

Satisfying Sound

WHY SOUND IS 70% OF A PRODUCTION



Why is sound so important in production?

Consider what you are hearing (and not hearing) right now.

If you're going to make short films, understanding how sound works is crucial. There are a number of ways that you can use sound and music in your narrative films.

Actual Sound

Actual sounds are all the sounds that occur within the world of the film and can be heard by characters.

Onscreen sound. Any sound that has a source within the frame.

Offscreen sound. The source of the sound isn't visible on screen but the audience understands that it's part of the scene. Ambient sound is a good example of this. If a scene takes place inside an apartment, the audience understands that the off-screen sound of traffic is part of the scene. One of the best uses of off-screen sound is in Steven Spielberg's Jurassic Park when the audience hears the sound of the approaching Tyrannosaurus Rex before it appears on screen.



Ways to use sound in film

Transitional sounds. A sound bridge when the sound between two scenes overlaps. Dialogue from the one scene, for example, might be heard before the characters appear on screen. This helps to create a smooth transition between two scenes.

Pre-lap. In *Unbreakable*, M Night Shyamalan uses dialogue to bridge two scenes. Elijah Price (Samuel L Jackson) is heard before he appears on screen. “I followed the guy in the camouflage jacket,” he says. Shyamalan cuts to the next shot where he’s having a conversation with David Dunn (Bruce Willis). The audience understands that this is dialogue from the next scene. In *Skyfall* (Sam Mendes, 2012), there James Bond is sitting in a hotel bar when he receives a text message informing him that an assassin has arrived in Shanghai. Mendes cuts to a close up of Bond and the sound of a jet landing has been edited into the scene before he cuts to a shot of the airport. This sound helps to smooth the transition between the two shots. In *The Matrix*, a sound bridge is used to create a transition between a nightclub and the protagonist waking up the next morning. “The answer is out there, Neo,” says Trinity against the loud music of a nightclub. “It’s looking for you. And it will find you if you want it to.” The sound of an alarm clock gradually starts to fade in and there is a sudden cut to Neo’s alarm clock as it wakes him the next morning.

Ways to use sound in film

Post-lap. In *The Silence of the Lambs*, Jonathan Demme uses a sound bridge to smooth the transition between two locations. Clarice Starling (Jodie Foster) is having a telephone conversation with her superior at the FBI. “I figured he’s from Baltimore and I looked in the phone book and there’s a Your Self Storage...” she says as Demme cuts to an establishing shot of the business, “...right outside of downtown Baltimore, sir.” Letting the dialogue trail into the next scene helps to smooth the transition between these two scenes.

Audio match cut. An audio match cut is when two similar sounds fade into each other. Director Alfred Hitchcock famously used an audio match cut in *39 Steps*, cutting from a shot of a woman screaming to the shot of a train sounding its whistle. In the thriller *Dead Calm*, director Philip Noyce uses an audio match cut, transitioning from the sound of a heartbeat to the sound of wiper blades. In Season 2 of *Breaking Bad* in an episode called ‘Over’, an audio match cut is used to transition between a shot of Walter White using a power tool at home, to a shot of a janitor using a vacuum at Skylar’s office.

Ways to use sound in film

Subjective sound is any sound occurs in the mind of a character. As David Sonnenschein notes in Sound Design – The Expressive Power of Music, Voice and Sound Effects in Cinema: “By getting inside a character’s head, hearing what he or she is hearing, the audience can have a strong bond with that experience.”

Inner voice. A character’s inner voice is when you hear what they’re thinking word for word.

Remembered sound. Although visual flashbacks are often used in films, a sonic flashback is when a character hears something – usually a line of dialogue from a previous scene – that reminds them of something. In *Hot Fuzz* (Edgar Wright, 2007), Nicholas Angel (Simon Pegg) is thinking about the murders that have rocked the small town of Sandford. The camera dollies in on Angel as he’s eating an ice cream, recalling the words a character said in the previous scene, “No luck catching them killers, then?” This sonic flashback helps to reveal that he’s made a significant breakthrough in the case.

Ways to use sound in film

Imagined sound. There are some films that allow the audience to hear characters' thoughts. Alfred Hitchcock's *Psycho* is a good example. Leaving Phoenix after she has stolen \$40,000, Marion Crane hears the voices of her boyfriend and boss, imagining how they're going to react. "Marion, what in the world –" the audience hears Sam say as she's driving along the highway. "What are you doing here? ...Of course I'm glad to see you. I always am. What is it, Marion?"

