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Subtlety of Sound: A Study of Foley Art

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Moving pictures have, in a span of roughly 130 years, gone from a revolutionary

technological breakthrough to a staple of everyday life. Many claim that the first non-stationary

images were released in the form of Eadweard Muybridge's *The Horse In Motion*, a collection of

high-speed photographs depicting a galloping equine (Wright, 2007). Since that innovation, the

media of film, and eventually television and video games, have advanced light-years in terms of

both technology and quality, due in large part to the bold creativity and ambitious developments

implemented by men and women like Mr. Muybridge. One such expansion was the inclusion of

sound as an accompaniment to these moving images, particularly a branch of sound design

known as the Art of Foley. A frequently unnoticed step in the process of media production, Foley

is defined as "a part of the post-production sound process where sound effects are performed and

recorded in time with an edited film" (Footsteps, 2012). On any film set, there is substantial

equipment designated for the recording of sound, be it the dialogue spoken, the atmospheric

ambience, or the tones produced by the movement of humans and props. The sonic landscape

which results from the juxtaposition of these sounds and their accompanying images is known as

a film's diegesis, which is defined as a narrative's "entire created world" (Felluga, 2002).

Scarcely, though, is this set-captured sound included in the final product. In order to enhance the

believability of the film's created world, the sounds therein must be re-recorded and tweaked.

Once the images have been produced and arranged, it is up to the Foley artist or artists to not

only recreate each and every diegetic sound that viewers would expect to hear, given their

familiarity with the on-screen circumstances, but also to find creative ways to make everyday sounds more prominent for the overall effect of the film or video game footage. It may seem that perfectly synchronized footsteps and carefully monitored cloth movement would be afterthoughts in the grand scheme of media production, but since the ultimate goal of moving pictures of all sorts is to make watchers and listeners believe in and identify with what they are seeing and hearing, meticulous attention must be paid to even the smallest sonic details. This can, at times, entail the complete elimination of certain sounds in order to emphasize others, but that is simply part of the artistic challenge. An examination of Foley art's historical progression, as well as its adaptations across several media throughout the years, will reveal just how significant the practice is, has been, and will continue to be in the field of media and the production thereof.

The technique's namesake is a man by the name of Jack Foley, who worked initially as a stunt double and eventually as an assistant director for Universal Studios in the mid-1920s (Yewdall, 1999). Foley and his cohorts were thrown for a loop in 1927 when Warner Brothers Studios released *The Jazz Singer*, the first motion picture ever to feature synchronized singing. At the time, this was a revolutionary enhancement to the medium, and Universal was quick to realize that their most recent effort, *Show Boat*, would be rendered obsolete, since it was a silent film (Yewdall, 1999). The task of retrofitting their new picture was left to Jack Foley and his team. David Lewis Yewdall, in his book Practical Art of Motion Picture Sound, affirms that "like so many breakthroughs in technology and procedure, the mother of invention is usually forced into a dedicated ingenuity by individuals with little choice but to do something never done before" (1999). Undoubtedly, the idea of a group of individuals jumping, running, brushing against objects, and knocking over others, for the sole purpose of mimicking what had already

been shot and edited, must have befuddled many at the time. In spite of probable reservations, however, the exercise was done. As Foley himself put it, "'Then Stage 10 swayed to the rhythm of a 40-piece orchestra under the direction of Joe Cherniavsky as he scored *Show Boat* and the rest of us watched the screen with him putting in the sound effects. . . and the laughter and cheers as it jus' kept rolling along'" (Singer, 2008). The Art of Foley was born then and there, and has evolved drastically since that point.

As Mr. Foley continued to refine his techniques over his forty-year tenure with Universal Studios, so did the sound design community as a whole. In order to achieve maximum accuracy when performing and recording these direct-to-picture steps and movements, the work was done on a soundstage, which is a facility arranged with specific acoustic qualities so that all that is heard are the motions of the Foley performers. According to Yewdall, Jack was well-known for spending a great deal of his time standing "in the middle of the sound stage floor, watching the projection screen and performing the selected actor in whatever footsteps and/or movements made" (1999). When described in such basal terms, it can be inferred that Foley art is simply an act of walking aimlessly, achievable by any of several interchangeable sets of feet. Jack Foley's devotion to the craft, however, as well as his considerable experience in physical stunt work, and his limitlessly creative mind, made a lasting impact on those that were able to see him in his element. A sound editor named Joe Sikorski explained his collaborator's efforts thus: "'When Jack performed a scene he got into the actor's head, becoming the character. You have to act the part and get into the spirit of the story. It makes a big difference'" (Yewdall, 1999). The connections that Jack made to various actors and characters were evident in his colorful descriptions of their footsteps, which included the modifiers "deliberate, clipped, springy, soft, and nervous" (Yewdall, 1999). In spite of this effort, the sound is received primarily by the

