Podcast Essentials – Sound Design

[Start of recorded material 00:00:00]

Peter: [00:00:06] Well, hello, everybody. It's great to see all of you folks you here. Thanks for being here. Thank you for giving me the time of day. My name is Peter Leonard. I am an audio engineer, sound designer, composer, for Gimlet Media. [00:00:35] And at Gimlet I've worked on a lot of shows at this point. Started off on "Start Up." I worked on "Without Fail" and then "Science Vs," "The Cut on Tuesdays," and "Stolen," "The Search for Jermain." I'm worked on "The Journal" and now I work on a show called "How to Save a Planet." Quick plug if you are looking for a climate, an optimistic climate-centric podcast.

[00:01:07] But today what I wanted to do with you all is show you just the fun and the power of sound design in podcasting. And so what we're going to look at – as you can kind of see, I'm sharing my screen – this is an episode of "Science Vs" that aired about two years ago. It's from Season 6. Just like a 10,000 foot view of the episode. [00:01:37] This is about – this is a historical episode. It's about when President James Garfield was assassinated. He didn't die as you would – as you may have expected from just like – from just the gunshot wound itself. The reason that James Garfield died was through some, through many complications thereafter. And all those complications advanced the theory in the medical community that germs actually existed.

[00:02:18] So this event was like, was super-big for the medical community because it forced them to reckon with all the theory around their being tiny little microscopic things that you couldn't see that cause infection and health problems. So the episode is great. We're going to be focusing on about a minute of it, [00:02:47] a minute where there is a scene described. Basically the scene being described is the actual time that President Garfield was shot. And before we actually dive into this Pro Tools session, we listen through the scene will be – that we're going to design together. I just wanted to give you all a little clue in. [00:03:16] Why sound design at all? Why is it valuable?

[00:03:20] Well, if you think about scoring in a podcast, very often it's used to of course bolster the emotions that you're meant to feel as a listener, get you to potentially relate to the story a little bit more through having emotions that you're supposed to – that you might want to feel, be [00:03:50] teased out by the qualities of the scoring. But also it's purely in my opinion an attention thing. A lot of people listen to podcasts passively. I'm sure that many of you have this experience too. You listen passively, you listen while your senses are – your other senses are tied up, doing something else, cooking, cleaning, commuting, running, exercising of some sort.

[00:04:20] You know, rarely ever do you listen to podcasts like this. I know it's – and I view things like scoring and sound design as tools to shape a listener's attention, choose when to immerse them in the moment and when you can kind of release them into not having to pay nearly as close attention. And sound design is just yet another one of those tools that can create a concentrated cool moment for your listener to really be immersed [00:04:52] in the story that you're trying to tell. Sometimes it's not enough to just have the events having taken place be described. That's not enough to actually nail home the point that you are attempting to make or have the right details be picked up by your listeners.

[00:05:20] Sometimes it's not enough just to hear the words. Sometimes you know, you want – I'm sure many people have told you this in your production life. Show, don't tell. Everybody says that all the time. Show, don't tell. Sound design is one of the tools that you can use to do that. So that's why – why do this at all? Why sound design at all? That's kind of why. And as you'll kind of start to get a sense of [00:05:51] here, this is a pretty intense detail, very detail oriented process. So given all of the work that goes into sound designing a moment, I often say like for – say like two minutes of sound design, it's probably somewhere between two and five hours of work. People in video, there's like an old saying, 10 hours for two minutes.

[00:06:25] Why do all of this detail oriented like exhaustive work for such a short period of time? Well, in the same way that over the course of a 30 minute long podcast there are moments of the story that you really want to be able to immerse your listener in. It's the same idea with sound design. You can use the concentrated moment, the 30 seconds to two minutes of sound design, to emphasize that this part is a part to be listened to. This part is one where we really want you to remember what happened [00:06:58] because it's become important in the narrative later. So that's why sound design – what you're looking at on my screen, this is your peek under the hood into this "Science Vs" episode.