Distorted sound. Sometimes, when the audience hears sound subjectively from the perspective of a character, it can be distorted. In *Unbreakable*, when David Dunn (Bruce Willis) plunges beneath the surface of a pool and starts to drown, the audience hears what the character would hear while he's struggling beneath the surface.

Ways to use sound in film

Spoken writing. When a character is reading something – often a letter or note – the audience can hear the voice of the character who wrote it. This is used in *Napoleon Dynamite* when Trisha receives a note from Napoleon which reads, “There’s a lot more where this came from... if you go to the dance with me. Yours truly, Napoleon Dynamite.”

Personal narration. Personal narration is when a character, from some point in the future, narrates the story. In *Mean Girls*, the narrator is also the main character Cady Heron (Lindsay Lohan) explains in voice over that she grew up in Africa because her parents were research zoologists and is starting school for the first time at age sixteen.

Non-Diegetic Sounds

Impersonal narration. While personal narration is relatively common, filmmakers seem to use impersonal narrators less frequently. An impersonal narrator is not a character in the film. *500 Days of Summer* is a great example of how an impersonal narrator can be used: “There’s only two kinds of people in the world. There’s women, and there’s men. Summer Finn was a woman. Height : average. Weight : average. Shoe Size : slightly above average. For all intents and purposes, Summer Finn: just another girl. Except she wasn’t. To wit, in 1998, Summer quoted a song by the Scottish band Belle & Sebastian in her high school yearbook. “Colour my life with the chaos of trouble.” The spike in Michigan sells of their album “The Boy with the Arab Strap” continues to puzzle industry analysts.” The Assassination of Jesse James by the Coward Robert Ford is another film that uses an impersonal narrator: “He was growing into middle age, and was living then in a bungalow on Woodland Avenue. He installed himself in a rocking chair and smoked a cigar down in the evenings as his wife wiped her pink hands on an apron and reported happily on their two children. His children knew his legs, the sting of his mustache against their cheeks. They didn’t know how their father made his living, or why they so often moved. They didn’t even know their father’s name.” The film uses this very dry and impartial narration to make the audience question the way we celebrate folk heroes like Jesse James.

Non-Diegetic Sounds

Non-diegetic sound effects. Non-diegetic sound is any sound that doesn't occur in the created world of a film. These sounds cannot be heard by the characters. In *Snatch*, Guy Ritchie uses a stylised bullet sound to accompany a jet taking off. In *Thank You For Smoking*, director Jason Reitman uses non-diegetic sounds to convey that Nick Naylor (Aaron Eckhart) is a charismatic public speaker. “I don’t have a MD or law degree,” he says. There is a shot of Naylor standing at a podium. His words are replaced by the sound of machine guns and grenades. “I have a bachelor’s in kickin’ ass and taking names.

Non-Diegetic Sounds

Score. In narratives, orchestral music performs a number of functions. It can establish setting. In the opening shot of *Braveheart*, the camera soars over the Scottish highlands and James Horner's score, which makes extensive use of bagpipes commences. In conjunction with the visuals, the music helps to establish the setting of the film within seconds. Similarly, in the opening sequence of *Equilibrium*, Klaus Badelt's score helps to create the impression of an oppressive, totalitarian government through its use of a Soviet-style choir. The score also conveys information about character. In *The Dark Knight*, composers Hans Zimmer and James Newton Howard collaborated on a theme for The Joker: a single note played on the violin which increases in intensity and pans rapidly from left to right, gradually joined by other discordant and distorted electronic instruments. As James Newton Howard notes: "What's great about the Joker theme to me is that it feels totally untethered. It just kind of exists. It lives somewhere in the cracks." The jarring, incessant wall of noise contributes significantly to his sinister characterisation. John William's *Imperial March* is another great example of music being used to characterise a villain. Of course, film scores also help to characterise heroes as well. Take John William's *Raider's March* or The Theme from *Superman*. Film scores also contribute to audience engagement. They heighten suspense and pluck at the heartstrings. Midway through Ridley Scott's *Gladiator*, Maximus is forced to fight for his life in a brutal and bloody battle in the Colosseum. Ridley Scott created a tense, furious and brutal scene which made all the more effective by Hans Zimmer and Lisa Gerrard's orchestral track, The Barbarian Horde. This is a good example of music underscoring and accentuating the action in a narrative. In *The Avengers* (Joss Whedon, 2012), the heroic and heart-pounding score by Alan Silvestri is used in the climactic battle sequence to emphasise the heroism of the main characters.

