

# Audio

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MUSIC AND TALK ACROSS MEDIA

# Who is Gregg Gillis?

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*By Drivenbyboredom - CC BY-SA 3.0*

It's likely you've never heard of him. He's not Beyonce. Or Jay Z. Or Shania Twain.

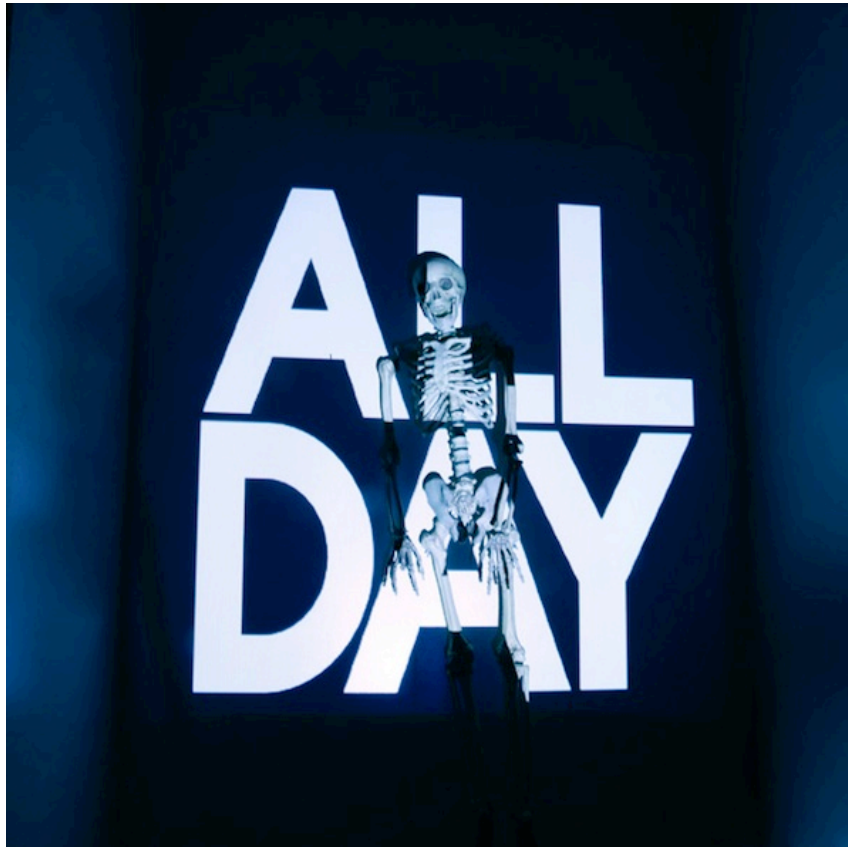
He's a deejay who does more samplings and mashups than anything else, taking established pieces and making something out of them.

He has a biomedical engineering degree, but quit his day job to produce albums. He's now known under the stage name "Girl Talk."

His work has received a lot of notice for one reason: his use of others' media.

# Gregg Gillis & Controversy

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Gillis does “massive sampling” of music, including on his 2010 album “All Day.” Many artist reps, including those who represent The Beatles catalog, have sent cease and desist letters.

Nothing happened when album stayed online.

No one has yet sued, even though Gillis doesn’t have a license.

There are reasons to NOT sue Gillis, though.

# Gregg Gillis & controversy

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Is what Gillis doing really fair use?

Will the perception of big artists change for attacking smaller ones?

How big of a deal is copyright in today's day and age?

# Especially when it helps artists

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Music sampling allows obscure artists some limelight, consider Dido's "Thank You" in Eminem's 2009 song "Stan"

- Did you know who Dido was? Do you now?
- What's the most memorable part of "Stan"?



