

Foley in Films, Television, and Games

By Dane Davis

For much of the public, the word “Foley” represents the total process of post production sound for linear media, including film, television, games, and online synchronized audio. To them, it means “sounds added later.” When those of us in the field of post audio describe what we do to people outside the industry, invariably their eyes suddenly light up and they chime out, “Oh yeah, you’re a Foley artist! I saw one of you guys on TV!”

Foley seems to be the best-known aspect of the audio post process. Because it is so literal, specific, performance-based, and visually interesting in execution, the idea of Foley sticks in people’s minds in a way that the more abstract endeavors of mixing, sound design, and sound editing do not. This “visualizability” seems to draw non-industry media toward the Foley stage, resulting in a general public awareness.

The Foley Process

As a layer of aural content in a finished movie, game, or other project, the same real-world attributes that allow the public to grasp the craft are what make the Foley artists’ and crew’s contributions so essential to the project. However fictional or unknown the settings and trappings of the characters’ adventures might be, their body actions, movement, gear, and footsteps are made believable on the screen with careful and appropriate layers of Foley. The audience can relate to any sound coming from the Foley stage because somebody made those sounds in real time and in sync to the picture with their hands, knees, feet, and bodies, which we all have. Even aliens have feet and skin that come in contact with various surfaces and follow the basic rules of acoustics in any universe. (We assume so, at least!)

When a sound designer or supervising sound editor starts work on a movie, he or she begins by “spotting” the project with the director and picture editor. Background sounds, vehicles (invented or real), psychological storytelling sounds, and action noises like crashes, explosions, and weapons are all discussed and noted. The sounds that people and animals and even machines make with their physical actions are the responsibility of the Foley department, and they are assumed to be “what you see is what you hear,” unless specifically discussed. Other than the obvious exceptions (“that plastic battle axe should sound like heavy iron”), most of the sounds required for scenes can be identified by looking carefully at the weights, materials, surfaces, and

body parts on the screen. During spotting, the team assumes without discussion that the Foley crew will do everything they can to create Foley tracks that are as natural as possible and correspond with all onscreen and specific off-screen activities.

The Foley supervisor begins the process by “cueing” or “programming” everything that needs to be recorded on the Foley stage for each reel. Every sound is considered to be within one of the three basic categories of footsteps, props, and “cloth.”

Foley Footsteps



Figure 1. Foley walkers own an impressive array of shoes.

Footsteps are, of course, the sounds made by people walking, running, and jumping with their feet. The soles of those feet are the first consideration. The Foley artist must determine what the shoes worn by each character are made of. They could be hard or soft leather, rubber, plastic, wood, bamboo, or bare skin. Pre-industrial people might wear any

combination of tree bark, woven grasses, and animal skins. If the characters are animals, their feet have various pads and claws that need to be simulated. And of course, creatures from another planet might be wearing a material we've never heard or Foley'd before, so something that sounds appropriate needs to be fabricated.

Some shoes have cleats or taps or other metal parts that might alter the contact sound. Foley artists, or "Foley walkers," collect an impressive array of shoes that they employ to "step" the sound of an infinite variety of feet. Each walker needs a shoe they can wear, or at least attach to their feet, representing any shoe type that comes up on screen. The shapes of shoes, especially the flat part of the sole and the heels, are always significant — the most extreme example being women's high heels and other dress shoes made of very hard materials with minimal ground contact. The "tap" or "click" of such footwear is an important sonic aspect of a character's costume, as is the softness of less assertive footwear.

Also of great importance is the weight of the body on top of the shoes. A child or small person can walk relatively quickly and has very little gravity adding to the foot contact sound. A heavy person, even when graceful or stealthy, shifts a lot of mass into each foot placement, demanding a very deliberate and committed Foley sound. Beyond body mass, there is the velocity of the physical character pushing into the steps. Jumping or taking large strides increases the power of the footsteps. The bodily stability of the character also comes into play. Tightly gripping bare feet or highly committed shoe steps sound very different than a loose or sliding step. Various shuffles, turns, rolls, and fidgets have to be matched as well.

And then there are the all-important surfaces. Every footstep occurs on a surface made out of something. The Foley stage has multiple surfaces representing the various common surfaces — wood, tile, cement, asphalt, grass, sand, dirt, and gravel — that people and animals might step on. These little worlds are generally called "Foley pits," and are either open squares below floor level that contain loose surface materials, or level areas of consistent materials. Sometimes these materials sit on top of an unseen column of similar material to avoid "polluting" the sound of that surface with underlying or surrounding substances. In a gravel pit, for instance, there has to be enough depth of gravel to avoid mixing in the more hollow sound of dirt or wood beneath.

Some dirt pits are several feet deep so they distribute the impact consistently without adding the resonance of the surrounding structure. Different walkers use various materials to simulate lawn, snow, wild grasses, and rock in natural settings. Mud must be mixed and controlled. Other natural materials, like

hardened mud, volcanic rock, or snow, require just the right proportion of crunchiness vs. surface hit. If ice or snow scenes are extensive, or require very accurate-sounding Foley, the crew may bring in a truckload of snow or ice.

The relative cleanliness of any surface, as well as its dryness or wetness, is also very important to portray. On hard surfaces, the amount of "grit" in the steps is of great importance to many filmmakers. Sometimes an additional grit track is recorded; this goes on top of the main footstep sound to counteract a too-precise or "tappy" quality in the final mix. A similar extra layer is often created for splashy or squishy footsteps to make sure that the right blend of wateriness emerges to match the picture.