subconscious, for the "art is so subtle that movie-goers may not recognize it, and yet it is an essential element in creating the environment, atmosphere and mood of films" (Weiss, 2012). That viewers and critics hardly ever make mention - positive or negative - of these subtle sound effects in professionally produced movies, animations, and games, suggests that Jack Foley's influence and commitment continue to influence those responsible for Foley design today.

Of course, there are varying degrees of success when it comes to the employment of these techniques. Foley art may be difficult to notice when done effectively, but it can be downright distracting if performed in a half-hearted manner. A film like James Nguyen's *Birdemic: Shock and Terror* provides a painful illustration of how bad Foley work can make a production laughable. One example is a section of the movie which is unofficially entitled "The Clapping Scene." In this particular portion, characters sit in a board meeting and receive good news from a high-ranking gentleman in their company, which prompts a session of group applause which endures for no less than forty-five seconds. With each new camera angle that is introduced, the loudness of the clapping is at its peak and begins to die down after a few seconds, only to be interrupted by more loud-then-soft applause. Meanwhile, nothing else in the scene can be heard, although many props are used; characters move about in their chairs, pat each other on the back, and walk in the scene, but all that is heard is the uneven clapping. As specified by writer Richard Johnson, a "Foley artist. . . make[s] the film sound 'real'" (2011). Any viewer with even the slightest understanding of applause and its tendency to go from loud to quiet in a gradual way cannot believe the scene, and thus the poor Foley work voids all credibility. Contrast this to a scene such as the opening chase sequence in the James Bond installment *Casino Royale*. Bond and his nemesis dart through and across edifices, leap across structures on a construction site, and leave chaos in their wake. In a scene with so much body and prop movement, the Foley work

and the artists' attention to emphasizing some sounds over others increases the tension for viewers. According to artist Alex Joseph, the scene "was quite a 'literal' piece of Foley, and [the artists] order[ed] four huge steel girders from a builder's merchant. . . stuck microphones onto the girders. . . and recreated the chase sequence in the studio" (Johnson, 2011). What resulted was a universally acclaimed sequence, thanks in large part to the efforts of Foley artists to preserve realism and focus on believability.

      While a number of Jack Foley's methods have withstood the test of time, the technology for capturing these sound effects has evolved dramatically. As was mentioned earlier, viewers and critics tend not to notice the more mundane, everyday sounds like footsteps and garment rustling, which makes the fact that sound designers and Foley artists have been able to keep up with the ever-changing visual splendor of the medium, without making themselves and their sounds the focus, especially impressive. Film Sound: Theory and Practice points out that "[m]ore than half a century after the coming of sound. . . cinema is an essentially visual art, sound serving as little more than a superfluous accompaniment" (Weis, Belton 1985). From its humble beginnings on Stage 10 with Jack Foley and his crew cheering and stepping along with the silent picture, Foley sound has adapted admirably. The outset of the 1940s saw improvements in the technology of microphones, loudspeakers, and amplifiers, and this was reflected in the sound that was produced for movies. Weis and Belton point out that "microphone booms. . . and the development of highly unidirectional microphones derive[d] from a felt need to reduce all traces of the sound work from the sound track" (1985). The goal has been, for more than half a century, to make the sounds of subjects and props subtle enough to be believed, and each technological advancement has made the realization of that goal more possible. Following the Second World War, however, was when technologies truly began to change how image and sound were

