



2013 HAWAII UNIVERSITY INTERNATIONAL CONFERENCES
EDUCATION & TECHNOLOGY
MATH & ENGINEERING TECHNOLOGY
JUNE 10TH TO JUNE 12TH
ALA MOANA HOTEL, HONOLULU, HAWAII

CASE STUDIES IN CINEMA SOUND

PAYTON, LEE C.

COLUMBIA COLLEGE CHICAGO

CASE STUDIES IN CINEMA SOUND

Exploring Sound Design & Re-Recording Techniques and Methodologies - from the forthcoming book: Ears Don't Blink - The Art of Cinema Sound & Re-Recording Mixing - by LEE C. PAYTON © 2013

INTRODUCTION

I have been fascinated with sound most of my life; whether it be the plethora of concerns involved with recording sounds, the delicacy and nuance employed to design sounds from scratch, or the elegance in a smooth and dynamic final mix. When recording and mixing cinema sound and music it never ceases to amaze me that when the gestalt of a piece of music or a cinema soundtrack is as fine-tuned as it can be, it actually *feels right* in addition to *sounding right*.

This phenomenon occurs on a profoundly regular basis when mixing sound for cinema. In countless sound mixes, both professionally and with students in classroom situations, my ears naturally perk up when part of the soundtrack we are working on comes to life. Just as good acting, a well-written and directed script, and the right dramatic lighting can make or break great cinematic moments, so can the depth and breadth of the cinema soundtrack contribute an overwhelming, and often underappreciated percentage to the overall story.

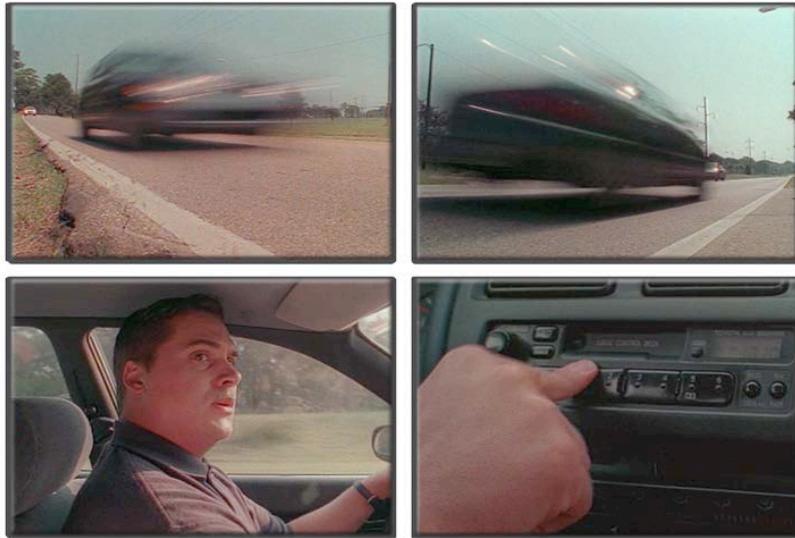
Ears Don't Blink - The Art of Cinema Sound & Re-Recording Mixing does not strive to be a standard cinema sound textbook. Rather, it is an insightful, educational and entertaining study of sound, split into two basic parts. The first part places sound into a geological, biological, physical and metaphysical context; with the goal being to help show film students, and filmmakers, that they actually know a lot more about sound than they think they do. The second part of the book explains various recording and mixing techniques used in the sound design and re-recording of short films from LCP's Graduate School apprenticeship with Academy Award Winner Richard Portman.

The excerpts from this book to be presented at the 2013 HUIC Education & Technology Conference will focus solely on material from the second part of the book. The presentation will screen scenes from short films, and explore the skills, concepts, and techniques used in creating specific sounds; designing and layering sounds to achieve maximum emotional effect; and the fine art of re-recording and mixing layers of sounds to achieve an elegant and dynamic final soundtrack.

Selected clips will be presented & discussed from the following films:

- Almighty Dollar - 3 scenes - Written & Directed by Greg Marcks
- Anderson - 3 scenes - Written & Directed by Jason Doty
- Lector - 3 scenes - Written & Directed by Greg Marcks
- Uncle Pete - TRT: 07:25 - Written & Directed by Evan Nelson

ALMIGHTY DOLLAR - 01 Harvey's Car Scene - (TRT: 01:03)



01 - This scene starts on the exterior with the sound of Harvey's car in a pass-by. The sound design was simply a matter of syncing a recording of the picture car passing by left-to-right. Unlike other shots in this film, the sounds of other traffic on this exterior shot was not as important as the sound of Harvey's car. During many excursions with the sound gear, I was able to obtain a library of sounds of the picture car, all recorded off-set, on quiet country roads where the sounds could be localized to just this vehicle. Having such controlled access to the actual picture car gives the sound of Harvey's experience in this scene a level of realism.

The car passes by and we cut to the interior, where Harvey is searching frantically for Frank the Wino, with the car radio blaring out a succession of three different southern Christian commercials hawking various religious totems. The commercials are separated by the sounds of Harvey nervously switching the stations. When designing the sounds for radios and other broadcast technology, there are layers of sounds that make up the equipment itself, and other layers of sounds that comprise the programming being aired.

