

2-1 Theater of the Mind

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I'm Doug Fearn and this is My Take On Music Recording

There is a story from the early days of television. A reporter asked a young boy if he preferred to watch a baseball game on TV, or listen to it on the radio.

His answer was immediate. "On the radio. The pictures are so much better!"

I've always wondered what that boy did with his life. He sounds like a candidate for a recording engineering career.

All the music you hear, or story you read or listened to, paints a picture in your mind. It is what humans do.

People love stories. It is presumed that the tradition of storytelling goes back to the beginning of humankind. It was not only entertainment, but in the days before written language, it was a way of preserving knowledge and passing it along to others.

We have technology today to preserve almost anything, no matter how fleeting or inconsequential it might be. And for many people, entertainment is a major component of their daily lives, available in many formats.

If you only have the audio of an event, your imagination has to fill in the visual details. We do this all the time, no matter what the source.

When I listen to a musical recording, I can't help but picture the recording environment. I can "see" the room and where all the instruments are located. My mental image may not be technically accurate, but it can be useful in analyzing how the recording was made. Over 99% of people listening to music would not have that image, and that's great. The mental image should be different for everyone.

For most listeners, the music creates a mood, which enhances their imagination, and the lyrics paint the picture.

Each of us create the mental image based on our experience. Most listeners to a song will not see a recording studio with musicians arranged around microphones, but those of us in the business probably do. The song may take a listener to a situation in their past, evoked by the music and words.

For many people, certain songs remind them of a place or event. If it was a good experience, the reminiscence is probably pleasant, relaxing, and distracts them from perhaps not-so-pleasant circumstances they may be in at that moment.

Music that takes them back to an unpleasant memory will probably make them turn off the song.

Storytelling in the days before TV or movies, or even recorded audio, had to be an in-person experience. It was fleeting, only existing at the moment and later in the listener's memory. The memory could be imperfect, slanted towards the aspects of the story the listener liked or could relate to, and blocking out the irrelevant or unpleasant parts. You had your own version. But it was all based on that moment of hearing the story.

For many storytellers, there was also a visual element, if only facial expressions and gestures. Some storytellers were good at this and others perhaps overdramatic, distracting from the message.

After recording was invented in the late 19th century, the visual element was eliminated. Today, with some obvious exceptions, the music has to stand on its own in telling the story.

But now we can listen over and over, if we want to. This allows us to dig deeper into the story, finding new things in there that we missed the first time.

So, if we accept that at least part of our job as recordists is to capture and enhance those "pictures" for the listener, then we should pay attention to how well we are doing this.

This may be a large part of the job of the producer. I think good producers do this unconsciously.

The role of producer of a song falls on different people in various circumstances. For the singer-songwriter working solo, recording at home, she is the producer. She must fill every role, including engineer in most cases.

In other situations, the artist and/or engineer is the producer.

Or maybe an entire band is the producer.

Whatever the situation, someone needs to have the vision for the song and dedicate their creativity and energy towards translating the songwriter's intent into effective entertainment for the listener. I am making this seem like a mechanical operation, requiring conscious thought, but good producers do this naturally. It's what makes them good at it.

How do we create these "pictures" for the listener? Well, fundamentally it is from the song itself. But the mood we evoke depends also on the instrumentation, the arrangement, the song structure, the key, and the tempo, for examples.

The mood is also influenced by the recording technique. What is the acoustic environment and how do we use it? Do we place a vocal mic as close as practical, to get an intimate vocal performance? Or do we mic from far away, to create a more wistful "picture" for the listener?

Multiply that by the endless variables we have some control over, and the process can be very complex. Again, talented people do this by instinct.

When I worked at WPEN back in the late 1960s, I was fascinated by the "old time radio" aspect of the station. The studios were designed in the 1940s for the golden age of radio, which did not include playing records all day long. The music was often live.