[00:07:24] Basically what you're looking at all below this point right here, this is all of the dialogue for the podcast, so all of these red tracks right here that I'm highlighting, these are all the two hosts talking to each other, Wendy Zukerman and Kaitlyn Sawrey, telling the story of James Garfield's death. And then below here, this is all of our guests' tape, archival, [00:07:54] and ambi that I need to use in order to smooth edits, etc., etc. And then this whole – well, before going to that, the stuff at the top, this is all scoring, the times that I've chosen to score in the podcast. And then this whole blank space in the middle, this is going to be our canvas to sound design on.

[00:08:25] So with that, I just want to zoom into the about 30 second long – let's see how long this thing is in all, actually. It's about a minute and 22 and the scene that we are actually going to design is 44 seconds. So we're going to

listen to this minute and 21 second clip describing the actual incidence of James – [00:08:55] President James Garfield being shot by a man called Charles Guiteau, who had been – who had had it out for Garfield for a while and had finally decided this is when I'm going to make my move and so he buys a gun. That's our way into the story. That's where we are. Guiteau was about to – is about to make his move on James Garfield. And so we're going to listen to this. What I want you to think about, during this scene, what settings and actions are being described by the hosts that need to be sonified, need to have some kind of sound associated with them?

[00:09:47] That's what I want – that's where I want your head to be. What is being described that needs to be, needs to have a sound associated with it? And when you're thinking about that, think small and specific. So for example, if we hear hosts narrate the lines, "He walked up to the building, rang the buzzer and was let into the apartment," just that one little sentence, "He walked into the building, or up to [00:10:16] the building from the outside; he walked up to the building, rang the buzzer and was let into the apartment"; you would think that sonifying that would maybe be simple given that it's, you know, only about 20 words. But there are tons of little micro-actions in here that needs to have sounds attached to them.

[00:10:43] So you know, "He walked up to the building," OK, we need footsteps, we need to decide what type of shoes he's wearing, we need to know the material of the street that he was walking on. Is it cobblestone? Is it asphalt? We need to know what city he's in. We need to know in what historical time period so that we can get the city ambi right. We need to know what kind of clothes he's wearing. Is he wearing leather? Is he wearing, you know, is he wearing nylon so that the swishes are right? [00:11:13] We need those footsteps to eventually stop at the door. We need the sound of a clothing swish as he brings his arm up. We need the sound of his finger hitting the button. We need the buzzer sound.

[00:11:29] We need some kind of like intercom, like, "Who is it?" Or something like that. We need then the sound the buzzer. We need a door opening. We need footsteps crossing the threshold. Let's see, what else? We need the door slamming shut after he gets into the building. Etc., etc., etc. You see how this gets very fine, very detailed, very quickly. So that's where I want your head to be at. [00:11:58] All right. Since we're going to be playing from this Pro Tools session, now I'm going to actually change this to be in stereo. You probably just noticed that my voice just went just into your left ear. It's going to be like that for the remainder of the time that we're listening to this Pro Tools sessions. Just give you a heads up on that. So yes, let's listen.

[Audio clip]

Kaitlyn: [00:12:18] So Guiteau buys a gun and he starts following Garfield. And in 1881 the president doesn't have a security detail, so Garfield is a sitting duck.

Wendy: [00:12:29] He was basically stalking the president and watching where he was going.

Kaitlyn: [00:12:34] How long for?

Wendy: [00:12:35] A couple of weeks.

Kaitlyn: [00:12:37] He's taking notes on everywhere he's going and basically and basically figuring out when he's going to try and shoot him. And the president, of course, has no idea he's in danger. And on the morning of July 2, 1881, Garfield's going out of town. The president's going on summer vacation because it's the middle of summer holidays. And he heads to the train station to start his holiday.

Wendy: [00:13:00] Like they got out of their carriages and walked in and they had just gotten inside. Like they weren't – because Guiteau was waiting for them. He knew that they were going to the train station that day so he was essentially laying in wait. He had just this look on his face of like calm and collected and raised his gun and fired the first shot that grazed Garfield's arm. And that's when Garfield was like, "Oh my God, what is this?"

Kaitlyn: [00:13:27] Guiteau shoots again. This one nails President Garfield in the back. The president falls to the ground and all hell breaks loose. But he doesn't die straight away. And –

Peter: [00:13:38] All right, that's the end of our scene. I'm actually going to play it through again. I realize that all of this information probably just is flying at everybody. And try to make your observations about what needs to be sonified again. In my opinion, when I was designing this, I started my scene when Kaitlyn Sawrey says …

[Audio clip]

Kaitlyn: [00:13:58] And he heads to the train station to start his holiday.