For this example, the layers that would make up the sound of the radio itself are combined with the sounds of the car's interior. We recorded the voices for the commercials in a studio environment and used sound effects processing tools to make the clean recording sound like it is coming from the radio. The main three tools Sound Designers and Re-Recording Mixers use to achieve various sonic effects are the Equalizer, the Compressor and Reverb. (The technical term for the process of distorting a clean recording for affect is called *futzing*.) I also had to create the sound of the radio buttons from scratch because most car radio buttons are not loud enough to be prominent in the final sound mix.

It is interesting to note that when Harvey slams on the brakes and pulls over to the side of the road, it is more than obvious in the wide shot (not to mention with the dust cloud the car kicks up...), that the car is skidding onto a dirt embankment. However, since it is a cinema sound cliché that all cars must squeal the tires when starting or stopping, no matter what surface the car is on, I had to acquire tire squeals both in the original recorded sound effects library, and use them albeit unrealistically in this instance, in the final sound mix.



01a - The Mini-Van approaches...



01b - And the Mini-Van vanishes...

01a - A very interesting sound concern in this scene is what I call the 'Mini-Van-ishing' shot. The shot above left 01a, was filmed in the morning before lunch, and shows a mini-van approaching on the left side of the frame. The shot above right 01b is the reverse shot on a hard cut from the picture edit. The problem for sound is that shot 01b was filmed in the afternoon, after lunch, and by then the mini-van was long gone.

01b - So basically, what I had to deal with was the front half of a passing min-van, the sound of which cuts off at the picture edit. There was usable production sound throughout the scene. If I used the sound of any other car to complete the pass-by, it would have to be the identical kind of mini-van with the exact same engine, and the same amount of load-bearing weight per axle. The friction of vehicles against the pavement changes their sound dramatically. After many experimental recordings and edits, what eventually worked was the sound of the same mini-van from shot 01a, copied, reversed, and cross-faded with the original to complete the pass-by. A small amount of reverb was added to make it sound like it took longer for the van to go away than for it to arrive. This combined with some exterior day ambience hides the edit.



02 - The Sassy Woman - (TRT: 01:03)

02 - Most door openings are tricky for cinema sound. In addition to the layers of ambient sound that make up the foreground environment, the sounds of the exterior must be faded up to exactly match the opening of the door. The sound of the exterior must reach its maximum before the door is actually all the way open, with a difference of about 3-5 frames, for the match to sound realistic.

In the case of the Sassy Woman scene, there was a door opening, and in the same shot, there was dialog and visible passing traffic sounds in the exterior. In addition to radio mics on both the Actors in this scene, I had a high quality stereo ambient microphone outside recording the sounds of passing traffic. The radio mics picked up clean lines of dialog with just a hiss of the passing traffic, and I synchronized the stereo recordings to match, giving the final mix a complete and realistic sound.

Another interesting anomaly in this scene was when the Sassy Woman delivered her line of dialog, 'I ain't payin' no five bucks until I see me some Jesus!' The picture cut went to the

reverse shot on Harvey during the last 'S' of 'Jesus,' such that, when I started editing her dialog, the line sounded more like '...see me some Jesus-ss-ss.' Designing this one word to sound correct from the production dialog tracks was one of the most tedious and meticulous pieces of dialog editing for cinema I have done.



03 - Harvey's Confession - (TRT: 00:58)

03 - Almighty Dollar was shot in August in Florida in an aluminum building with no insulation. During the climactic moment of Harvey's story, when he confesses to the Congregation, during the exact take that the Director cut into the film... it started to rain... just enough to ruin the boom mic recording. And the lead Actor was not available during post-production to replace his lines with ADR.

After scouring the dailies for any usable production dialog, the solution finally came much simpler than originally thought possible. To salvage the lines of production dialog, I muted the boom mic channel, and relied solely on the radio mic for the Actor's dénouement. The rain was still audible as a faint hiss, but I added some of the stereo traffic sounds and SFX processed them to match the sound of the rain. Just as the rain becomes audible, the car pass-bys come in and the hiss registers as distant traffic rather than a rainstorm.

ANDERSON - 04 - Massacre - (TRT: 01:26)



04 - Anderson opens with a brutal massacre of American POWs by the Nazis during World War 2. With so many films glamorizing scenes of this nature, I really wanted to create sounds for gunshots, body hits, and warfare that would *hurt* the Audience when they heard the sounds - not necessarily physically but emotionally. Though less than two minutes long, this scene was a tour-de-force of creative sound design and re-recording.

There are a plethora of body hits, ricochets etc, and each individual sound was custom created mostly from scratch. The gunshots were designed predominantly from recordings made on set with re-enactors. There were as many as 9-15 separate sounds that made up any one body hit and each layer was recorded and mixed to capitalize on the dynamic frequency range represented by that one sonic event. During presentation discussion, I will share with Conference participants my methodology and design for creating the custom warfare sounds used during the opening massacre of Anderson.

