sisters, Janet Jackson, Anita Baker, and a handful of others – generated a significant proportion of the music industry's revenues.

This period also saw the introduction of the compact disc by Sony and Phillips. As a digital medium, the CD was far superior to the LP in terms of resistance to wear, ease of use, and deterioration of sound quality over time. One might have guessed that the shiny new disc would have been welcomed by the industry, but initially it was greeted with hostility. The CD, reasoned the labels, did nothing to stem the tide of unauthorized copying; if anything it provided a higher quality original. Recording companies would have to build expensive new production facilities to manufacture the discs. And there were already two popular sound carriers in the marketplace – the record and the cassette; adding a third might risk confusion and backlash on the part of consumers.

Such potential drawbacks notwithstanding, once record company executives did the

math, there was little doubt about the CD. Record companies were able to set the retail price of a CD at \$16.95 at a time when LPs were selling for \$8.98. As Steve Knopper points out: 'The CD was an opportunity to change consumers' expectations about what music should cost' as well as 'a chance to rejigger artists' contracts' (2010, p. 32). By 1988 worldwide unit sales of LPs and CDs were roughly on a par, but because CDs were priced so much higher, purchases in the new configuration added millions to the labels' coffers. In 1986, reported Simon Frith, 'the sale of 53 million CDs generated almost as much income (\$930 million) as the 125 million LPs sold (\$983 million)' (Frith, 1988, pp. 102–103).

The introduction of the CD also opened up another revenue stream for artists and record companies – back catalogue. Back catalogue had always been a valuable commodity, as hit records have often boosted sales on previous recordings. With the advent of CDs, back catalogue took on an even greater significance, as consumers began buying recordings they already owned in the new configuration. The success of reissued artist retrospectives as 'boxed sets' rendered back catalogue even more valuable. By the early 1990s, catalogue sales were estimated to be as high as 40 percent of all album sales, making back catalogue, for many top-selling artists, their most valuable asset.

For all their complaining about lost revenues, the major music corporations quickly resumed a pattern of steady growth following the recession. In 1993, the IFPI family of nations reported \$30 billion in worldwide sales. And by the end of the millennium, that figure had risen to \$38.5 billion. Then the industry went into free fall.

## THE DIGITAL AGE

Unbeknownst to the music industry, the CD had let the genie out of the bottle. As a digital medium that translates sound recordings into



binary code, every digital copy duplicates the original. Every disc is, in effect, a master recording. For a time the major labels felt reasonably secure about this because the CD was released as a read-only medium and all methods of consumer copying were in an analogue format that deteriorated over successive generations. Digital audio tape would have allowed consumers to make a digital copy – that is, an exact duplicate – of a digital original, but the Audio Home Recording Act had already neutralized DAT. Blindly focused on the windfall profits generated by CDs, the music industry remained blissfully unaware of the research on file compression that had been going on at Germany's Fraunhofer Institute for years. In 1992, the audio portion of this work was certified by the Motion Picture Experts Group (MPEG) as a standard that was designated MPEG 1 - Audio Layer 3, or MP3 for short.

The MP3 CODEC (compression/decompression formula) could shrink an audio CD file to one tenth its original size without appreciable loss of quality and, as an unprotected format, there was no way to regulate its use. Still, it wasn't until modem and computer clock speeds increased enough to take advantage of the internet as a file sharing network toward the end of the 1990s that the potential of MP3 as a way to share music between users finally bore fruit. As early as August 1999, *Wired* magazine reported that: 'About 846 million new CDs were sold last year. But at least 17 million MP3 files are downloaded from the Net *each day*. That adds up to almost 3 billion in the first six months of 1999' (Peraino, 1999, p. 144). And that was before Napster was invented.