Peter: [00:14:02] He heads to the train station. That was where for me it was the most compelling point to actually start the scene. This is – she's actually placing you in a specific place. She's starting the story, picking up, exactly having the events actually happen one after another. That's why I thought – so you know, this part for the context, great. But then right here, when she [00:14:33] says, "He heads into the train station," that's where let's say – that's where we'll actually start design in our scene and then we'll take it out after Katie says, "But he doesn't die straight away."

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[00:14:44] So let's listen through again. Make your observations about what we need, what kind of sound effects we need.

[Audio clip]

Kaitlyn: [00:14:52] So Guiteau buys a gun and he starts following Garfield. And in 1881 the president doesn't have a security detail, so Garfield is a sitting duck.

Wendy: [00:15:01] He was basically stalking the president and watching where he was going.

Kaitlyn: [00:15:07] How long for?

Wendy: [00:15:09] A couple of weeks.

Kaitlyn: [00:15:11] He's taking notes on everywhere he's going and basically and basically figuring out when he's going to try and shoot him. And the president, of course, has no idea he's in danger. And on the morning of July 2, 1881, Garfield's going out of town. The president's going on summer vacation because it's the middle of summer holidays. And he heads to the train station to start his holiday.

Wendy: [00:15:33] Like they got out of their carriages and walked in and they had just gotten inside. Like they weren't – because Guiteau was waiting for them. He knew that they were going to the train station that day so he was essentially laying in wait. He had just this look on his face of like calm and collected and raised his gun and fired the first shot that grazed Garfield's arm. And that's when Garfield was like, "Oh my God, what is this?"

Kaitlyn: [00:13:27] Guiteau shoots again. This one nails President Garfield in the back. The president falls to the ground and all hell breaks loose. But he doesn't die straight away. And in the fight –

Peter: [00:16:14] All right. So enter in the chat. You can also unmute yourself and speak these things into existence. But what are some – what are some things that you notice that need to be sonified here? Gunshots, yes. That is – that's the first and probably most obvious thing, of course.

[Audio clip]

Kaitlyn: [00:16:42] Raised his gun and fired the first shot that grazed Garfield's arm.

Peter: [00:16:48] OK. Great. Yes, steam engines. Awesome. Yes. Footsteps for sure. Many – footsteps probably in many, many different places. We need Garfield walking into the train station from his carriage. We need – once we're in the train station we probably need many footsteps, as all the people around them are walking. Crowd noise, yes, definitely. Definitely, definitely. [00:17:17]

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Especially in the train station. We have two settings to realize. We kind of have like outside of the train station right here.

[Audio clip]

Wendy: [00:17:24] Like they got out of their carriages and walked in and they had just gotten inside. Like they weren't – because Guiteau was waiting for them.

Peter: [00:17:32] So basically for this period of about four seconds, we're outside of the train station.

[Audio clip]

Wendy: [00:17:38] Like they got out of their carriages and walked in and –

Peter: [00:17:41] OK, so they're outside of the train station in a carriage. And they walked up to the train station. Even that little bit is something that we're going to need to take into – so we need crowd noise during that part that sounds like we are outside of a train station. We're on cobblestone streets. We hear horses clomping around. And also we need …

Wendy: [00:18:11] – carriages and walked in and –

Peter: [00:18:12] They got out of their carriage? We need a carriage door. So I'm going to write down – I'm just going to start keeping a running tab of these things. Gunshots. Do we need just any old gunshots? When was James Garfield assassinated? That's probably a very important detail. I mean we know it's sometimes in the 19th century, but here – that's probably something that we'll need to – I'm just going to do like a quick [00:18:42] James Garfield assassination. Very important research. 1891. OK, great. So that's going to inform everything that I look at. We don't need any old gunshot. What do we need? We need a gun from that era. We need a revolver probably. 1881 revolver, shot. So I'm going to write that down as well. Revolver. 1881. We need period correct steam engines.

