AFD Ep 356 Links and Notes - The Industrialization of Music [Bill/Rachel/Kelley] - Recorded 3/7/21

- On this episode of the show we're talking about the rise of the music industry, in terms of being a literal industry and its typical adherence to the recurring patterns of big industrial consolidation that we've been discussing in all our episodes on the Second Industrial Revolution in the United States.
- https://en.wikipedia.org/wiki/Music_industry#Early_history
- Printing presses began putting out sheet music in 1465. By the end of the 1400s, monopoly music printing was already a thing
    - More: https://en.wikipedia.org/wiki/History_of_music_publishing
- **Mass market sheet music** exploded in the 19th century – I assume probably after the new industrial cheap paper production process arrived – before the rise of recorded sound.
    - **Tin Pan Alley** from the mid-1880s: https://en.wikipedia.org/wiki/Tin_Pan_Alley - generally believed to have began in 1885 and ended around the time of the great depression
        - It was closely tied to racist Minstrel shows
        - "Tin pan" most likely referred to the sound of inexpensive pianos: https://www.britannica.com/art/Tin-Pan-Alley-musical-history
        - Was really the hub of American "pop music and refers to a specific location - West 28th Street between Fifth and Sixth Avenues in the Flower District[2] of Manhattan.
        - With the increase in copyright rules, the sheet music industry had to get a bit more organized - "With stronger copyright protection laws late in the century, songwriters, composers, lyricists, and publishers started working together for their mutual financial benefit. Songwriters would literally bang on the doors of Tin Pan Alley businesses to get new material."
        - The industry attracted many Jewish Eastern European immigrants - most famously Irving Berlin.
        - Much of the music industry relied on sales techniques for 'plugging' music.
        - "A more aggressive form of song plugging was known as "booming": it meant buying dozens of tickets for shows, infiltrating the audience and then singing the song to be plugged. At Shapiro Bernstein, Louis Bernstein recalled taking his plugging crew to cycle races at Madison Square Garden: "They had 20,000 people there, we had a pianist and a singer with a large horn. We'd sing a song to them thirty times a night. They'd cheer and yell, and we kept pounding away at them. When people walked out, they'd be singing the song. They couldn't help it."
        - Tin Pan Alley unsuccessfully lobbied for longer copyright terms.
        - Tin Pan Alley was the center of more than just sheet music, but really became a hub for entertainment. "... "The New York Clipper" newspaper located at No. 47 West 28th Street. The Clipper (1853-1924) was the first American newspaper devoted entirely to entertainment. The paper was one of the earliest publications in the United States to regularly cover sports, and it played an important role in popularizing baseball in the country." (https://hdc.org/policy/a-brief-ish-history-of-tin-pan-alley-policy/)
    - What are the class implications of sheet music? You have to have leisure time and the resources to have a piano or other instruments
        - https://soundcharts.com/blog/mechanics-of-the-recording-industry - "In the early 20th century, sheet music publishers ran the music industry.

House concerts were a centerpiece of middle-class entertainment — the number of pianos manufactured in the US alone averaged at around 300,000 each year (vs. 31,000 in 2017). “
        - Interesting to think about sheet music as the “pop music” of the day when there was no way to replicate or share the sound itself.
    - Before the rise of phonographs, **Player Pianos** owned by the rich could automatically reproduce music someone had “recorded” (so to speak) on hole-punch paper piano rolls: https://en.wikipedia.org/wiki/Player_piano They were an antebellum invention but not technologically advanced enough to be popularized or widely available (to the wealthy) until the mid-1870s. At the start of the 20th century, player piano producers became industry leaders in unprecedented consumer advertising campaigns. A few years later, innovations in design destroyed most of the smaller production operations building player pianos, thereby allowing the surviving larger producers to become an oligopoly, following the pattern we’ve seen across so many industries in our episodes. In 1908, the consolidated player piano makers held a conference to agree to industry standardization so that all paper piano rolls could play in any new player piano, thus benefiting all the manufacturers with growth. By this point, the technology was also advanced enough to play back the notes identically to how it was recorded, allowing companies to market specific individuals’ unique performances by name to consumers. In 1916, “word rolls” were invented which printed lyrics on the player piano paper so that people could sing along to the automatically-playing music, like modern karaoke. World War I further strengthened the powerful US manufacturers by ending competition with German companies. After the war, popular music supplanted classical music as the focus for US player piano customers.
- **Phonography:** Recorded music for sale (phonograph cylinders and then phonograph records) began in the late 1880s and the “record industry” quickly dominated the whole “music industry”.
    - Phonograph cylinders and phonograph records originate from Edison’s labs in the late 1870s https://en.wikipedia.org/wiki/Phonograph_record [Edison notes below]
    - “Graphophone” records were a competitor developed at Bell’s Volta labs in the late 1880s, not very successfully: https://en.wikipedia.org/wiki/Graphophone
        - https://www.pbs.org/wgbh/pages/frontline/shows/music/inside/cron.html - A note on jukeboxes - “As one of 30 franchises competing in the graphophone leasing business, the Columbia Phonograph Company achieves little success until it begins to record music to send to fairgrounds to accompany its leased graphophones -- thus resulting in the birth of nickel jukeboxes. The popularity of the fairground jukeboxes allows the Columbia Graphophone Company (the company changes its name in 1894) to survive the dwindling economy of the 1890s and to become the only graphophone leasing company to turn a profit. Though extremely popular, the first jukeboxes are limited by the impossibility of mass-producing the bulky cylinders used in the graphophone.”