# Early sound

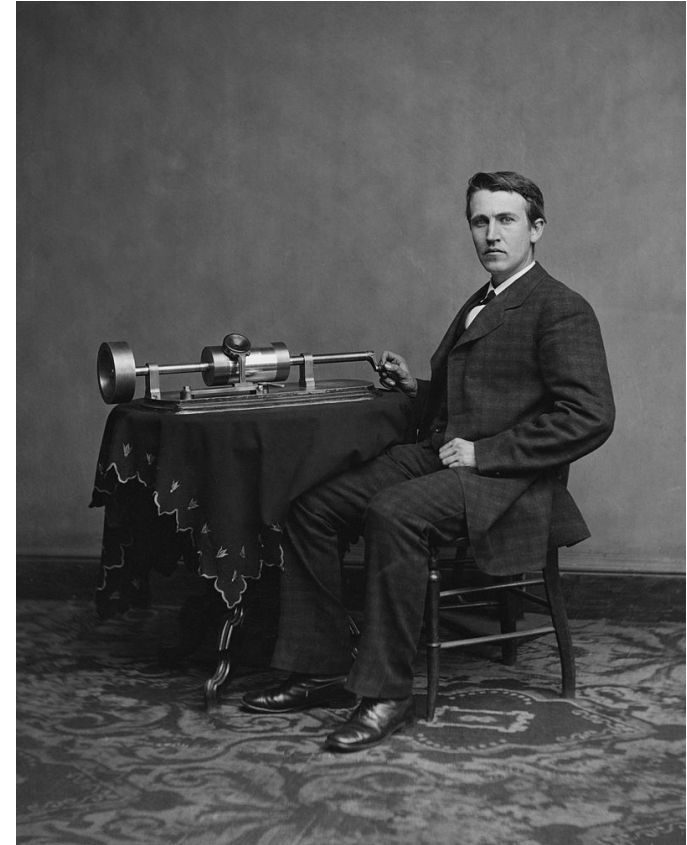
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**1877:** Edison invents phonograph, an early sound recording machine, records sound on foil cylinders

- First recording was “Mary Had a Little Lamb” with Sarah Josepha Hale
- Foil cylinders didn’t last long

**1888:** Emile Berliner develops gramophone, plays music on mass produced discs

- Used flat discs, rather than cylinders
- Viewed machine as entertainment device



*By Levin C. Handy*

# Early sound

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**1953:** Hi-Fi is combination of technologies to create better music reproduction

Gramophone and phonograph were used interchangeably in conversation.

Prior to this era, only two ways to preserve music:

- Parents teaching children
- Written music, musical scores

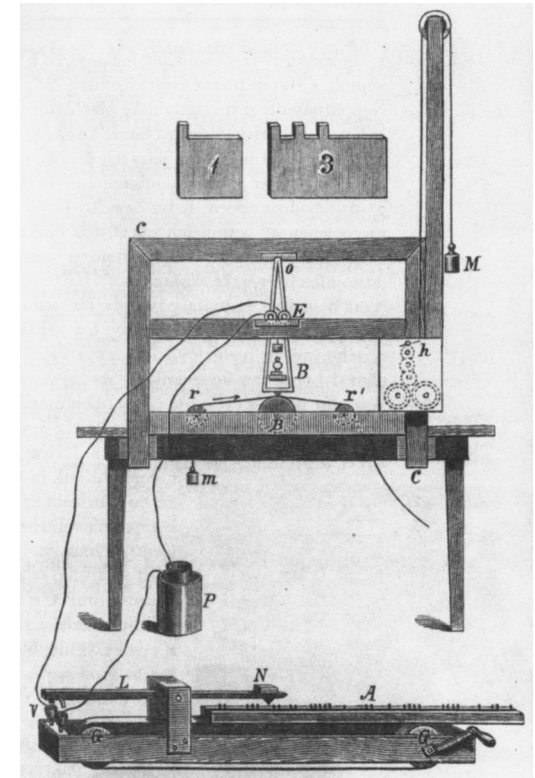
Advances made it possible for non-notated music, such as folk songs, to be catalogued.

# Early transmission

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1844: Samuel Morse's telegraph allowed messages to be sent over wires

- Messages could travel at speed of electrons
- By 1866, telegraph cable extended across Atlantic ocean
- Limitations, wires could be cut easily (happened during American Civil War)
- Need for wireless technology addressed, 1888 German physicist Heinrich Hertz found he could detect a signal created by electric spark on one side of room with a small antenna



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# Early transmission

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1890s: Guglielmo Marconi develops wireless telegraph

- Point-to-point communication tool, used radio waves to transmit messages
- Over time a system developed to send and receive messages
- Soon went from length of attic to across the Atlantic



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# Early transmission

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**1901:** Reginald Fessenden begins sending voice signals over radio in lab

**1905:** Fessenden makes Christmas Eve broadcast with voices and music

- Broadcast could be received by same devices that received the initial Morse code
- Would be years before another broadcast
- Young American Marconi employee named David Sarnoff went to work for the Commercial Cable Company around this time



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# Radio Music Box Memo



Brig. General David Sarnoff, Chairman of the Board, Radio Corporation of America

## Sees No. 1 wish come true!

**Television Tape Recording by RCA Opens New Era of Electronic Photography**

In 1956, RCA's General Sarnoff will celebrate his 50th year in the field of radio. Looking ahead to that occasion, three years ago, he asked his family of scientists and researchers for three gifts to mark that anniversary: (1) A television tape recorder, (2) An electronic air conditioner, (3) A true amplifier of light.