[00:19:19] We need horse clomps. We need a carriage door. What else? What else? What else did people notice? Yes, yes. A body falling and hitting the floor. Yeah. That's – you're thinking, I can tell. You're thinking around the right lines, Mindy. Each little action does need an associated sound effect. It's not enough to say, you know, [00:29:52] in my sound effects library I can't just search assassination. No, it has to be gunshot, hitting, you know, like bullet hitting person, fall to the floor. Clothing swishes. And screams. Yes, yes. Shrieks. Yes, screams and shrieks. What would happen if somebody gets assassinated in the train station? Everybody would freak out. [00:20:23] So yes, we need – we need like general, many screams.

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[00:20:33] We need like disturbed crowd, just like animated speaking and everything. Hubbub. Yes, definitely hubbub for before the – yes, exactly, Peter. We need hubbub for – like when the enter the train station, before Guiteau actually shoots Garfield. For before the shots. [00:20:59] And we need – anything else that anybody noticed before I just keep revealing things here? Did they have sirens in those days? That is – let's, hey, let's find out. This kind of research is very much stuff [00:21:30] that I do in real time whenever I need to. 1881 sirens. Did they even have them? Just to hone my search a little bit more. Unclear. Unclear. OK. [00:21:59] So I'm probably not nearly as good as – of researching as many of you probably are, being steeped in it these days.

[00:22:08] But just to say that I do all of this kind of research. I want everything to be period correct. Like when I look for ambi, crowd noises, hubbub, I can't have people saying, in that crowd noise, I can't have people saying modern style phrases like, "Oh yes, I'll hit you up tomorrow," or something like that. It all has to be period correct. I can't use [wallah 00:22:32] that has electronic train announcements in the background. All the doors [00:22:39] that I need to use, the front door opening for the train station needs to be wood probably, because they used, you know, wood and iron back in that day. Any other observations that people have before we start kind of like trying our hand at laying in some sound effects?

[00:22:55] Any others? Going once. Galloping horses? Yes, definitely. Is there archival audio of – this is – oh yes, that's a great question. So 1881 is I think after the phonograph. But the chances – there are two stumbling blocks here. The first is that the chances of us getting a high fidelity recording of that event are extremely low. So I would say that there's probably a [00:23:38] – oh, OK, Peter, thank you. So this was even before. So we don't even have – this predates modern recording. If there happened to be archival of this audio, the two stumbling blocks that we'd run into are, first, the fidelity would probably be really bad, like distractingly bad. And we want this to be like you're actually immersed in there. You know, it sounds as though you [00:24:05], if you close your eyes, are in the train station observing from, you know, as a third party, rather than you listening to a noise-laden, you know, wax cylinder from back then.

[00:24:17] And then also fair use around archival audio is a big stumbling block. It's – especially for a private institution like Gimlet and Spotify. Fair use does not allow – fair use does not allow institutions like ours to just use archival audio or anything unlicensed, just in that way. So we probably wouldn't be able to use any – this is all stuff that [00:24:47] we have to, in order to realize this event, we truly do have to use licensed sound effects from a library. But I really love where you head is at. It's a great question. OK, so let's start trying to lay some stuff in. I know that the first thing –

[Off mike]

Peter: [00:25:19] If I'm starting my scene around here, I know that for this stretch of about seven seconds, what's being narrated is, we're rolling up to the train station.

[Audio clip]

Kaitlyn: [00:25:29] He heads to the train station to start his holiday. Like they –

Peter: [00:25:34] OK, so for this I'm going to need some – I'm going to pull up my sound library, so just to illustrate the fact that I can't just like search for something like 1880s train station to get it, like there actually are a couple, you know, there are a couple – we do have a couple [00:26:05] instances of full station ambis. But a lot of these are unusable, because, well, let's listen to just this one right here. That's clearly a modern train. We can't use that. How about just this train ambiance? Can't use this because there are electronic announcements. [00:26:35] So we truly have to be like, you know, let's say 1880, or actually just do 1880 just to keep it –

Michelle: [00:26:42] Peter I don't think we're able to hear the samples that you're playing from this particular sound library.

Peter: [00:26:46] Thank you for alerting me to that. Let's see if I can change that. Yes, I can. OK, how about now?

[Audio clip]

Michelle: [00:26:59] That's great.

Peter: [00:27:00] Great. Just to illustrate.

