Effects and Production Techniques
Echo/Reverb

• “The persistence of sound after a sound is produced”

• Imagine yelling in a large stairway, or a gymnasium

• Ex: Booker T & The MGs – “Green Onions” (1962)

• 1:14 little or no reverb, 1:30 lots of reverb

• Demo on Guitar
Delay

• When a sound is played back, or repeated.
• Can be repeated once or multiple times.

• Repeated sound can be almost instant, or a few seconds later. Measured in milliseconds.

• Confusingly, sometimes referred to as “Echo.”

• Short delay creates a unison or double-tracking effect

• Guitar Demo
Delay

Slapback Echo
• Ex: Elvis Presley – “Blue Moon” (1954)
• Ex: Rolling Stones – “Brown Sugar” (1971)

Medium Delay
• Big Youth – “Screaming Target” (1973)

Longer delay
• Ex: U2 –
  “Where The Streets Have No Name” (1987)
Distortion/Overdrive/Gain

• Originally comes from a vacuum-tube amplifier played at a very high volume.
• Sounds begin to break up and get distorted.

• Effects Pedals.
• Guitars, Bass, Keyboards most common

• Demo on Guitar

• Old blues trick, paper in strings
Wah Wah

• Simulating the sound of a mute on a trumpet or trombone
• Sweeps between the high and low frequencies in a sound
• Explain highs/lows in tone

• Ex: Isaac Hayes – “Theme From Shaft” (1971)
• Ex: Jimi Hendrix Experience – “Voodoo Child” (1968)

• Demo on Guitar
Tremolo

- A “trembling” effect
- Bowed instruments, notes played very quickly
  - https://www.youtube.com/watch?v=4E8rMLH1pag

- Sometimes called vibrato
- Effects pedals which rapidly turns the volume of a signal up and down. Can be quick or slow.
- Organ: https://www.youtube.com/watch?v=oyHg2U_Ydhg

- Guitar:
- Ex: Duane Eddy – “Rebel Rouser” (1958)
- Ex: Creedence Clearwater Revival – “Born on the Bayou” (1969)
Chorus

- Modulation effect
- Doubles original sound
- Slightly out of tune, and delayed

- https://www.youtube.com/watch?v=zmN7fK3fKUE

Ex: Nirvana – “Come As You Are” (1992)
Phaser

- Similar to the wah wah, the phaser adjusts the tone of the sound.
- Sweeping sound
- Guitar demo

Ex: Lenny Kravitz – “Are You Gonna Go My Way” (1993) 2:00
Talk Box

https://www.youtube.com/watch?v=YHnnnexSx-A

Ex: Bon Jovi – “Livin’ On a Prayer” (1986)
Ex: 2Pac feat. Dr. Dre and Roger Troutman – “California Love” (1996)

• Sound comes through tube
• Similar to wah wah effect
• Guitar. Keyboard, others
Vocoder

• Synthesized vocals
• Used for encrypting vocals during WWII
• Music in 1970s


• A different kind of sound:
Ex: Kanye West feat. Pusha T – “Runaway” (2010) 5:30-7:00
Auto-tune

• Pitch correction – widely used invisible effect
• Studio software; effect pedal
• Relate to cut-and-paste vocals (comping)

• Purposely used as a **robotic effect**:
• First hit:

  **Ex:** Cher – “Believe” (1998)

  **Ex:** Daft Punk – “One More Time” (2001) 1:00
Auto-tune

• Became overused in popular music c. 2010
• Negativity, value judgements

• Another use: creates notes where none exist

Ex: “Ain’t Nobody Got Time For That”

https://www.youtube.com/watch?v=Nh7UgApringM
Equalization (EQ)

Ex: Spooner’s Crowd – “Two In the Morning” (1966)

- Demo on iTunes
- Connect to Wah, phaser
Audio Space

• Stereo: left and right
• Reverb: Front and back; near and far
• Volume: Where is each instrument in the mix?

• Visualizing sounds
  • https://www.youtube.com/watch?v=fSSLQf95-Nc

• “Dry” and “wet” sounds