Non-Diegetic Sounds

Songs. Popular music can also make a significant contribution to narratives. When the T-800 travels back through time in James Cameron's *Terminator 2*, he arrives in the present day completely naked, finds the nearest seedy bar and demands the clothes, boots and motorcycle of one of its patrons. He emerges from the bar clad completely in black to George Thorogood's 'Bad to the Bone'.

Contrapuntal sound. Contrapuntal sound is when sound or music is used in an ironic or unexpected way. In John Woo's *Face/Off*, a child caught in a massive gun battle between criminals and police listens to the song 'Somewhere Over the Rainbow' through a pair of headphones. Windows explode, machine guns flash and spark as the room is showered with bullets. The scene plays out in slow motion to this unexpected music. A similar example occurs near the beginning of *I am Legend*, when Robert Neville (Will Smith) is bathing his dog and singing along to the Bob Marley song 'Three Birds'. Contrary to what the lyrics suggest, everything is not going to be all right. How could it in a nightmarish, post-apocalyptic world filled with bloodthirsty vampires? Rather than make the audience feel comforted, this song creates a deep sense of unease.

Building Your Soundtrack

A good soundtrack will add considerable production value to your film. Most first time filmmakers simply use the audio recorded by their camera's microphone, resulting in a soundtrack that is flat and lacks polish. To create a decent soundtrack, you will need to assemble a patchwork of purposefully recorded audio, including dialogue, sound effects, music and atmosphere.

SOUNDTRACKS

If you want to create a polished soundtrack for your film, simply using the audio from your camera isn't good enough. To create a professional result, you will need to put together a patchwork of purposefully recorded audio, including dialogue, sound effects, music and atmosphere. A good soundtrack will add considerable production value to your film and you will find it almost as time consuming as completing the visual editing.

DIALOGUE

When shooting your scene, it's very important to capture dialogue clearly. Use a shotgun microphone and get it as close to the actors as possible. Eliminate ambient noise, such as air conditioners or televisions. Re-recording dialogue in post-production is difficult and time consuming, it's best to get it right on location.

SOUND EFFECTS

The sound effects for your scene will be sourced from a number of places - including production audio, foley sounds and sound effects libraries.



Production audio. After your shoot when the set is silent, use a field recorder like the Zoom H1, to record important location sound like footsteps, doors opening and other sound effects that are unique to that location or important to your scene. These sound effects will be far superior to the audio captured by your camera.



Foley sounds. Foley sounds are when you create sound effects in a controlled environment, like a recording studio, to maximise recording quality. Foley artists recreate sounds, such as footsteps, while watching footage from the film to match the sounds precisely.



Sound libraries. Sound libraries are a good source of sound effects that are difficult or impractical to record, such as gunshots, screaming or explosions. When you are sourcing sounds online, ensure that the sounds are Creative Commons or in the public domain. The website www.freesound.org has a good range of sounds.

ATMOSPHERE

When you're on location, always capture several minutes of atmosphere using a field recorder like the Zoom H1. This room tone becomes the foundation of your soundtrack.

GUIDE TRACK

When you're shooting your scene, the sound that comes from your camera will serve as a guide track, allowing you to sync dialogue and sound effects with the performance of the actors. Many amateur filmmakers stop here and the soundtrack never sounds that good. When you have built your soundtrack up using other recordings, you can disable this layer of audio so you're left with more pristine recordings.

Tips for recording sound

Recording dialogue on location is one of the most important parts of principal photography. If you don't capture audio properly, you will be forced to rerecord performances in post production using a process called automated dialogue replacement (ADR). Dialogue is often rerecorded days or weeks after the initial performance. It can be quite difficult to match the performance and then make the rerecorded dialogue sound like it belongs in that space.

As a low budget filmmaker, correctly capturing dialogue on location is essential.