[Audio clip]

Peter: [00:27:07] And also those announcements are in a different language. So this is why realizing train station ambi usually is an exercise in finding many, many different specific sound effects that we can layer and layer and layer together to actually make the train station. So let's first do horses, cobblestone. [00:27:37] Horses on cobblestone. OK. See if this is going to work.

[Audio clip]

Peter: [00:27:52] All right, that's not quite right – just do –

[Audio clip]

Peter: [00:28:11] Pull down some of these. Ah, here we go. Walking on pavement, perfectly.

[Audio clip]

Peter: [00:28:21] All right. Now we're starting to cook with gas. Sure. Just going to drag this in right here as our first layering opportunity. Kind of just fade that in a little bit. Let's find one more instance of horse galloping, just so we can fill this out. Horses. [00:28:49] I'm pulling this search a little bit more. Horses walking. Go under the [South Pro 00:29:01] library. So walk, gravel. We don't want gravel. We want it on pavement. So wet gravel. It's not what we want. Wood interior. Concrete. That's probably a little bit …

[Audio clip]

Peter: [00:29:27] Sometimes this is an exercise in working with what you have. If I can't find clomps on actual cobblestone, then I'll kind of just need to fake it.

Person: [00:29:39] How about wood?

Peter: [00:29:42] Wood? Do you think that there would be wood surfaces outside of a train station, like on the street outside?

Person: [00:29:50] No, but I think the sound might be the same.

Peter: [00:29:54] Sure. All right.

[Audio clip]

Peter: [00:30:00] That's a possibility. Let's just look at this horse library. This is probably very …

[Audio clip]

Peter: [00:30:22] Going to say – let's just go back to – to the horse library, [sound in Pro 00:30:32].

[Audio clips]

Peter: [00:30:52] Excellent. This is sounding a lot more like it. And this is useful too because there's carriage audio in here, which we know that – we know that Garfield was in a carriage. So that is good. OK, let's get some – let's get some city – [00:31:22] all right, we've got to back the search out a little bit. So the trouble with finding actual city ambi here is that it has to be, like it can't have traffic in it. And often exercise is putting in the right search term, such as you get meaningful results but it doesn't have some of the things [00:31:50] that you want to avoid from the time. Like traffic or other things. So I'm very open to your help, by the way, if you have suggestions for my search terms, sometimes as I appear to be coming up empty in certain things here.

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[00:32:14] Let's say 1800 wallah. Let's see if that's going to – all right, let's go with Ext crowd.

[Audio clip]

Peter: [00:32:40] All right, now we're talking. All right, great. And the reason that I put Ext right here is for Exterior, because we want this to sound like it's coming in from the outside and not like it's in a space. So let's just use this. Let's see where we're at so far. Back this down. Not loud.

[Audio clip]

Kaitlyn: [00:33:09] And he heads to the train station to start his holiday. Like they got out of their carriages and walked in they had just gotten inside, but they weren't – because Guiteau was waiting for them. He knew that they were going to the train station that day so he was –

Peter: [00:33:26] All right, so –

Kaitlyn: [00:33:27] Had just gotten inside, but they weren't – because Guiteau –

Peter: [00:33:29] So we want this until our guest here says that they had just gotten inside.

[Audio clip]

Peter: [00:33:41] So basically from here on out I do not need these. I especially don't need the carriage. And we can fade out these horses here. So basically from here on in we're actually in the train station. So we'll fade all these out at the moment that they kind of like open the train station door. [00:34:09] One thing I do need is a carriage door for Garfield getting in and out of the – so let's see if I can find that carriage door. OK, all right. So let's see. That's a good option.

[Audio clip]

Peter: [00:34:34] This is literally, well – see, it's like this would be perfect, horses on cobblestone, except that it was recorded probably about 50 years ago and the fidelity is just not there. So unfortunately. But that's fine. I think – you know what? That sounds like a perfectly acceptable carriage door to me. So let's make sure that this is appropriately leveled.

[Audio clip]

Peter: [00:35:06] So they got out of their carriages. Then you hear the carriage door.

[Audio clip]

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Peter: [00:35:12] And to just kind of like make this feel a little bit more immersive, I'm going to pan this to the left a little.

