

6.805/6.806/STS.085, Ethics and Law on the Electronic Frontier  
**Lecture 11: Origins of Broadcast Regulation**

Lecturer: Hal Abelson

Sex, Drugs, and Rock and Roll (How Metaphor becomes law: the origins of broadcast regulation)

This lecture is mostly about the history and regulation of communication and the metaphors that have shaped the law and technology behind it.

- I. Drugs
  - A. "Puff the Magic Dragon" – do not playlist in 1971
  - B. FCC went after popular music for promoting drugs and then went out to the "experts" (US Army)
  - C. 27 songs ended up on do not playlist
    1. Colleges (newspapers, organizations) were asked not to play these songs on the playlist
    2. Yale sued and lost
- II. Media that are regulated
  - A. Broadcast and TV
  - B. Books and Newspapers
  - C. Uncle Fester
    1. Don't remember real name
    2. Wrote about how to manufacture methamphetamine and published his books – bad stuff
  - D. Government tried to figure out where the Internet should fit
    1. New technology usually introduces new laws, so metaphors are what eventually end up becoming law
    2. From 1995-2001 the metaphor changed from weapons to protecting from credit card fraud and encryption technology
- III. The Power of Metaphor in Broadcast Regulation
  - think about the real policy and parallels of how technology and laws evolve
  - A. Titanic sinking (April 15, 1912)
    1. Beginning of radio. The Navy was using radio to send communication
    2. Navy was pretty upset because of hackers and also Marcony company
    3. Marcony – commercial interest of wireless telegraphy. Company complained that business was being hurt by outside unregulated stations
    4. As Titanic sunk, one radio room survived intact
    5. Carpathia ship was 10 miles away from Titanic, but the radio operators were not required to keep radio on all the time

- B. Congress acts
  - 1. Alignment of military and commercial interests
  - 2. Huge Public interest
  - 3. Hearings were run by William Alden Smith and decided that the real disaster was in the lack of radio communication
  - 4. Smith suggested that Congress enact radio regulations and helped enact the Radio Act of 1912
- C. Radio Act of 1912
  - 1. Used Titanic disaster to saturate air waves
  - 2. no one could broadcast without license
  - 3. permissible frequencies
  - 4. military got excellent frequencies
  - 5. commercial shipping and commercial use
  - 6. amateurs were banned from "useful" frequencies and regulated to technological unusable frequencies
  - 7. Metaphor – Congress regulates where shipping lanes or frequencies are
- D. Post Radio Act
  - 1. 1914 – 1918 considered Golden Years
  - 2. 1919 – ran radio as govt-sanctioned monopoly
  - 3. Hoover became interested in broadcasting and make a band for commercial broadcasting
  - 4. 1920 – broadcast of Presidential Election
  - 5. 1921 – broadcast of World Series. There were 5 broadcast stations in the U.S.
  - 6. 1922 – There were 576 broadcast stations and the broadband space was full so Hoover expanded it.
  - 7. Intercity Radio sued because license was denied and Hoover lost
  - 8. Courts ruled that only had the power to regulate shipping lanes not choose who could use, so band was expanded it again
- E. Broadcasting Spectrum
  - 1. Hoover spoke of it as a "great national asset" and "public interest to say who is to do the broadcasting."
  - 2. Zenith and GE frequency dispute
    - a. Companies switched to Canadian frequency but were fined
    - b. Sued and won
  - 3. 1926 – Court came down hard on Hoover about regulating power
  - 4. 1927 – Radio chaos. Hoover was out of the regulation business
- F. Radio Act of 1927
  - 1. Congress passes their own regulation and a reversal in principle
  - 2. Spectrum is now owned by the public and is in the public interest. Licensed by FRC (Federal Radio Commission)

3. successor was the Communications Act of 1934 and FRC became FCC
4. Act was a consequence of avoiding interference since the spectrum was a scarce resource. So government impounds radio broadcasting
5. Public Interest Standard – although strong regulation, will not interfere with free speech and no offensive content to be broadcast

#### IV. Sex

##### G. John Romulus Brinkley

1. bought a medical degree from a university in Kansas
2. opened up practice and observed frisky goats
3. Brinkley transplanted goat testicle into patient with erectile dysfunction
4. 1923 – starts Radio Station KFKB (Kansas First, Kansas Best)
  - a. Broadcasts goat gland transplants and offers medical advice
  - b. Was most popular station in 1930 (4 times as popular)
  - c. American Medical Society was unhappy at popularity of station
5. In 1930, Brinkley lost medical license and broadcast license from FCC
6. Court rules against him and FCC states that since the frequencies are limited, the character and quality of the service rendered must be considered → Hence license was revoked
7. Traveled to Mexico to practice and ran for governor of Kansas
8. This was the genesis of broadcast regulation and the court case NBC vs. U.S.

##### H. NBC vs. U.S.

1. Stricter regulation of broadcast since it is limited and is unlike other modes of expression like books and print since a response may also be limited
2. Red Lion Broadcasting v. FCC
  - a. Equal response time
3. spectrum not large enough to accommodate everybody – later proven to be false

##### I. Land

1. national resource that the government owns – National Parks System
2. metaphor – radio and broadcast regulation sprung up and is similar to government regulation of Parks system

##### J. Internet

1. making the different modes of media communication collide to the same thing

K. Hedy Lazaar

1. born in 1914 and was child actor
2. at the age of 19, was first woman to appear nude in a feature film *Ectasy*
3. she was to be the hostess for Mandl's parties in Vienna and entertain his business friends.
4. husband Mandl was extremely jealous; later fled to London and divorced Mandl
5. Louis Mayer and Hollywood
  - a. meets her in London and takes her to Hollywood. He was stunned with her beauty

L. George Antheil

1. child prodigy and patron was Chris Bach (?)
2. became pretty famous composer in the 1920s
3. most famous composition – compromised of player pianos and airplane propellers
4. wrote scores for John Wang movies and others
5. In Hollywood, he copyrighted "See-Note" system of musical notation
6. also really interested in endocrinology and glands

M. Lazaar and Antheil meet

1. in 1940 at a dinner party in Hollywood
2. Lazaar asks about hormones and breast enlargement
3. Lazaar wants to quit Hollywood and wants to offer services to National Inventor's Council
4. Both were very patriotic and wanted to help the war effort. Lazaar wanted to know more about torpedoes
5. Torpedoes were controlled by frequencies and ships would listen to see if they could jam the enemy's torpedoes
6. Lazaar had an idea of shifting frequencies to prevent torpedo jamming
7. Antheil had the solution of using piano keys to control frequency jumps

N. Fate of the Invention

1. Lazaar and Antheil give patent to Navy but never implements it probably because they were thinking you need to put player pianos on torpedoes
2. In 1950, electronic control became possible
3. Heavily used in Cuban Missile Crisis (1962)
4. In 1997, Lazaar and Antheil were recognized with Pioneer Award for their work

O. Corel Draw contest

1. winning entry was an image created using Corel 8 and of Lazaar
2. She sued for \$15M but received \$5M

All the history and inventions are based on metaphors. Now we take it as commonplace, but the metaphors are not real. We are busy inventing and reinventing these metaphors with the Internet and new technology.

We have the opportunity to look beyond the metaphors and create new metaphors.