produced and eventually perceived: the first magnetic recording techniques were made available (Weis, Belton 1985). These magnetic recorders permitted filmmakers and sound recordists in the 1950s to exercise more creativity in regards to myriad components of sonic preference. On-set recordists and Foley artists alike now had the option to position unidirectional microphones, which are designed to focus their reception on sounds that come from one specific direction, such that certain elements received precedence and appealed to the selectiveness of the human ear; some chose to continue to record using centrally-located omnidirectional microphones out of partiality to unedited sonic content and ambience (Weis, Belton 1985). Particularly in the post-production stages of a media project, things became much less finite. Foley artists could determine which type of microphone would pair most appropriately with the dimensions of their soundstage, and position subjects and props accordingly. As the recording capabilities became more advanced, so did the layouts of Foley soundstages, allowing for even more precision when synching sound effects. Soon enough came the introduction of pits, which feature segmented areas with various types of terrain so that the Foley artists can achieve any of several desired footstep tones (Yewdall, 1999). Another significant innovation was the prop room, which "…should be directly accessible to the stage itself, and large enough to amass a full and continuous collection of props (basically useless junk that makes neat sounds)" (Yewdall, 1999). Many scenes, such as fast-paced chase sequences, require than an eclectic assortment of materials are available and easily accessible to the Foley artist during recording, and the introduction of prop rooms has helped with the efficiency and control that Foley artists have when it comes to time and resources. Finally, the inception of digital recording technologies has opened up seemingly infinite possibilities for what sound can do (Weis, Belton 1985). These styles began to correlate to different genres of motion picture, and soon enough, visual and audio

media were able to branch into unexplored genres, such as video games. To give an example of the specialized features of this medium compared to others, "Foley stages are geared toward the film aesthetics of realism and detail. Games by comparison are much crunchier, edgier. . . over the top. . . dense and over-compressed" (Lackey, 2009). In its present practice, Foley can be used not only to create entirely new sounds, allowing for enhanced creativity on the part of visually-oriented filmmakers, but it can process them in ways never before feasible. Each sound can be isolated, its temporal qualities distorted, its pitch and amplitude adjusted, and its effect on the viewing experience more intriguing than for a natural, unedited sound.

The Art of Foley is not limited to motion pictures featuring human subjects and pre-recorded location sound. In many cases, the piece that is produced features absolutely no on-set source sound to act as a basis for the changes made on the soundstage, such as an animated feature or a video game. For these particular forms of moving image, the soundscape is a blank slate, allowing the Foley artists to manufacture every single sonic event, be it a sound from the palpable world or a creation unique to the diegesis of the story. One innovator who played a large role in early animation sound was Scottish Foley artist Jimmy Macdonald, whose musical background and penchant for using unorthodox materials are responsible for the sound effects found in many early Disney animations. Macdonald's "remarkable contraptions could replicate the sound of anything from a train to a mosquito" (Lee, 2001). While it may seem that following and recording an actual train would have sufficed, Macdonald's preference was to heighten one distinguishing feature from the sound and ensure that it took precedence: "[h]e mounted wheels on a track that one could spin around with a handle - it made a 'clackety-clack' that was a perfect recreation of a train car riding the rails" (Lee, 2001). Another figure largely responsible for the evolution of Foley art is Ben Burtt, a pioneer of modern sound design. A notable example of his

ability to create effective Foley without even attempting to do so is found in an account of the production of 1970s science fiction flick *Star Wars: A New Hope*. One of the most distinct sounds in the film is heard via the lightsaber, a type of sword used by several of the film's characters. In order to craft the unique sound, Burtt recorded an unusual hum that was produced when he carried a microphone and walked in the vicinity of a high-volume television set. Equipped with this hum, he took to a soundstage and performed the Foley art necessary to match the hum with the movements made by the figures on-screen (FilmSound, 1997). The point of science-fiction films like *Star Wars* is to transport viewers to places they've never been, and this cannot be done without creating sonic events and environments that transcend the familiar. The lightsaber's whirring buzz has become one of the most iconic sounds in cinematic history, thanks in large part to the technological advancements in Foley design and the powerful minds that apply their methods and techniques to maximize the potential of this technology.