- Avoid the camera's onboard microphone. Your camera's inbuilt microphone is useful for capturing a guide track for arranging effects during post production. The audio from your camera's microphone should not be used in the final edit of your film. The microphones in consumer cameras are usually poor quality and pick up the inner workings of the camera which can result in the omniscient hum associated with digital video.
- Use an external microphone. Using an external microphone is the best way to capture audio.
- Use headphones. Your recordist should always listen to the audio through a pair of headphones, this is the best way to ensure that you're recording a clean track.
- Eliminate background noise. When you arrive on location do everything possible to remove background noise. Listening to the location through your headphones will often draw your attention to sounds that you might otherwise not notice. Close windows and doors. Turn off air conditioners and refrigerators. Do everything possible to ensure that the recording environment is pristine.
- Get close. Whether you're using a shotgun microphone or a portable audio recorder like the Zoom, it's important to get the microphone close to your actors. When you're on location, make sure you have a dedicated sound recordist whose responsibility is to position the microphone as close to the actors as possible. If you're shooting static shots, it's often easiest to simply mount the microphone on a tripod or microphone stand slightly out of shot. If your sound recordist is holding the microphone, it's important to ensure that they are wearing headphones and monitoring the sound all the time.
- Capture an atmosphere track. Before you start shooting, capture a five minute atmosphere track. Even quiet rooms have sound. When you're editing your film, an ambient background track is the foundation of your sound mix. Not including ambience will result in periods of silence that will remove your audience from the reality of the film.
- Record location sounds. When the set is quiet, rerecord important foley sounds such as footsteps, doors opening and closing and the sound of important props using a dedicated microphone. It's important that you slate your takes by saying something like, "Location: Kitchen. Sound: Door opening. Take one." This will help you to identify the sounds later on.



Foley is the art of recording sound effects to match the performance of actors onscreen. A foley artist typically performs these sounds on a soundproof soundstage while watching clips from the film. These sound effects are then mixed into the final film.

In the case of The Hunger Games, the sound designers decided to record many of the sound effects at outdoors locations, the foley artists using an iPad to play back segments of the film.

Recording your own foley sounds can contribute significantly to the effectiveness of your own films.

RECORDING FOLEY SOUNDS AT HOME

Low budget filmmakers often don't have access to professional, soundproof recording studios. When you're recording foley sounds find somewhere that's quiet. Do your best to remove any unwanted sound such as air conditioners and refrigerators. Try to avoid recording in rooms that don't have carpet or furniture. The unwanted reverb produced in this type of location will ruin your recording. Blankets can be used to reduce reverb and help capture a crisp, dry sound. Use a tripod to position the microphone close to what you're recording. When you start recording, slate the sound by saying something like, "Snapping celery to simulate bones breaking. Take one." Hold your breath so you don't inadvertently ruin the track with the sound of your breathing! Don't be afraid to do multiple takes of the same sound effect to make sure that you get it right.

IDEAS FOR FOLEY SOUNDS

Bicycle. An interesting source of mechanical sounds. Spin the tyres, ring the bell, crunch through gears, squeak your hands across leather seats.

Blood. Recording tinned soup or baked beans hitting a plate can create an interesting splatter sound.

Bones. Snapping a handful of spaghetti or celery can create the realistic sound of bones breaking.

Buttons. Find anything with buttons that makes an interesting sound when you click it!

Cauldron. Blowing bubbles through a straw into a glass of water.

Clock. Find a ticking clock and record it for sixty seconds.

Door. Position the microphone close to the door handle, record the sound of opening and closing. Position the microphone close to the hinges and record the door opening at different speeds.

Drip. Record the sound of a tap dripping.

Egg. The sound of an egg cracking open, like the dinosaurs from Jurassic Park, can be achieved by breaking waffle cones.

Fire. The sound of cellophane or plastic bags can be used to create the sound of a fire burning.

Flesh. The sound of flesh tearing can be simulated by ripping citrus fruit, such as lemons and oranges apart. Playing with the inside of the fruit can also create interesting squelching sounds.

Footsteps. Position the microphone close to your feet. Walk on the spot using different surfaces – such as tiles, carpet and concrete – vary the speed of your footsteps and your footwear.

Gun cocking. Record the sound of a briefcase latch closing.

Hinges. Find interesting hinges around your house and record them opening and closing, including cupboards, barbecues, desk lamps...anything that makes an interesting noise!

Ice. The sound of ice cracking can be simulated by moving your fingers across the surface of an inflated balloon.

Mud. Make squishing sounds with a wet sponge.

Punch. Punching a leather jacket with your fist or whacking it with a rolled up telephone book or magazine is a great way to create punch sounds. Punching a lettuce or cabbage with your fist can generate interesting impacts.

Robots. Record the sound of computer DVD trays opening.