Napster was a combination search engine, communication portal, and file sharing application that facilitated the transfer of MP3 files by connecting users through a central server. Boasting tens of millions of users within its first year of operation, Napster could have been the music industry's goose that laid the golden egg. Most of the research on music downloading at the time – including surveys from UCLA (Latonero, 2000),

Jupiter Research (Borland, 2002), and *Playboy* (2000) – concluded that downloaders were the most avid record buyers. Indeed, the RIAA's own mid-year 2000 figures – a period of heavy Napster use – exclaimed: 'The number of full-length CDs ... is at an all-time high, growing 6.0% from this time last year ... which suggests once again, that consumer demand for music in the form of a CD remains the mainstay' (RIAA, 2000). Still, the major labels regarded Napster as 'a 21st century piratical bazaar' (Knopper, 2010, p. 191) and sued the wildly popular file sharing service into oblivion. Artists themselves were divided on the issue. Paul McCartney, Metallica, and Dr. Dre took legal action against downloading services, while Prince praised Napster as 'an exciting new development in the history of music' (Reuters, 2000).

During this period, the major labels did take some baby steps toward a meaningful online presence, but they were eclipsed by second-generation technologies such as Morpheus and KaZaA, which implemented direct user-to-user (peer-to-peer, or P2P for short) connections, faster download speeds, more powerful file encryption, and increased user anonymity. As a result, worldwide sales of recorded music fell from an all-time high of \$38.5 billion in 1999 to \$32 billion in 2003, before plummeting to \$15.9 billion in 2010. Oddly, this did not stop the major labels from suing every major file sharing service that appeared, including Morpheus, KaZaA, Grokster, Limewire, the Pirate Bay, and MegaUpload. The major labels scored a major victory against Grokster when the US Supreme Court replaced the landmark 1984 Sony Betamax standard, which had established the legality of any technology with 'substantial non-infringing uses', with a more industry-friendly standard, which 'premises liability on purposeful, culpable expression and conduct' (Souter, 2005). Still, in every case the take-away was the same: for every P2P site that went dark, there was another to take its place.

When it became clear that suing file sharing services would do little to stem the tide of



downloading, the RIAA resorted to another, more draconian tactic – suing individuals. Between April 2003 and May 2006, the RIAA sued more than 18,000 individuals – from pre-teens to grandfathers – in the US alone, with another 5,500 lawsuits in eighteen other countries (*Guardian*, 2006). As of June 2006, none of these cases had gone to trial; not a single person had been convicted of any wrongdoing. Indeed the whole point of the lawsuits seems to have been to intimidate thousands of file sharers into settling out of court for around \$3,500 each on average. By the time the RIAA discontinued the practice in December 2008, more than 35,000 individuals had been sued, producing a lucrative, if temporary, multi-million dollar revenue stream for the music industry, but obscuring the fact that power remained in the hands of the downloaders.

While the major labels were spending most of their time on lawsuits, Apple debuted its iconic iPod in 2001 and followed up in 2003 with its iTunes Music Store, a downloading and syncing service that was legal, affordable, and more user-friendly than any service then in operation. The iTunes Store surpassed Apple's own expectations when it sold 1 million songs in each of its first two weeks of operation – at a time when iTunes was Macintosh-only software and probably less than 1 percent of the record-buying public owned iPods. Within a short time, Apple had negotiated licensing agreements with all the major labels, invited dozens of independent labels to participate on an equal footing, and cornered the digital music market, with a 70 percent market share that it sustained over time. As of 2009, Apple had sold 220 million iPods. In 2010 the iTunes Store reported its 10 billionth download, outselling big box stores like Best Buy and Walmart, as well as premiere bricks-and-mortar music outlets like Tower Records and Sam Goody, both of which went bankrupt in the decline of physical sales, along with 2,700 other music retailers. The decline of physical outlets encouraged other online retailers like Amazon.com to enter the music business, finally providing some competition for Apple.

A different kind of competition came from subscription-based streaming services beginning with Rhapsody, and eventually including many others such as Pandora, Spotify, and Rdio. While they boasted the convenience of music anywhere, anytime, on any device, these services most often required an active internet connection and the downloaded tracks became unavailable once a subscription became inactive. Initially, Apple's Steve Jobs famously pooh-pooed subscription models, a position corroborated by the research firm NPD, which calculated that subscription services had signed up 2.5 percent of music consumers, compared with Apple's 17 percent share (Knopper, 2010, p. 23).