- Gramophone (with an M, from Emile Berliner) popularized the use of flat spiraling records over the cylinders in the 1890s. https://en.wikipedia.org/wiki/Emile_Berliner These flat discs had a major advantage in being much easier to reproduce for mass production in factories after the initial recording was carved. Stamping a flat surface of any shape is easier than dealing with a cylinder. The discs also had more minutes of recording space than the early cylinders, although those were eventually improved too. He also got someone to design a spring mechanism to rotate the disc at a stable speed for playback without requiring unreliable hand-cranking. Gramophone itself and Berliner struggled with endless legal battles in the US and eventually left the market but the flat-disc technology was too successful not to continue. Companies like the Victor Talking Machine Company (founded in 1901 and producing the Victrola from 1906) ensured that the discs now known as phonograph records would take off. And their playback equipment like the Victrola was designed to look like stylish home furniture. https://en.wikipedia.org/wiki/Victor_Talking_Machine_Company Victor also significantly refined the actual recording technology in the mid-1920s to greatly improve the sound quality of records and compete with increasingly popular home radio sets. This was achieved by shifting the recording process from a crude acoustical capture of direct sound waves onto the physical surface of the wax master recording disc before copying it and instead using microphones and electrical impulses translated into precise physical outputs on the recording disc. The new machines for playing back the electric-recording discs were sometimes more expensive than a car. Victor, which became RCA Victor in 1929, tried to devise and release a record that could hold more music in the 1930s but the project was a failure due to the Great Depression's sharp limitation on people's ability to buy new playback equipment compared to a radio that could receive whatever was being broadcast.
- The physical limitations of phonography had a profound impact on music. Early discs and cylinders could only store a couple minutes worth of music. (Moreover, cheap, early steel-tipped record player needles had to be changed after every side of a disc was played, until wartime rationing in World War I put more emphasis on using longer-lasting stylus materials: https://en.wikipedia.org/wiki/Phonograph#Stylus) Disc improvements in the early 20th century could hold around four minutes on a side and were recorded on both sides for around 8 minutes of music on a disc. But until Long Play (LP) records were invented in 1948, recorded music really couldn't be longer than that, unless it had planned breaks to turn over or switch out the records either by hand or eventually with a disc-changer. The term "album" arose to describe the photo-album-like collections of multiple discs of one song each sold together as a collection by a single artist. The term stuck around even after LP records allowed these collections to be contained on a single disc. The early albums, often bound like a book, held these 10-inch or 12-inch discs and could be stored on a home bookshelf. Radio stations sometimes used 16-inch discs to fit more on one disc.
- Until World War 2, most records were made of a compound of shellac, pulverized minerals, cotton fiber, and carbon black. The war rationed the availability of some of these materials for consumer goods, so the industry switched to plastic vinyl, which had already been in use for some records, especially the ones being mailed to radio stations. The vinyl records had more durability as physical objects, but often worse sound quality and lower replay durability, as they tended to wear out more easily or collect dust.