[Audio clip]

Peter: [00:35:20] Ooh, that's a little too much. Let's just do just a bit off center. In addition I'm going to pan this to the left a little bit and I'm going to pan the other horses to the right.

[Audio clip]

Peter: [00:35:53] And they had just gotten – so this is where we are. I can hear I need to do a little bit of leveling.

[Audio clip]

Peter: [00:36:07] All right. So let's do some footsteps, cobblestone. All right. If we can't find cobblestone, then we'll just do boots, footsteps, hardwood. That's not what I want. Street. Gravel, running, street, not exactly I want – not snow. Paved. Nope.

[Pause]

Peter: [00:37:12] Good to have footsteps, human library. Ooh, this is good. OK, so we want – perfect. There we go, there we go, there we go. You can definitely see how sometimes this just feels like an exercise in futility, because you're like how am I – if I'm getting such weird results, how am I going to arrive at something that's all right? Just kind of have to trust. All right. [00:37:42] So if this, if the carriage door was panned to the left a little bit, then I want to make sure that my footsteps in addition are panned to the left, because Garfield is getting out of his carriage kind of like on the left side of our –

[Audio clip]

Peter: [00:37:58] OK, now we can keep these footsteps. In fact we can move this a little bit. Let's have them pause right here, open the door. So we need like a wood, probably the front door of the train station is a big wood door. So wood door. Ooh, antique.

[Audio clip]

Peter: [00:38:23] OK, let's go with that. If I were being really persnickety, I would kind of want to have a door that sounds like it's a little bigger. But I think that this is totally fine. Right here. So let's see. Pauses, open door. Opens the door and then keeps going. So we've got –

[Audio clip]

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Peter: [00:38:53] All of our kind of like crowd and ambi dies away really quickly. We need to replace all of that with the sounds of people talking in a train station, which is different from crowd noise from the outside. This crowd noise is going to be much more reverberant, probably like it's going to probably sound washy. Oh, Emily, I'm sorry. I missed your question. I'm using Soundly, and [00:39:26] so the Soundly Pro library is what I'm using. But we also [unintelligible 00:39:30] we also use Soundsnap. And the Boom library as well. Just to like kind of point you in the right direction. So let's hear, let's see if we can do Interior crowd. Let's just see with that – OK –

           [Audio clip]

Peter: [00:40:02] OK. Let's have –

           [Audio clip]

Peter: [00:40:07] Ooh, here we – this is –

           [Audio clip]

Peter: [00:40:11] I'm just going to listen to make sure that I don't hear anything that is, that is anachronistic. I don't think so. It's all just a wash. So this will be perfect for our interior train station ambi. I'm going to just – and so now let's do – what I want to do is I want to line the door up with – I want to line the door, the opening of the door with the introduction of this new ambi. It's like you would open the door and [00:40:40] then as you're opening the door you can hear all of that crowd noise come in. So – and that's where, you know, the outside crowd ambi starts to fade out, interior crowd ambi starts to fade in. So let's line that up with the incidence of the door.

           [Audio clip]

Peter: [00:41:06] So it would be –

           [Audio clip]

Peter: [00:41:19] I'm actually just going to – just give this some room to extend out this horse. Here. OK.

           [Audio clip]

Peter: [00:41:38] And let's make the transition between these two ambis just a little bit more smooth here. Just going to – fade in for the store –

           [Audio clip]

Peter: [00:41:52] Here we go. There we go.

[Audio clip]

Peter: [00:42:10] All right. So we're pretty much good here. It doesn't really sound like there is a lot of important narration here that says we need to actually hear the actions that are being narrated.

[Audio clip]

Peter: [00:42:35] All right, so the next things – this is like the most exciting part of this, this scene definitely is, we need the gun. We need the gunshot and then we need basically like ensuing gunshot, screams, pandemonium. So that's what we're going to start doing now. All right. Let's get a revolver.

[Audio clip]

Peter: [00:43:03] All right, that's the cock of the revolver. Which, you know, we don't really – we're not getting nearly that close. We just need a revolver shot.

[Audio clip]

Peter: [00:43:20] Hmm. Maybe. Let's see if there is another – hmm.