Figure 2. Foley pits are designed to simulate multiple surfaces.

In real-time performance, a key challenge for Foley walkers is executing the exact number of steps required to match the picture onscreen (and, when necessary, off-screen). People in movies, as in real life, rarely ambulate with a simple "one-two" rhythm unless they are crossing long stretches of unchanging terrain. The rhythms become even more complex with uneven strides, running, or even fast walking over obstacles, stairs, and complex surfaces like tree roots, rocks, and wreckage. Turning and pausing can deceive the eye. On-foot chase scenes require a great deal of care to match all the feet involved. Foley artists acquire a highly honed ability to watch a character moving, and can anticipate when either of their feet will make contact — so even in real time the synchronization and step count will be very close. Later on in the process, the Foley editors will appreciate the accuracy of the recordings, as it optimizes their efficiency.

Foley Props

Working with Foley props is almost an entirely different job. Prop Foley essentially creates every other sound a body makes besides footsteps. “Hand props” are essential to synchronize with everything held, grabbed, dangled, squished, dropped, kicked, scratched, tickled, stirred, spooned, whipped and otherwise manipulated by fingers, toes, hands, and feet, as well as knees, elbows, hips, or any other point of contact. Mouth actions like biting, licking, and chewing require Foley staging. The most common props are pens and pencils, drinking glasses, cans and bottles, keys, guns and knives, buttons and switches, paper products, and eating utensils.



Figure 3. Foley walkers execute the exact number of steps required to match the on- and off-screen action.

Additionally, any cinematic body-to-body contact, clothed or unclothed, like grabs and pats, clawing and gripping, rubbing and caressing, kissing and any other intimate or confrontational activity the filmmaker portrays must have believable corresponding sound effects. These are most conveniently and efficiently created, in sync to picture, on the Foley stage.

Other uses of Foley include the recording of “debris,” which refers to the spray, particles, or remnants of a destructive event that fall to rest in a relatively random way. While glass breaks are usually the domain of the sound effects editors, Foley artists can create a convincing shower of glass debris to add specific realism to a shattering. Dramatically, the sense of danger and instability can be heightened by adding glass debris to footsteps and other

actions in an area covered with the shards and particles of a broken window. Explosions, door, floor, and wall breaks; car crashes, and other violent events can be seriously augmented on the Foley stage with debris of all kinds, including dirt, gravel, metal, wood, plastic, paper, and ceramics.

Many Foley artists are quite good at creating the aural illusion of crashes and destruction right on the Foley stage. Buildings crumble, bridges collapse, planes crash, and whole cities are destroyed sonically by these specialists! A great cinematic impact can be created with the combination of Foley stage work and the depth and scale of well-recorded field effects like explosions and actual collisions.

Foley Movement

Other Foley layers include the movement tracks. When people onscreen wear or interact with leather, vinyl and plastics, jewelry, or other attached props, their body movements must be performed and recorded using or simulating those materials, usually each as a separately recorded layer. “Gear” includes the guns, holsters, handcuffs, ammunition, radios, keys, and other paraphernalia of police officers and soldiers. Backpackers, workers, and athletes also have complex movement layers.



Figure 4. Adding glass debris to footsteps can add a sense of danger.

The very last thing to be recorded, usually immediately before the final mix, is the “cloth” track. This minimal but essential track includes, as the term suggests, any body movements that involve fabrics. It also covers any simple skin movements, like hands moving over a bare arm or legs rubbing together. This recording helps to lessen the sterility of

dialog replaced in the studio. It is very important in the domestic version, and critically necessary for the foreign dubbed versions as well. No one ever notices this cloth track, but if it's missing, everyone senses something unreal or lifeless, especially in quiet scenes. Creating this all-inclusive backing track for foreign versions is an obligatory service rendered by the Foley team.

The Foley Team

In addition to the Foley artists, the typical team includes the supervising Foley editor, the Foley mixer, and the Foley editor. The mixer engineers the session, using proper microphone choice and placement to make performances sound as natural and “punchy” as possible. Many mixers use a combination of close mics and more “roomy” mics, being careful with their phase relationships, to create an overall sound that matches the visible environment onscreen. These mics must be carefully mixed, equalized, and possibly limited to optimize the recordings, which are then duplicated for the Foley editors.



Figure 5. Foley artists can be quite good at creating the illusion of destruction.

Once the Foley stage finishes work, the Foley editors have a big job to do, including precisely synchronizing the recordings to picture, conforming the tracks to altered visuals (which is very common), flagging anything that needs to be replaced or added, and preparing the Foley tracks for premixing. It is essential that all Foley footsteps and props “top,” or exactly synchronize with the production recordings. Foley props need to be aligned with sound effects if they overlap on the same event. Some sound editing crews (like mine) will have the same editor cut the Foley props along with other sound effects so they can go into the same premix, with the timing matched precisely to avoid doubling or “flamming” on the stage. The track layout for mixing embraces the logic of grouping sounds together by

type, so the mixer can bus each fader of similar sounds to the proper premix channels.

Consideration of screen position or “panning” is also very important to keep the premixing process as efficient as possible. The goal of the premix is to combine all the Foley, with an appropriate degree of separation, in a balance that feels as natural as possible, so that in the final mix the audience will never consider that those actors up on stage didn’t actually create these sounds. Even more than the rest of the post-production work, Foley must keep everyone in the audience from thinking that all the work I’ve described here ever took place!