
FILM AUDIO
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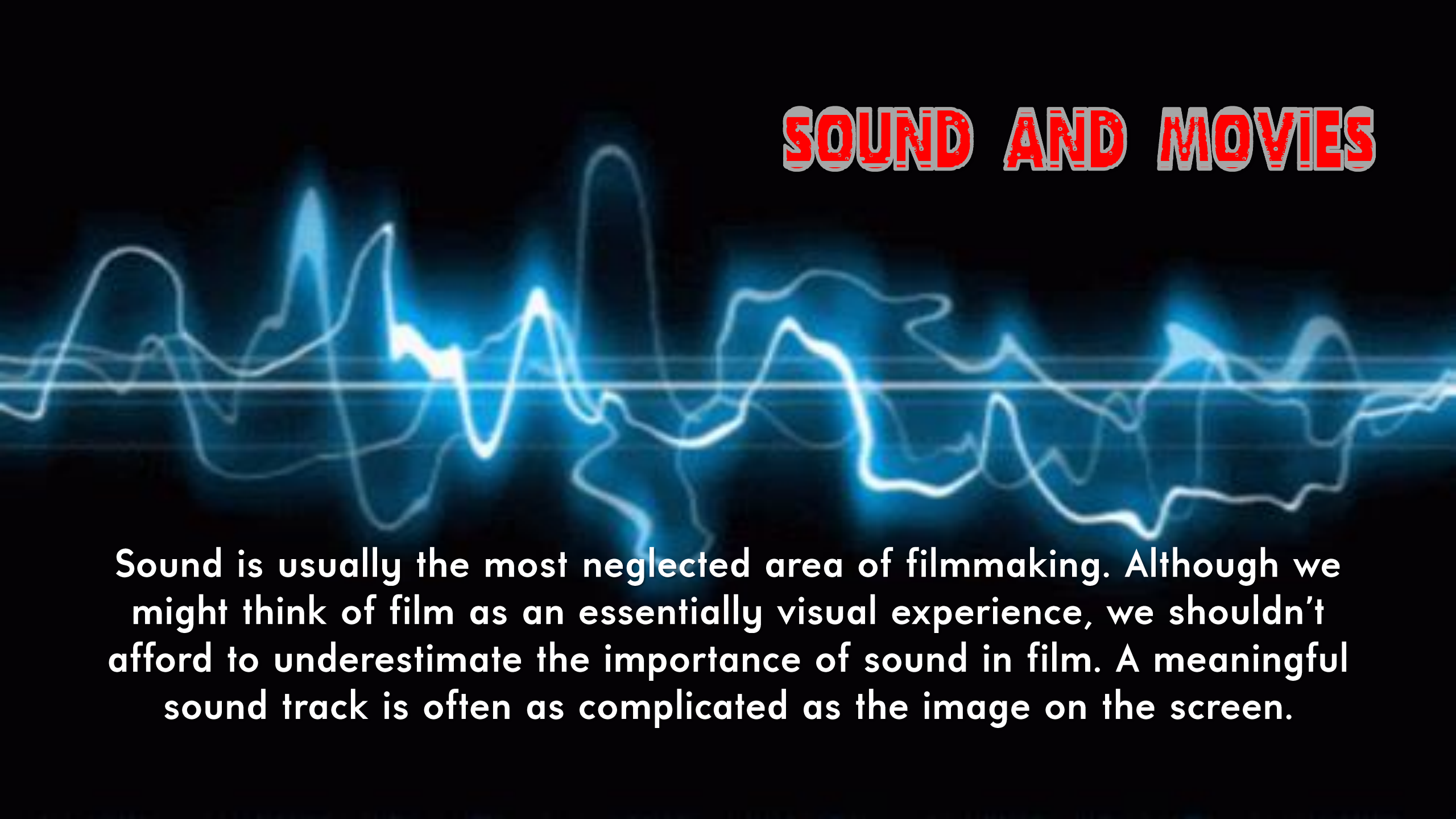
SCENE
TAKE
ROLL
SOUND

Bad video is forgivable. Bad audio is not.