    - In 1948 and 1949, there was a Long Play vs 45s format war between Columbia and RCA Victor to develop and popularize new technology for home records with longer content. [Good place to talk about the companies more from notes below.] In 1948, Columbia announced a new type of disc called a Long Play (LP) record, which would be played back less than half the rotational speed of the prevailing model of record and with a more precise stylus for narrower grooves, allowing more recorded audio to be crammed in. In 1949, RCA Victor released a competing new type of slow-rotating disc (called a 45 after its rotations per minute) and its own new type of playback machine, which would similarly allow people to listen to much more music or voice content on a single vinyl disc, and which would automatically change the discs at high speed so the break would be almost inaudible. Early home 45 discs held 8 minutes per side, about double the length of older discs, and would be further refined to hold up to 15 minutes, while LP discs held up to 22 minutes per side, which finally allowed entire albums to be released on both sides of a single disc. The two rival companies allowed other companies to use their new designs of records in an effort to gain market share for their proprietary players. After two years, LPs had mostly prevailed within the industry, although both formats would continue to have commercial utility and appeal, so both companies would end up pressing records in both rival formats and manufactured record players that could play different records at different speeds. (Even if LPs were more popular at home, 45s in particular had great industry appeal for use in pop music jukeboxes where they only needed to hold a single short song on a side, and jukeboxes had already become a massive source of demand for records each year and a helpful source of listener data: https://en.wikipedia.org/wiki/Jukebox) Home LP and 45 compatible players competed with older 78 record players from 1949 until the end of the 1950s in the US (or longer in other places) as consumers gradually acquired the new players over time. Jukeboxes also started to decline from their peak over the 1950s as transistor radio sets became a competitor for people's interest. The technology for longer records also continued to evolve over several decades to further improve length and quality, both in playback and in the recording process, and stereo technology arrived at the end of the 1950s. The recently-established Recording Industry Association of America in 1954 also got the record technology companies to agree on a standardization of disc and player technology so that US consumers could interchange discs freely across player types without damaging equipment or having playback problems. https://en.wikipedia.org/wiki/RIAA_equalization
    - We're not going to get into tape recording as a competing audio format on this episode because that would drift a bit too far outside the focus we've set. Likewise for digital audio.
- The seeds of **the current corporate oligopoly in the music industry** were planted in 1929, although it took quite a while for the record companies and device manufacturers to consolidate, both before and after that date**.**
    - Wikipedia summarizes the current situation as follows: *In the 2000s, a majority of the music market is controlled by three major corporate labels: the French-owned Universal Music Group, the Japanese-owned Sony Music Entertainment,[1] and the US-owned Warner Music Group. Labels outside of these three major labels are referred to as independent labels (or "indies"). The largest portion of the live music market for concerts and tours is controlled by Live Nation, the largest promoter and music venue owner. Live Nation is a former subsidiary of iHeartMedia Inc, which is*

the largest owner of radio stations in the United States. [iHeartMedia used to be Clear Channel, by the way]
    - UMG is the descendant of Decca Records, which had acquired the Universal movie industry company in 1952. Decca was founded in 1929.
    - Sony Music is the descendant of Columbia Recording Corporation (formerly the American Record Corporation founded in 1929) and also now owns the remnants of RCA, the Radio Corporation of America, which had been a project of General Electric, Westinghouse, AT&T Corporation and United Fruit Company to end foreign control of American Marconi at the behest of the US Navy for national security reasons after World War I. RCA's reorganization happened over 1919 and 1920, and it acquired Victor Talking Machine Company in 1929, as mentioned earlier, becoming RCA Victor.
    - Warner Music Group is the only original one of the old industry leaders still under a recognizable name and came late to the game in 1958 as Warner Bros Records to ensure in-house financial control of Warner Brothers movie stars' musical side projects.
    - The Spotify quagmire: 10% of Universal Music Group is owned by Tencent Holdings; 1.6% of Warner Music Group is owned by Tencent Holdings. Tencent Music Entertainment Group is co-owned by Tencent Holdings and Spotify, as well as equity stake ownership by Sony Music Publishing, a division of Sony Music and the owner of EMI Music Publishing. Spotify profits flow to Tencent through their shared subsidiary and royalties flow to Universal and Warner which are part-owned by Tencent and also to Sony, which is invested in Tencent Music too.
    - Edison left the game in 1929
- **Muzak**: https://en.wikipedia.org/wiki/Muzak
    - Listeners might recall our 2020 episode on the late 19th century utopian futurist novel "Looking Backward" (http://arsenalfordemocracy.com/2020/12/15/dec-13-2020-edward-bellamys-looking-backward-arsenal-for-democracy-ep-337/) where one notable point was that in the early 21st century you could walk into a music listening room and play any music on demand through a speaker system, much like people do today with their corporate voice recognition -slash- surveillance devices. But what you might not know is that some of this "listening room" and on-demand music technology began to come into existence only a few decades after the novel. To understand the origins of that, we need to go to the origins of the most industrialized music production: Muzak
    - Fascinatingly, this type of generic, commercialized music that we might think of as "department store music" does not even originally derive from radio, but rather from a separate technology for wired transmission of sound (including music), which was far more reliable initially than early radio technology. Major General George Owen Squier developed a technology called "multiplexing" (https://en.wikipedia.org/wiki/Multiplexing) in 1910 for sending multiple signals over a single wire and then separating them out again at the end. This was originally meant to allow a single telephone wire to transmit multiple different telephone conversations, but he kept playing around with it and realized he could use it to transmit music on-demand over telephone wires to home customers. A major utility holding company set up a subsidiary in 1922 called "Wired Radio Inc" dedicated solely to this venture, acquired his patents, and brought him on board to keep working on it. However, as home consumer wireless radio technology became more viable, General Squier realized he needed to pivot to a different use for the wired music technology, and in 1934 he shifted to enterprise customers, namely department stores. He also renamed the company to