05 - The antique phonograph sound started with a crisp, clean digital recording of a piece of symphonic music. Through an elaborate series of re-recordings and SFX processing, I was able to *degrade* the sound quality to a very 'antique' sounding, WW2 era phonograph. During this presentation, we explore the design and re-recording process of creating this customized sound.



05 - Phonograph - (TRT: 00:24)



06 - Luftwaffe - (TRT: 00:52)

06 - The core of the sounds for the Luftwaffe bombing raid came from vintage newsreel footage, with the explosions augmented by library sound effects. Shaking a piece of plywood covered in heavy steel and concrete debris over a large diaphragm condenser microphone created the low frequency rumble for this scene.

LECTOR - 07a & 7b - Dialog & Foley - (TRT: 00:53)



07a - Lector is a rare film, in that it features 100% production dialog from the lead Actor - no ADR was required. The Foley (sounds that are particular to human movement) for the Workers was created from layers and layers of production sound effects, recorded on-set, after-hours with the props and some of the crew. In order to record as much usable production dialog as possible, I used 4 x 8 foot wheeled flats covered in soundproofing. Whenever the shot on the Lector was a medium or close-up, I arranged these flats around the Actor, just outside of the frame, creating a mobile Voice Booth during production. This worked extremely well to minimize reverberation and early reflections from his loud dialog passages. We were shooting in a large concrete and brick warehouse, which is essentially a giant reverb chamber. The final mix required an elegant balance between the vocal range of the Lector, and the density of sounds from the many Workers in the building.

07b - This scene concludes with the Workers 'applauding' the Lector with their cutting tools by banging them against their worktables. The picture edit cut from wide to medium to close shots. A general clapping sound works in the wide, but for every closer shot, there had to be specific sounds in synch with the banging, while the background bangs continue uninterrupted. There are approximately 20 layers of sounds used to build the cutting tool bangs up to sound like applause. The scene then transitions to an exterior shot, and the cutting tool clapping sounds are cross-faded into the pass-by of a vintage automobile.



07b - Tool 'applause' & Transition to EXT. - Location recording of vintage auto



08 - Baseball Game - (TRT: 01:32)

This scene cut from outside with the Lector and the exterior ambiances, to the interior and the Workers listening to a baseball game on the radio. Since this scene took place at the end of the workday, it was imperative to have as much of the city's ambience as possible on the outdoor wide shots.



Lector takes place in 1924, three years before the first film that featured cinema sound, so it was up to research, ingenuity and creativity to design a believable exterior ambience. While the Lector is outside, he gradually begins to hear the Workers enjoying the baseball game from inside the factory. As Lector tunes in, the interior sounds fade in with more clarity to match the Actor's performance.

Once inside the factory, the sounds include the Worker's dialog and Foley, the sound of the radio itself, and the baseball game being broadcast over the radio. The Director and I had more than one discussion about just how much sound would have accompanied the very first radio broadcasts of baseball games. We decided to use three layers of sound for the baseball game - the Announcer, the crack of the bat, and the roar of the crowd. These layers were mixed with the static and hum of the radio technology, and the excited conversations of the Workers to achieve a believable 1924.



09 - Radio Show - (TRT: 01:02)

09 - Before working my Sound Design and Re-Recording magic on this scene, every time the picture would cut to the radio, the film was silent. There were roughly 15 layers of sound that made up the technology of the radio, switches, knobs & tuning. For the programming on the radio, the Director contacted Dr. Demento and got a copy of a popular radio recording of the day, and I re-created it from scratch in a digital recording studio, and degraded the sound similar to the Phonograph scene in Anderson.

UNCLE PETE - Short Film (TRT: 07:25)



Uncle Pete is one of my favorite short films. I recorded on set, and did the sound design and re-recording mixing. It is essentially a seven and a half minute car chase, in which Uncle Pete has to assassinate the Mark in time to play video games with the Nephew at the birthday party. The film came to me from the picture editor completely silent, save for one line of production dialog from the child Actor who played the Nephew.

There are many sound design and re-recording techniques, methodologies, and processes that can be discussed in relation to Uncle Pete. By exploring some of these cinema sound concerns and concepts, knowledge and insight can be generated with the potential to assist members of the filmmaking crew to create more well thought-out works of cinema.

SUMMATION

It is the goal of this presentation to share some practical, hands-on techniques and methodologies that will be of benefit to both Sound Designers, Re-Recording Mixers, picture editors, and other members of the filmmaking, and greater academic communities. In my experience as an Instructor, and as a Cinema Sound specialist, I have explored many ways in which the art of cinema sound and re-recording mixing can be transferable skills into other disciplines within filmmaking, but also into other avenues and professions outside of filmmaking. This interactive presentation will screen, explore and discuss scenes from award-winning short films that feature a number of specific cinema sound concerns, and the creative strategies used to address them.

CASE STUDIES IN CINEMA SOUND

Exploring Sound Design & Re-Recording Techniques and Methodologies - from the forthcoming book:

Ears Don't Blink - The Art of Cinema Sound & Re-Recording Mixing

by LEE C. PAYTON © 2013