Gift No. 1—the video tape recorder—has already been successfully demonstrated, two years ahead of time! Both color and black-and-white TV pictures were instantly recorded on magnetic tape without any photographic development or processing.

You can imagine the future importance of this development to television broadcasting, to motion pictures, education, industry and national defense. And you can see its entertainment value to you, in your own home. There the tape equipment could be used for home movies, and—by connecting it to your television set—you could make personal recordings of your favorite TV programs.

Expressing his gratitude for this "gift," General Sarnoff said it was only a matter of time, perhaps two years, before the finishing touches would bring this recording system to commercial reality. He described this RCA achievement as the first major step into an era of "electronic photography."

Such achievements as this, stemming from continuous pioneering in research and engineering, make "RCA" an emblem of quality, dependability and progress.

**RADIO CORPORATION OF AMERICA** 

World leader in radio — first in television

14 TIME, FEBRUARY 15, 1954

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- Sarnoff sent a memo to director of American Marconi in 1915
- He outlined radio as a potential popular mass medium
- Sarnoff didn't invent technology, he just summarized what radio could possibly become, including addressing use as a mass communication tool for media, entertainment and sports
- American Marconi didn't act immediately

# Radio evolution

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- Manufacturers originally thought there would be as many senders as receivers, reality there were more receivers than transmitters
- WWI the Navy takes control of radio equipment technology, wanted to maintain control after – but the resistance against government control won out
- Navy, though, advocated creating private monopoly to control radio development
- Radio Corporation of America (RCA) was formed as a consortium of four companies: General Electric, AT&T, Westinghouse and the United Fruit Company (used radios to connect boats to banana plantations and evolved the media)

# Radio evolution

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- Frank Conrad, a Westinghouse employee, began broadcasting music on Sundays in 1920
- Westinghouse then built Conrad a more powerful transmitter, but a broadcast schedule together
- KDKA debuted Oct. 27, 1920 – others soon followed

# Growth of networks

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- By 1923, more than 600 radio transmitters broadcasted through the United States
- Limited broadcasting, could not fill a 24-hour on air period
- RCA soon developed networks to provide larger-scale programming to a large group of station
- RCA established the National Broadcasting Network on July 22, 1926, first major broadcasting network



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# More networks emerge

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- NBC was once two networks a “red” and a “blue,” but had to be split into two networks after an anti-trust ruling
- The “blue” network became the American Broadcasting Corporation (ABC)
- William Paley’s Columbia Broadcasting (CBS) system followed, and he was the first to consider advertising as a way to pay for programming, soon many radio shows were sponsored by companies – many of which were cigarette companies
- CBS started as United Independent Broadcasters, Paley was able to buy UIB and rename it from revenue he earned in advertising sales

# Golden age of radio

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- 1920s, 1930s and 1940 became known as the “Golden Age” of radio
- Radio was mass medium that served as primary entertainment in home
- People were in their houses, but getting media from outside the home
- Wide range of programming existed: Music, dramas, soap operas (“Guiding Light” began as radio show in 1937, move to television in 1952 and ran until 2009)



# The new companion media

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By the 1950s, radio stations were losing market share as more people turned to television.

Listening to the radio became the thing you did while doing other things.

Think about that now.

Soon reinvented itself as a “companion” media, rather than a central media experience.



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# Changing music experience

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- Invention of radio changes personal music interest, expands horizons and listening
- Music was no longer something people had to pay high costs to hear
- “Social music,” or music people play or sing for one another, becoming the past
- We no longer had “shared musical experience”
- By 1979, the “personal soundtrack” emerged with invention of the Sony Walkman, which cost up to \$200
- Allows for privacy, personal listening, but also creates a private world
- Critic John Zerzan argues Walkman led to “a sort of withdrawal from social connections”

# Musical discussions

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Music existed prior to Rock 'N' Roll, but this specific genre was what really brought radio to prominence.