The final track of a Foley session is divided into three distinct categories: moves, feet, and specifics. Veteran Foley artist Philip Rodrigues Singer details these thoroughly on his webpage, "Art of Foley." The *moves* track is dedicated to any physical motion made by on-screen individuals, included but far from limited to the sounds of pant legs rustling together, subtle scratches and pats, and basically any possible tone that can emanate from clothing being moved or touched. Though extremely subtle and often relegated to the very back of the mix, a scene featuring no moves track "would sound sterile and too perfect" (Singer, 2008). As for the materials required in the prop room, anything with which clothing is constructed - namely denim, cotton, and leather - is ideal. Singer suggests that Foley artists should sit when synchronizing garment moves, and that all movement should be captured in a fluid recording, as opposed to a sporadic grouping of individual tracks. Perhaps most importantly, Singer claims that the

recording of the moves track "gives the Foley artist a chance to really feel the film. . . which helps later on when [performing] the footsteps" (2008).

The second track that is given focus, and most likely the action with which Foley artists are most closely associated, is the *footstep* track. As demonstrated from the earliest days of Jack Foley, the way that a character walks speaks volumes about his or her mood and demeanor, and contributes immensely to the seamlessness of the motion picture's flow. Among the challenges is the fact that, though the figures on-screen are traveling from point A to point B, the Foley artist "can't walk across the room because the microphone needs to be fixed" (Singer, 2008). The article specifies that, like the moves track's insistence on multiple fabrics, the footstep track necessitates virtually every type of footwear for walking through the variety of surfaces found in the pit. Microphone placement is paramount in achieving realism for the footstep track. For outdoor scenes, the microphone is generally placed three feet away from the Foley artist in the soundstage. Conversely, when the action occurs indoors, the microphone is more useful at a distance of six to ten feet. Doing such "allows the [microphone] to breathe and provides a roomy sound for indoor vs. a tight sound for outdoors" (Singer, 2008). The method may appear counterintuitive, but Singer's experience speaks to his understanding of this microphone-to-subject proximal relationship. Another focus is the monitoring of the amplitude, as there are often scenes which feature characters either approaching or departing from the point at which the camera is placed, and the volume levels of the footsteps must reflect either the ascent or descent of the tones. Effective Foley practitioners will, while observing the video playback, watch the shoulders of the actors rather than their feet, as this results in better synchronization. Singer asserts that recording the footstep track "can take several days or weeks" (2008). The scrupulous precision required, along with the fact that the Foley artist must recreate the footsteps of every

single main actor, secondary actor, and background extra, contribute to this lengthy period of time.

Thirdly, Foley artists are responsible for the *specifics* track, which constitutes anything an actor touches, or anything that moves as a result of an actor's physical activity. Specifics are what allow Foley artists to exercise their creativity and to inject their own voice, so to speak, into the production. This is necessary for the many sounds and sound effects that are either too large to fit onto a soundstage - like a vehicle - or that are simply beyond the artist's control - like horse hooves (Yewdall, 1999). There are certain techniques that have becomes staples over the years, such as putting cornstarch into a leather pouch to simulate the sounds of snow crunching under characters' feet (Singer, 2008). Other standards include using a pair of gloves to imitate the flapping of birds' wings, and using frozen romaine lettuce as the sound of bones, or even a head, being squished. Still, there are many more that are left up to the personal preference of the artist, depending on his or her subjective interpretation of the sound's contribution to its accompanying image, or the possibly finite supply of materials available in the prop room. At its core, the specifics track and the attention paid to its production are defining factors in the way that audiences will respond to the sounds they hear as they experience the film or gameplay. David Yewdall puts into perspective the role and expectations of the Foley artist, stating, "If the audience is aware of what we do, we have pulled its attention out of the film reality we are creating, and therefore we have failed" (1999).

That Foley artists are called upon to put so much time and effort into something that is meant to go unnoticed can be a vexing concept. What they do, though, is essential to the presentation of visual media as a believable world that watchers and listeners can understand and interact with. Occasionally, little consideration is paid to Foley sound design, and the resulting

uneven, artificial qualities of the soundscape as a whole completely ruin the intended effect.

Without the introduction of magnetic recording devices, without the creativity of groundbreakers like Ben Burtt, without the innumerable hours spent walking in place on every substance imaginable, audio/visual media simply would not be what it is today. Foley technology has expanded so widely that it is difficult to imagine just what else can be done to broaden the sonic horizons of everyday media. Like Jack Foley in 1927, though, artists must continue to confront the unknown and thereby introduce new and unique ways to tell the stories that people want and need to hear.

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