[Audio clip]

Peter: [00:43:44] Just looking around for something that's a little bit more acceptable to –

[Audio clip]

Peter: [00:43:53] Sound too old. Too old. I'm talking about the quality of the recording.

[Audio clip]

Peter: [00:44:09] Let's just, in the interest of – I don't like those gunshots. There's just this weird, there's this weird high end action going on that I do not really like. And these are peaked. Ah, I'm like trying to get out of my like too detail oriented self. [00:44:40] And I'm having a hard time. Like I can't – I'm like, "Peter, you've got to move on." But I can't. I'm just like, "Ugh, I need the perfect gunshot." So if you are somebody who like really, really sweats the details, you know, I can – 1800 as a modifier is just not really something that's –

[Audio clip]

Peter: [00:45:09] – giving me a lot of success. If you're somebody who really sweats the details, sound designer, that's a pretty – that's a good role for you. So –

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[Audio clip]

Peter: [00:45:27] I can look at all of these.

[Audio clip]

Peter: [00:45:40] Let's just go with that. I understand this is not period correct. I made like such a big deal out of everything being period correct and now I'm like just pulling this random gunshot. But you know, it's just because I wasn't really able to find something that was satisfactorily period correct and also sounded as good as I wanted it to. So – and at that point I'm kind of like, well, who's going to really, like is it [00:46:11] useful to pour into the details of who would be able to discern that the gunshot that I'm using is not from a revolver from the time period?

[Audio clip]

Peter: [00:46:30] All right, so first, even before I get to laying in this sound effect, I can tell that with this dialogue, in order for me to create the feeling that I want to, I need to create some space here. I need to create some space for the gunshot to happen and then for the ensuing pandemonium to start, before the narration continues. [00:47:00] So I'm going to choose right here, actually, to take this and just move it a little forward, give myself about, hmm, let's say three seconds to work with. Three seconds for a gunshot and then some screams.

[Audio clip]

Peter: [00:47:23] And so we want the ambi and we want the music in addition to continue right up until the moment – these footsteps don't nearly go long enough, so I'm going to loop them a little bit. Go up right until the moment of the shot.

[Audio clip]

Peter: [00:47:47] There we go. All right, now we're starting – so something that I know that I need with this gunshot – we're indoors and so the crowd sounds like it's indoors. This gunshot, I'm not sure where it was recorded. Possibly somewhere out of doors, in some other space. I want this gunshot though, and I want the ensuing screams, to all sound like they're in the same space. [00:48:15] So the answer is, we're going to send all of the sound effects from, you know, gunshots, screams, and also the footsteps even – I realized I forgot to do that – we're going to send them to same artificial reverb. That artificial reverb is going to make it sound – is going to kind of like enhance the realism of those things actually happening in the space that they are happening in.

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[00:48:54] So I'm just going to make sure to send all of these. Let's do it with the crowd noise as well. Send the crowd noise too. I didn't kind of have to move. If I did have time, I would put in – I would put in some steam engines right here, probably somebody saying, "All aboard," or something like that. But you know, we have bigger fish to fry. So here, let's try that out.

[Audio clip]

Peter: [00:49:31] Whoa, that's a little too much for those footsteps.

[Audio clip]

Peter: [00:49:45] OK. And again, that is way too much.

[Audio clip]

Peter: [00:49:52] All right, that's a little bit more convincing.

[Audio clip]

Peter: [00:49:57] And I can even check what is my scene verb, what is – what kind of reverb is my scene verb? Is it actually a – here we go. Scene verb, yes. What is it set to? Set to – oh, just like the default setting. So not something that we want it to be set to. I want to set it to some space that's actually probably more [00:50:30] analogous to a train station. So that means that we're looking for a something with a lot of hard surfaces. We're looking for something that – let's see. I don't have a lot of good options in this particular plug-in. But I know that we can probably get somewhere along the way, if we just do a concert hall.

[Audio clip]

Peter: [00:51:08] It sounds a little bit more realistic. All right, let's move on to our screams and resulting pandemonium. So first, let's just do – let's just do single screams. Ooh.

[Audio clip]

Peter: [00:51:30] OK, that's a little overblown.

[Audio clip]

Peter: [00:51:33] Sure. That's one that we can use. And these are going to be – I do not want to have these be really all that loud. They want to sound like they're like really in the background. So that means that I'm going to make sure to kind of pan them to different places in the stereo spectrum. I'm going to try to make sure to have them be going to that scene reverb.