- Ryan Connolly, Film Riot



SOUND AND MOVIES

Sound is usually the most neglected area of filmmaking. Although we might think of film as an essentially visual experience, we shouldn't afford to underestimate the importance of sound in film. A meaningful sound track is often as complicated as the image on the screen.

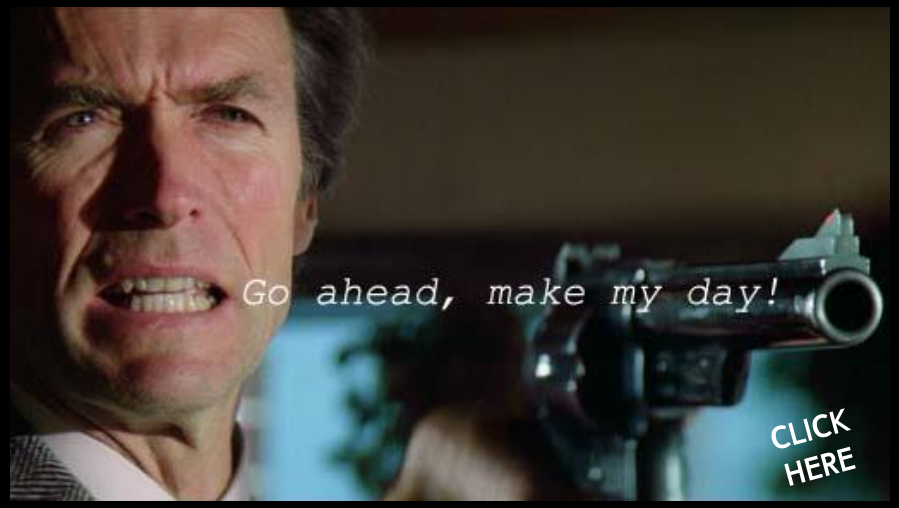
An entire sound track is comprised of three basic components:

- human voices

- sound effects

- music

THE ROLES OF SOUND IN A FILM EXPERIENCE



Sound in film has a...

1. Direct Narrative Role - Sound has a direct storytelling role in film making. Dialogue and narration tell the story and narrative sound effects can be used in such capacity too, e.g. to draw the attention of the characters for an off screen event. Such direct narrative sound fx are often in the script, since their use can influence when and where actors have to take action.

2. Subliminal Narrative Role - Sound affects an audience subconsciously. While viewers call tell apart the various objects in a picture - an actor, a table, the walls of a room, listeners barely ever perceive sound so clearly. They take sound in as a whole, despite its actually being built from many pieces.

Herein lies the key to the storytelling power of sound. The inability of listeners to separate sound into parts can easily produce "a willing suspension of disbelief" in audiences, since they can't separately discern the various sound elements. This can be controlled by filmmaker to produce a route to emotional involvement in the film by the audience. Ambient sounds are very valuable as they can evoke emotion in a more subtle way than music often does...

The most direct example this effect is often the film score. Heard apart, the score played with the film might not make much sense. The music is written to enhance the mood of a scene and to underscore the action, not as a foreground activity, but a background one. The function of the music is to "tell" the audience how to feel, from moment to moment: Soaring strings mean one thing, a single snare drum, another.

3. The Emotional Sound Equation - The emotional sound equation says that low frequencies represent a threat. A distant thunderstorm played underneath an otherwise sunny scene creates a sense of foreboding or doom, as told by this equation. An interesting parallel is that the shark in Jaws is introduced by four low notes on an otherwise calm ocean.

4. Grammatical Role - Sound plays a grammatical role in the process of film making too. For instance if sound remains constant before or after a picture cut, it indicates to the audience that while the point of view many have changed, the scene has not shifted - we are in the same as before. So sound provides a form of continuity or connective tissue for films. In particular, one type of sound represented several ways plays this part. Presence and ambience help to "sell" the continuity of a scene to the audience.