And there were radio drama programs back then, some of which are the predecessors of TV soap operas. Not exactly theater-quality drama. But there were more serious productions, which used multiple voice actors and included live or recorded music and perhaps sound-effects to create the scene.

I heard some of this during my several years at WPEN, coming from the NBC radio network. It was very well done, and I can still recall some images from the experience.

WPEN did not do anything like that locally during the time I worked there, but they still had a huge library of sound effects and background music, all on 78 RPM records. They also had some sound effect devices, like a small door, a wind machine, and various things you hit to emulate footsteps or horses' hooves. There was a pan of sand, to make a different kind of footstep.

I discovered the sound effects record library in the back corner of a studio. Why those records still existed baffled me, because, as far as I could tell, they had not been used in a very long time.

There were hundreds of discs, each with about 3 minutes of a sound effect or music. I used that library, plus my own self-made sound effects, in the piece I created to simulate the opening of the studio roof. I describe this in detail in the episode, "What Radio Broadcasting Taught Me About Recording." The effect this had on the listeners was far beyond what I would have ever expected, and it taught me about the power of sound to create believable illusions – even if the premise is outlandish.

The sound effect records generally were not recordings of actual sounds, but rather a version created in the studio. A lot of the effects were almost cartoon-like. That probably would not work today, when we expect realistic sound effects, even if they are actually created from everyday sounds manipulated and layered to create the desired sound. But the sound effect records had a certain charm to them, and they were more effective than a field recording of the actual sound. Recording outside the studio was not an easy task back then anyway.

The music library section of this collection was recorded in a studio, and some if it was public-domain songs that most people would be familiar with. There were also endless original compositions, written for the library. Some of musical bits were only a couple of second long; others were much longer, and arranged in a way that you could easily enter and exit at many different points, or loop it for a longer sequence. And most of the music had many variations. Some versions were faster or slower, or used different instrumentation, or were in a different key. The library was divided into many different categories, based on the mood the music would suggest.

I found these recordings amusing to play with. I would pull out a random sound effect and put it down on tape. Whatever image that provoked would lead to adding more sound elements. Soon, a story would emerge. No words, just sound effects and perhaps some music. All the tape machines were mono, but there were a lot of them, so the production was created by starting and stopping various machines, mixing them all into one final mono version.

One that I remember, but sadly no longer have to play for you, was an outdoor scene, with a gently breeze. I added some insects and birds to the mix, and then a cow. In fact, there seemed to be quite a few records of cows making a variety of sounds, and pretty soon I had the cows talking to each other. Anyone passing by the production studio would have been baffled by the sounds, and my laughter as I put this together.

The scene slowly evolved into a picture, in my mind at least, of cows randomly doing cow things but slowly coming together in an animated conversation. No words, of course, but by applying human-like speech patterns to the cows and choosing different cows for different roles, you could almost understand what they were talking about.

I played this for a variety of people, and, frankly, hardly anyone got it. They just thought it was weird.

But when I played it for some kids, they immediately loved it and wanted to hear it over and over. They understood it. They got the humor, and the parody of human interaction, devolved down to its essence, and performed by cows.

Perhaps children understood it because that aspect of their imagination had not yet been destroyed by the world. Or perhaps I just have a childish sense of humor.

Later, in my studio, we once did an entire series of short radio drama segments. As far as I know, these were never actually broadcast. But we had fun making them.

The studio got fairly regular advertising work, often with original music we recorded, along with the professional voice talent. I got to know many of these people over the years, and I was always in awe of their abilities. One might be an expert at the hard-sell spot advertisement. Another might be great at an intimate style that drew in the listener. There was one guy who did a lot of work for pharmaceutical companies. In addition to a great, authoritative voice, he also had the ability to rattle off obscure medical terms and complex drug names, sounding fully knowledgeable about the topics.

And a couple of people were really good at humorous voices.