[Audio clip]

Peter: [00:52:04] This is all going to sound, start to sound like, since we don't have crowd noise yet, this is all going to sound a little eerie because these things are happening in isolation.

[Audio clip]

Peter: [00:52:15] All right. We need a lot more screams to start making the sound realistic.

[Audio clip]

Peter: [00:52:20] Nope.

[Audio clip]

Peter: [00:52:35] Let's get a male. That doesn't sound realistic. I need a short screen. A short scream, short.

[Audio clip]

Peter: [00:53:02] Sometimes looking for sound effects is hilarious, because you get stuff like this, where it's like …

[Audio clip]

Peter: [00:53:07] Who would scream like that? But you know, you just got to work with it.

[Audio clip]

Peter: [00:53:15] All right, sure, let's use that as well. And it looks like I'm just starting to run out of time here. I'm just going to work up basically, right up into the – up to the wire. Just pan, make sure it's panned.

[Audio clip]

Peter: [00:53:45] Oops, I panned those to the same side and I actually want – I'd like to pan into different sides. So let's go – kind of this guy. Happened on the other side –

[Audio clip]

Peter: [00:53:56] Not nearly that loud.

[Audio clip]

Peter: [00:54:00] Not nearly that loud. OK, so we've got a couple screams. Let's work on some disturbed crowd and running. Or wallah is often the word that people use for – wallah, angry. That sounds – ooh, crowds, angry crowds. Perfect.

              [Audio clip]

Peter: [00:54:35] OK, but I can't use that because it's just, the actual words are a little bit too, are a little too discernable, angry. Let's just look at this angry crowds.

              [Audio clip]

Peter: [00:54:54] Riot.

              [Audio clip]

Peter: [00:54:58] Oh yes, now we're getting somewhere. Yes, this sounds like how a crowd would react if there was gunshots in their midst. So all right, let's make sure first that this is not anywhere near as loud as that, send it to our scene verb, and yes, let's just –

              [Audio clip]

Peter: [00:55:24] These things would probably take a little bit of time to actually happen. So let's give it a bunch of time here, people to digest that there was actually a gunshot there. I'm going to start with this crowd and then we'll move into screams.

              [Audio clip]

Peter: [00:55:52] OK, so it looks like that's all I'm going to really have time to actually design. Let's just listen to what we were able to come up with, this very rough scene so far.

              [Audio clip]

Peter: [00:56:42] Then of course there we would have yet another gunshot. Then we would probably have Garfield falling to the floor, more pandemonium and continued screams. And then after Katie says …

              [Audio clip]

Kaitlyn: [00:56:56] But he doesn't die straight away –

Peter: [00:56:59] Well, then that's when we would take our scene out and right there you could see the scoring starts. After this scene.

              [Audio clip]

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Peter: [00:57:18] So kind of after the scene ends we have some upbeat scoring and more of the story as like kind of like a palette cleanser. Like you just finished listening to that really intense scene. Now you can start paying attention to what happened in the aftermath, because that's really where this story starts. So yes, that's it. We went through some really, really rough sound design. Mostly this kind of was an exercise in seeing that many sound effects from Soundly at first glance are not usable. [00:57:50] But if you just kind of dig deeper and believe, you'll find stuff that you can kind of like finagle into making a scene work.

[00:58:00] But yes, as you can kind of see, sound design is very much an exercise in layering many, many individual things to create one big picture. And each of those individual little details has to be, has to adhere to the strict guidelines of what we've set out for this scene. So it has to be period correct, has to adhere to the descriptions that the hosts and guests give to what is going on. And most of all, all of these – [00:58:30] all of these sound effects need to happen when the hosts and guests describe when they're happening. You know, I have the carriage door open up when –

[Audio clip]

Peter: [00:58:48] They had just gotten inside. Then the train door opens and you hear them going inside. So yes, that's about it. You can listen to the full episode on Spotify. It is – I think it's "How Bad Science Killed A President." It's a really cool rest of the story about how germ theory was confirmed through this. And yes, thanks to you all for having me. Really appreciate it.

[End of recorded material 00:59:22]