- Been called a “cross-cultural phenomenon”
- Started with “race records” converging blues, gospel and jazz covered by black artists
- Rhythm and blues started as a genre specifically when big bands became too costly
- Fewer instruments in R&B: singer, electric guitar, electric bass, drummer



# Rock emerges

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- Dec. 28, 1947, Wynonie Harris records “Good Rockin’ Tonight’ in Cincinnati, Ohio
- Song became a big hit on jukeboxes in African American clubs
- Was it the first rock ‘n’ roll song? Debates continue
- Jukebox hit for Harris, helped give the genre its name (later a radio hit when covered by Elvis Presley)
- Songs were not played on “white” radio stations



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# Moving across color lines

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- Greatest result of rock was a moving across color lines movement, artists often covered one another
- Elvis Presley and Chuck Berry blended hillbilly music, which had more “twang,” with R&B
- Resistance to play in wider markets because it was seen as “colored” music, even if sang by a white man
- Presley and Berry “borrowed” sounds from other genres
- Previously segregated styles of music and listeners began coming together
- Disc jockeys became playing songs across race lines too, which made shows more popular, but also controversial in some regards

# Popular music changes forever

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## MOTOWN

- Detroit-based record label, founded by Berry Gordy Jr.
- Most successful black-owned businesses ever
- Stopped publishing songs by black artists for white artists to cover
- Turned out its own hits
- Still exists as part of Universal Music Group

## BRITISH INVASION

- Began in 1964 with music of “The Beatles,” “The Who” and “The Rolling Stones”
- Beatles were notable and had to stop performing live in 1966 because the band couldn’t hear itself perform
- “Concept album” concept gave rise

# Hip-hop brings less music, more culture

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Suddenly music was no longer about just the music anymore, rather it became a production. And even a culture.

Consider the Hip Hop genre. [DJ Kool Herc](#) is credited with first inventing the breakbeat during a block party in August 1973.

The genre's elements are:

**MCing** – Rapping over recorded music, rapping is only PART of larger genre, which started out of the Bronx with cassette tapes passed from person to person

**DJing** – Playing recorded music from multiple sources

**B-boying** – Hip-hop dancing, often referred to as breakdancing

**Graffiti art** – The visual images of the culture

# Country finds roots

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Clip Art

- Grew out of folk, hillbilly, and “old timey” music
- Songs often relay a story about people in suburban or rural settings
- Revitalized by *Urban Cowboy* (1980)
- No longer “country” sounding, the genre has evolved around lyric-oriented songs
- Songs about love, heartache and having life “slap you around a bit”



# Music effects on young people

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- There have always been concerns about effects of lyrics on young people, beginning in 1970s with derogatory comments about women
- Adults and young adults have different interpretations of lyrics and meanings, some believe they transmit hidden meanings
- Hip-hop have attracted lots of controversy, especially with tone and language use
- Middle-class white parents often at the center of concerns, especially when children are listening to what they perceive as “black music” ... yes, even today

# Rise of digital music

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- Recording begins with LP developed by Columbia Records, could hold 23 minutes of music
- Alternative was 45s, or 45-rpm disc, which played about four-minutes of audio at a time
- Problem with both: sound quality degrades over time, not long lasting
- Compact Discs launched in 1983 in United States, moving populous away from analog to digital



# Rise of digital music

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- Manufacturers wanted chips on CDs to prevent ripping initially
- Digital move made it easier for files to be condensed
- Compressed MP3 was next move, allowed for artists to distribute media more openly, easily
- Digital allows consumers to make perfect copies
- Also opened door for pirating of content

# Consequences from digital music

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- Consumers “share” music over the Internet, violating copyright law
- But artists can use Internet to promote music directly to consumers, bypassing record labels

# The business of radio

**Table 7.1** Popular Radio Formats

Although the ratings of various radio formats vary from month to month, here is an overall picture of the audience percentage of the various top formats. Note that the report of number of stations includes FM, AM, HD, and Internet streaming.

FORMAT	AUDIENCE PORTION	# OF STATIONS
Country + New Country	14.2%	2,893
News/Talk/Information	11.4%	3,984
Pop Contemporary Hit Radio (Top 40)	8.2%	1,012
Adult Contemporary + Soft AC	8.1%	1,390
Classic Hits	5.2%	883
Classic Rock	5.2%	944
Hot Adult Contemporary	4.7%	810
Urban Adult Contemporary	4.1%	336
Rhythmic Contemporary Hit Radio	3.4%	370
All Sport	3.1%	1,274
Urban Contemporary	3.0%	274
Contemporary Christian	2.9%	1,691
Mexican Regional	2.9%	550
Adult Hits + 80's Hits	2.2%	395
Active Rock	2.1%	356
AOR + Mainstream Rock	2.0%	336

Source: "Radio Today 2013: How America Listens to Radio" (Arbitron, Fall 2012 survey period).