SOUND PRE-PRODUCTION

Director Tim Burton and composer Danny Elfman have collaborated on many films for many years.

Though film sound is usually engaged during Shooting and Post-Production, there is no reason why planning a soundtrack cannot start earlier. Introducing sound earlier initiates a dialogue between the Director and the Sound Department through Pre-Production, Shooting and Post.

It is commonly thought that music should not be considered until after editing but due to its impact on the story, its cost and the lengthy process of clearing rights, it should be engaged as early as possible.

SOUND MOVEMENT RECORDING

Sound travels in mechanical waves. A mechanical wave is a disturbance that moves and transports energy from one place to another through a medium. Sound vibrates its way through matter. Sound needs matter to travel, so there cannot be any sound in a vacuum, such as space.

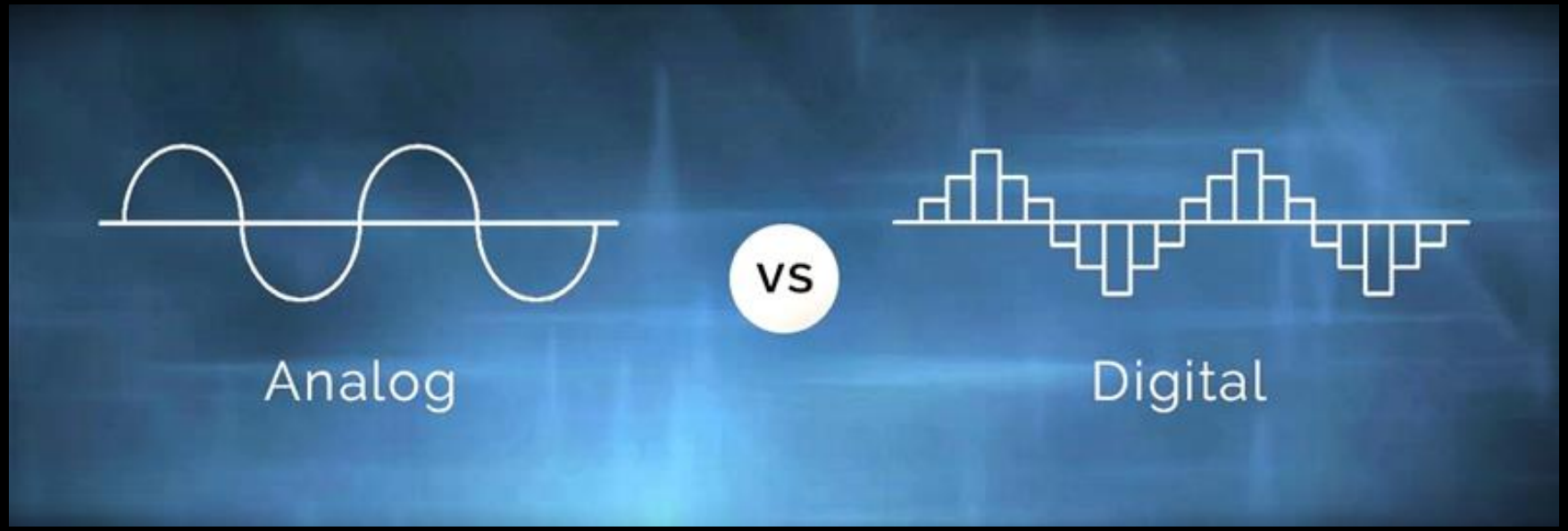
Sound moves as a vibration disturbing the air causing air molecules to bump into each other in succession. It's similar to how a ripple from a thrown rock moves through water.

Sound travels through waves, a wave that microphones can detect. Sound cause disturbances in it's medium by vibrations. We perceived the vibration as a sound.