Still, it would be a mistake to count subscription services out, as they are using sophisticated methods to attract users. Pandora employs a team of professional listeners to rate each of the hundreds of thousands of songs in its database on hundreds of variables which, in addition to the formal properties of music like beats per minute, also include measures like whether the singer's voice is 'gravelly or silky', whether the scope of the song is 'modest or epic', or whether the electric guitar sound is 'clean or distorted' (Leeds, 2006). The result is an innovative and appealing music discovery service. The buzz that accompanied Spotify's launch in 2008 and its introduction to the US in 2011 – particularly its integration with Facebook and ability to share playlists among friends – evoked the possibility of creating new music communities and suggested that consumers might be warming up to the idea of subscription services.

*Wired* editor Chris Anderson extolled the value of all online digital music services in describing a 'long tail' market and used Rhapsody to make his point. Record companies and bricks and mortar retailers, argued Anderson, are limited by what he called 'the tyranny of geography'. Because of the scarcity of physical storage space, they have to generate hits in order to maximize profit. Online merchants face no such limitations. As Anderson observed, 'Rhapsody streams

more songs each month *beyond* its top 10,000 than it does its top 10,000' (Anderson, 2004). It can afford to 'stock' tens of thousands of recordings that would be considered unprofitable by labels and physical retailers because storage space is not an issue. In Anderson's view, digital sales would eventually replace lost revenues from declining CD sales and listeners would be exposed to a broader palette of musical sounds in the process.

In 2011, the major labels took hope from the fact that \$16.2 billion in international sales marked the first year since 1999 that the industry saw an overall increase in the sale of recorded music and it was the first time in the US that digital sales outpaced physical sales. Since sales had already declined to less than half of what they were in 1999, however, the question for the record companies was whether this was too little too late. This, it should be noted, is a different question than what is the state of music. As David Byrne has said: 'What is called the music business today ... is not the business of producing music. At some point it became the business of selling CDs in plastic cases and that business will soon be over' (Byrne, 2007). But while streaming services may provide some relief to record companies and an affordable source of listening for fans, many artists have complained about low royalty rates: '[I]f artists have to rely almost exclusively on the income from these services', opined Byrne, 'they'll be out of work within a year' (Byrne, 2013).

One aspect of the music business that the decline in sales has drawn attention to is the importance of live shows. 'Live performances used to be seen as essentially a way to publicize a new release', said Byrne. 'This, to be blunt, is all wrong. ... Performing is a thing in itself, a distinct skill, different from making recordings' (2007). In fact, for most artists, CD sales have accounted for a small portion of their income; their main sources of revenue have come from live performances and merchandising. Indeed, in his book *Free: The Future of a Radical Price*, Chris Anderson argued that since the cost of producing music

is approaching zero, it should simply be given away free as a way of promoting more lucrative enterprises, like touring (2009). To the extent that live performing becomes a more significant way for people to consume music, it will mark a return to a moment when music was an experience, rather than a thing.

The question then becomes: Just who are the entities that will emerge as dominant in the new music business? Record companies have tried to compensate for their losses by preventing unauthorized downloading and negotiating so-called 360 deals, wherein the labels pony up significant advances in return for an equity partnership in all aspects of an artist's earnings – music sales, live touring, merchandising, publishing, etc. Madonna and Jay Z have signed 360-type contracts, but with Live Nation, a concert tour promoter. Paul McCartney released an album through an exclusive deal with Starbucks, as did the Eagles with Walmart. Radiohead released *In Rainbows* (2007) on its website with no record company at all and no price listed for downloading the album, leaving consumers free to pay whatever they considered a fair price, including zero. Alternatively, *Billboard* has noted that, in a digital world where touring, merchandizing, branding, sponsorships, engaging social networks, and the like have become as important to an artist as album sales, management companies have moved closer to the hub of activity that once defined record labels. 'In short', said *Billboard*, 'managers may just be the new labels'. At least one manager acknowledged that 'this change is driven by artists, not managers', raising the possibility that artists themselves might be the new labels. Another went so far as to say that, 'managers need to be focused on growing that relationship between the artist and the fan, because the fan is the new record label' (Wadell, 2008, p. 10).

No matter what the future holds, the market for sound recordings, at least in the near term, is likely to be a bifurcated one, with a place for (fewer) major labels, superstar artists, and blockbuster hits, and an equally important place for dozens of niche markets

and new music communities based on new taste-making algorithms and recommendation engines, and improved methods of social networking and peer-to-peer communication.

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