Note: Among the other formats are Alternative, Oldies, Spanish Contemporary, All News, Classical, Religious, Album Adult Alternative, Classic Country, Spanish Adult Hits, Gospel, Contemporary Inspirational, Spanish Religious, and Tejano. Audience Portion is of 12+ persons. # of Stations includes AM, FM, HD radio, and streamed stations.

# Business of radio

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## SPANISH LANGUAGE

- As of 2009: 1300+ stations broadcasting in Spanish
- Growing in popularity
- Multiple formats, including ESPN (lots of soccer)
- Caters to a very specific audience
- Top rated stations play Mexican or adult contemporary music

## TALK RADIO

- **Political talk radio:** Most political talk is conservative; Rush Limbaugh, Sean Hannity most popular.
- **Shock Jocks:** Howard Stern, Bubba the Love Sponge
- All-sports radio: Passionate listeners who won't change channel

# Moves toward consolidation

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Prior to 1985, broadcast owners could only own seven AM stations, seven FM stations and seven television stations.

- FCC relaxed those rules then
- Telecommunications Act of 1996 further relaxed rules, basically meant single owner could have as many stations as possible
- Within a year, the radio industry became less diverse and more concentrated
- By 2003, number of stations grew 5.9 percent, but station owners fall by 35 percent
- Clear Channel emerges as top owner, but 2014 had changed named to iHeartMedia to reflect broader strategy

# Consolidation effects

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Stations are now much different than before:

- Small or no staff
- Few people to sell advertising at a local level
- Programming mix of local input with lots of borrowed elements from other stations, many coming from a centralized source at corporate level



# Public radio

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- NPR founded as part of 1967 Public Broadcasting Act, designed to create educational television
- *All Things Considered* goes on the air in 1971
- NPR's *Morning Edition* news show has bigger audience than any of the morning TV programs
- NPR's website is key part of network's strategy
- Is no longer National Public Radio, just NPR

# Future of sound

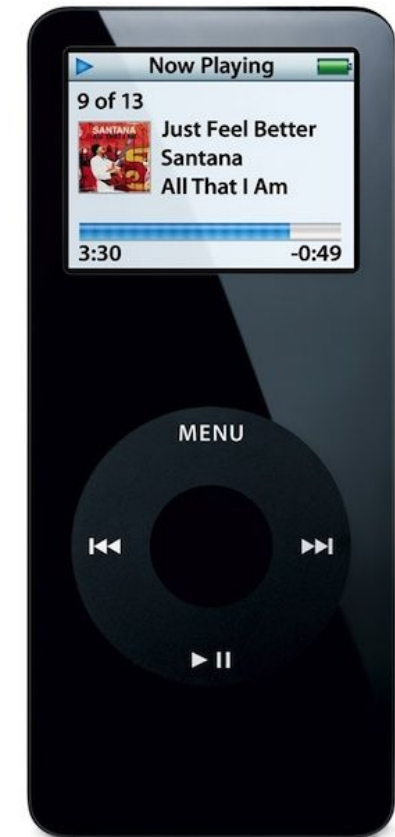
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Industry has been pulling revenue sources from packaging sound since infancy. Then came computers and the Internet, which allowed people to package their own sounds.

Now the industry is facing new competition and transformations of its own.

Ninety-three percent of Americans ages 12 and older still listen.

But all media is going through huge changes, so what will emerge in the area of radio?



# Future of sound: Radio

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## HD RADIO

- CD-quality sound and listening
- But 2010 showed only 7 percent of listeners wanted HD radio, a decline from year before
- Increasing number of cars offering option to purchase HD radio

## SATELLITE RADIO

- Main players Sirius and XM merged to create SiriusXM in 2008
- Ended 2013 with 24 million subscribers
- Biggest draw comes from programming, which typically doesn't fall within governmental regulation – think Howard Stern

# Finding new models

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- CD sales declining as people are more likely to get access via Internet channels
- Pirating and illegal file sharing common because ease in technology allows us to
- Artists seeking new ways to make money, sometimes turning to their own means of distribution (Beyonce/Tidal experience)
- Touring, sale of merchandise, commercial endorsements, direct sales of music to consumers are all options
- Consensus is that people who love music will continue to buy it, but we're still developing how we'll be getting music into the next decade