Sound recording is an electrical or mechanical inscription and re-creation of sound waves, such as spoken voice, singing, instrumental music, or sound effects. Two types of sound recording technology are analog and digital.

In analog recording a small microphone diaphragm detects changes in atmospheric pressure (acoustic sound waves) and records on a medium

Digital recording converts the analog sound signal picked up by the microphone to a digital form by digitization, allowing it to be stored and transmitted by a wider variety of media. Digital recordings are higher quality than analog because it prevents the loss of quality found in analog due to noise and electromagnetic interference in playback, and deterioration or damage to the storage medium.



MICROPHONES

There are only three ways to get sound onto your recordings: via direct input (as from a guitar amp or synthesizer), MIDI (which isn't really sound per se, but instructions to a module that creates sound), and by microphone. The blessing and curse of mics is that they all color sound to some degree, although the better ones hooked to a good preamp, really give you that you-are-there feeling.

Types: There are basically two kinds of microphone technology, dynamic and condenser:

- Dynamic mics are actually backwards speakers and generate a small amount of electricity when the diaphragm of the mic moves back and forth under the pressure of the sound waves hitting it.

- **Condenser mics** are powered by electricity and so are more sensitive; they use a more lightweight diaphragm and are better at picking up nuances of sound. "Large diaphragm" mics are more sensitive and more expensive than "small diaphragm" types.

Pickup Patterns: Refers to the relative sensitivity of a microphone to sounds coming from the side.

A pickup pattern can be:

- omnidirectional: picks up equally well in all directions
- unidirectional: picks up mostly from one direction
- cardioid: picks up in a heart-shaped pattern

Plugs: Amateurs use the small 1/8" plugs found on consumer mics and 1/4" plugs found on guitar cables. Professional mics have XLR plugs and balanced cables, with the following features:

The plugs lock in and don't rip out easily if someone trips over something.

- The cables have 3 thick conductors that are more resistant to rough handling, and less likely to pick up buzz, hum, etc.
- XLR cables are male on one end and female on the other, allowing use of any cable as an "extension cord".

DOUBLE-SYSTEM RECORDING

Double-system recording is the standard procedure of sound recording used in motion picture film photography where the sound for a scene is recorded separately from the camera. Recording sound-on-film directly at the time of photography has many limitations, so all production sound is recorded on a separate recorder. Both camera and sound recorder need to share a very accurate time reference.

Double-system recording requires that sound and picture be manually synchronized before every take. This task is performed by the clapper slate. A clap sound on the recording is matched to the closed clapper image on the printed film, and thus the two recordings can be synchronized.

FOLEY

Foley is the reproduction of everyday sound effects that are added to film in post-production to enhance audio quality. These reproduced sounds can be anything from the swishing of clothing and footsteps to squeaky doors and breaking glass.

The best Foley art is so well integrated into a film that it goes unnoticed by the audience. It helps create a sense of reality within a scene. Without these crucial background noises, movies feel unnaturally quiet and uncomfortable. The term "Foley" also describes a place, such as Foley-studio, where the Foley process takes place.

DUBBING

Dubbing, or re-recording, is a post-production process in which additional or supplementary recording occurs after the original recording stage. The process includes additional dialogue recording(ADR), in which the original actors and synchronize audio segments. Music is frequently subject to the dubbing process in the post-editing stage.

Voice actor Sarah Natochenny , seen dubbing here is, the English voice of Ash Ketchum in Pokémon.

The term "dubbing" most commonly refers to replacing the voices of the actors on the screen with those of different performers in another language.

RESHOOT

1. Which are the three basic components of a sound track ?
2. Explain the roles of sound in a film experience.
3. Explain how sound travels.
4. Which are the two types of sound recording technology used today? How do they work?
5. Which type of pickup pattern would you avoid if recording dialogue?
6. What is the function of the clapper slate?
7. What is Foley?
8. What is dubbing?

BONUS MATERIAL

Enjoy the following video from Film Riot:

Next:

POST