"Muzak." Warner Brothers then bought the Muzak corporate subsidiary from the utility holding company in 1937.
    - In the 1950s, Muzak began experimenting with designing music for workplaces, rather than shopping spaces, with an emphasis on trying to pump up the workers to get more done. This was called "Stimulus Progression." But many workplaces did not find this especially useful and instead well into the 1960s used muzak speaker systems to kill boredom in places where people had to wait around for long stretches or probably even just to deaden the omnipresent sound of all the clicky-clacky typewriters that we talked about in our recent bonus episode on "dropped ceilings" and mid-century office spaces. (http://arsenalfordemocracy.com/2021/03/03/preview-mar-2-2021-dropped-ceilings-arsenal-for-democracy-ep-355/)
    - However, as rock-and-roll propelled a new generation of pop stars to individual or group stardom, the era of depersonalized and generic music was coming to a close. Companies that were willing to pay licensing fees for specific, recognizable musical artists were able to out-compete the more generic Muzak. The company began to flounder and lose its longstanding focus by the end of the 1970s. This was the dawn of the era that resulted in grocery stores and some restaurants playing top 40 or genre music.
- Corporate Actors
    - Edison Records (https://en.wikipedia.org/wiki/Edison_Records)
        - Wax entertainment cylinder debuted in 1889, mainly for arcades, saloons, etc. (nickel-slot phonographs). Cylinders for home use came in 1895, after more affordable phonographs were available.
        - Edison sold blanks to Columbia Records from 1889 to 1894, when The North American Phonograph Company was dissolved
        - In 1902, the Edison Gold Moulded Records (made of more durable hard black wax) were introduced. These cylinders could be played hundreds of times without wearing out.
        - In 1912, Edison introduced Diamond Disc records. They had higher fidelity, but both records and players were more expensive than competitors'. They were also incompatible with other discs and machines. They were only the third-top seller, after Victor and Columbia.This caused their market share to shrink, and they could never regain from their losses, closing down in 1929.
        - While they innovated recording technology (durable discs), they weren't able to translate that success into recording industry success.
    - Victor
        - As mentioned before, they also innovated the recording technology. They also expanded in the 1920s, owning controlling interests in the Gramophone Company in England, as well as the Deutsche Gramophone Co. in Europe. Soon, Victor formed the Victor Company of Japan (JVC), founded in 1927. As Radio Corporation of America acquired Victor, the Gramophone Co. in England became EMI giving RCA a controlling interest in JVC, Columbia (UK), and EMI
        - RCA was fully acquired by Bertelsmann in 1986, making it a part of Bertelsmann Music Group (BMG). RCA Records became a part of Sony BMG Music Entertainment after Sony and BMG merged in 2004; it was acquired by the latter in 2008, after the dissolution of Sony BMG and the restructuring of Sony Music
    - Columbia (https://en.wikipedia.org/wiki/Columbia_Records)

    - Used technology invented by both Edison and Victor to produce their records in their early years.
    - Built up a strong catalogue of blues and jazz artists. In 1937, they hired talent scout John Hammond, who had a huge influence in the 1950s and 60s, signing many huge artists, and also championing reissues of blues artists who were the direct influence for the emerging rock scene.
    - Ultimately acquired by Sony in 1988.
- Decca (https://en.wikipedia.org/wiki/Decca_Records)
    - British label founded in 1929; U.S. label established in 1934
    - Named after a portable gramophone named the Decca Dulcephone
    - During WWII, developed full-frequency range recording, used to record and catalogue German submarines by their engine noises. Later used to produce high-fidelity musical recordings
    - Fully embraced stereo recording before competitors
    - In the 70s, developed digital recording and mastering
    - Now owned by Universal Music Group; Decca label still in use today
- Warner Music Group (https://en.wikipedia.org/wiki/Warner_Music_Group)
    - Formed in 1957 to prevent Warner-contracted actors from recording for rival companies
    - Wasn't involved in early technology wars; instead quickly became involved in the acquisition game. One early major purchase was Atlantic Records in 1967. This included Stax Records, which had a very big, lucrative back catalogue.
    - Now one of the "big three" recording companies