I took advantage of our friendship with some of these people, and, when they were in for a paying client, they would record a short script for us at the end of the session. They were happy to volunteer their talents when they understood what we were trying to do. Most really got into the absurd nature of the stories.

We made our own sound effects, which might be a car roaring past or screeching to a halt just before hitting the microphones we set up in the street.

One recording of a pickup truck racing toward the mics, blowing the horn, was so realistic that people involuntarily jumped away from the speakers when they heard it.

We recorded explosions, using firecrackers slowed down. For an underwater scene, we used a straw blowing bubbles in a tank of water. For the sound of underwater dialog, we added a lot of flutter to a tape machine.

I recorded quite a few thunderstorms, trying to get just the right sound for one episode. The take we used was recorded with one mic out the front door of the studio, and another mic aimed out the back door. Those mics were close to 100 feet apart and the stereo image was gigantic. I slowed it down just a bit and layered a couple of other good thunderclaps together to create a truly impressive storm.

I don't think any of the sound effects we made were accurate representations of the actual sound. Doing that was not effective. I had to exaggerate the sound using studio techniques like variable speed on the tape machine, eq, reverb, compression, and overdubbing in order to make a sound that did the job. The fact that it was a comedy production made it easier.

We ran hundreds of feet of mic cable out the door so we could record a "man in the street" interview with patrons of the bar around the corner.

For a trash truck scene, we asked the local sanitary workers to help out with the sound of their truck crushing stuff. They were excited to be in "show business." I made sure they all got a copy of the finished recording.

And to create the sound of a bag of trash hitting the ground, we threw bags of bottles, cans, and paper off the roof of the studio and recorded the sound with multiple mics on the ground.

We needed the sound of someone kicking the tire on the trash truck, but the actual sound was dull and unconvincing. We walked down the street with a microphone, kicking the tires of the cars parked there until we found the perfect sound. It was on an MGB, with a slightly loose hubcap. Slowed down, you could imagine a gigantic tire on a humongous trash truck.

Songwriters on the project wrote original music for the theme and incidental music. It was a whole lot of work, but back then the days seemed to have more hours and there were no computers or cell phones to eat your time. This didn't cost us much, which was good because it never generated any income. But each of us involved learned things from the process would prove to be useful to us during our career. One engineer went on to become the location sound guy for a major movie director.

These projects reinforced my previous experience of working with sound to create a scene. I also learned more about my microphones, acoustic environments in and out of the studio, how the sound could be exaggerated by saturating the tape, and how sounds can be manipulated by changing their speed.

Each episode, or scene, required different music and effects, and working with creative people led us to inventing the sounds we wanted, and challenged us with how to make them. Of course, if we had a big budget to do this, it would have been easier. But the limitations we faced forced us to use everyday things to make the sound effects we needed.

The key thing was creating the scene for the listener's imagination, from the sounds we created. Voice actors told the story, but the music and effects were just as important.

On a project like this, or sometimes on traditional music production, I often did not have the instrument to make the sound I needed. One time, very early in my studio days before we had a studio drum kit, we decided to try to make the drum sounds with whatever we had on hand.

For the snare, a metal coffee can, filled with small nails had the same kind of attack and rattle as a snare drum has. It wouldn't fool anyone – it sounded nothing like a snare drum. But in the song, it didn't have to be loud, and by recording it with the tape machine slowed down just a bit, the can of nails brightened up. Some eq helped, too.

I tried a variety of things for the bass drum, including cardboard boxes of various sizes, pieces of wood, and even just thumping a foot on the wooden floor in an office. None really did the job.

Then I tried tapping on a large, felt cowboy hat that someone had given me. Putting a KM84 inside the hat created an amazing sound, with tons of low end. You couldn't hit it with a stick. That did not work. But a gentle tapping with one finger resulted in an impressive sound. I think I had to actually roll off some of the low end, it was so bassy.

The studio did have some percussion instruments lying around, including a couple of tambourines and a bell tree. For a cymbal effect, one bell on the bell tree seemed to work best. That was recorded at a slightly higher tape speed and slowed down to sound like a believable crash cymbal.

The high-hat sound came from hitting a piece of aluminum plate about a foot square with a real drum stick.

Soloed, this drum kit sounded pretty comical. But when the other instruments were added, everything fit together nicely and complemented the song quite effectively.

We tend to get into a rut using everyday instruments for a song. But by using different instruments to emulate what you wanted sometimes was more effective than the real instrument itself. Lots of instruments become very interesting when you speed them up or slow them down.

Once I needed a percussive sound that had some depth. After a lot of experimenting, what worked best was dragging a razor blade through a block of Styrofoam. It wasn't very loud, but by mic'ing it very close, in stereo, it was a truly impressive sound. It fit the mood of the song perfectly.

On another song, I needed a different kind of large, percussive sound. The final sound was created by hitting a large weight plate from a barbell set with a small sledge hammer. That was still a bit dull, so I mounted the weight from a rope under the Steinway grand piano in the studio. With the sustain pedal pressed, the sound was stretched out nicely from the sympathetic vibration of the piano strings. Recording it at a higher tape speed, about 10% above normal, and playing it back at normal speed made it sound even larger and more alien. Adding a combination of EMT plate reverb and early digital reverb created a massive percussive sound.

You can sometimes create a better picture in the mind of the listener by using instruments, or improvised instruments, in a way that nobody has ever heard before.

Of course, there are very few songs that could actually be enhanced by sound effects. But think about the impact on the listener using ordinary instruments and the mental image they might concoct from the way you record or layer the instrumentation.

For me, I always want to create something that I have never heard before. It has to be appropriate for the music, of course. You don't want to make a sound that doesn't make sense in the context of the song, no matter how interesting that sound may be. And always be ready to abandon your effect, if it isn't helping.

And there is one last aspect of this "theater of the mind" topic that I want to address.

From the beginning of film, people have made what we now call "music videos." An example of a huge music video was Walt Disney's "Fantasia" released in 1940. The music was classical, played by the Philadelphia Orchestra and recorded multi-channel by RCA. My father played on that film score. On the screen were images and stories that made sense to the creators of this massive project.

There were other "music videos" even earlier, dating back to the invention of sound for film.

Forty years later, music videos became a necessity for most recording artists.

I have to say I have mixed feelings about music videos. Some are truly great multimedia productions. But most tend to be over-the-top on the visual aspect, and seem to treat the music as merely background. Generally, I do not want someone else providing the images for my imagination.

Far too often, the visual has nothing to do with the story of the song, or even the mood of the song.

I actually prefer music videos without any video content, or, at most a static photo or illustration. I find that there are enough distractions from listening already, without another one dominating my interpretation of the music I am hearing.

I know I am in a minority on this. And I am impressed with the wonderful production and creativity that talented people bring to a three-and-a-half-minute video. But I think it detracts from the music.

Taken a step farther, I wonder if liner notes are actually a good idea. I like to see who produced the record, who the players were, and who the various engineers were. But when the notes try to tell me about the song, I tend not to read them. I don't even want the songwriter to tell me the story behind the song, as some do in their notes or vocally in a live performance.

It's probably from a lifetime of being privy to these stories from the people who are creating the music. That background is often helpful to me in understanding the artist's intent, or insight into the song that the composer maybe doesn't even realize. But for a listener, perhaps too much information skews their mental image in a direction they might not go without the explanatory words.

Back when I worked in radio, I would warn people who wanted to see the radio station that they would never listen to the radio the same way again. The same applies to a recording session. Let them keep their own picture of the process.

Sometimes we are just better off casting the music out there and letting every listener create his or her own interpretation. Everyone has some degree of imagination. Let's encourage that. After all, the pictures are so much better that way.

This is My Take On Music Recording. I'm Doug Fearn. See you next time.