Game Music Composition Interview with Rosewater's Mark Benis – Game & Gadget Podcast #40

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James Woodcock: Hello, and welcome to another episode of the Game and Gadget Podcast. I'm your host, James Woodcock of www.pixelrefresh.com. Joining me today is Mark Benis, a composer, game developer, and audio programmer who is the composer of the recently released point-and-click adventure game *Rosewater*.

Thank you for joining the Game & Gadget Podcast. So before we get specifically into the game *Rosewater*, tell us a little bit about yourself and how you got into composing and game development.

Mark Benis: Thanks James. First of all, thanks for inviting me on. It's a pleasure to talk to you about all this stuff. And to jump into some of my background, I started back in 2016. I was a fresh graduate out of university, and I had moved to New York City because – I'm originally American. Accent will probably clue you in. I moved to New York City right out of school. And New York City had a very bustling indie game scene. Specifically, there was an organization called Playcrafting, which did expos basically every season.

So that was my first deep dive into, "Maybe let's take composition seriously and start reaching out to developers." And that's actually how I met Francisco González, who is the developer of *Rosewater* and *Lamplight City*. So this ties into my history with Francisco in that I met him at one of these expos. He was showing an early build of *Lamplight City*, which is a detective adventure game [with] very dark colors, but he had no music in it. A lot of the art was in there. He had a working build. And I remember

meeting him there and playing it and just saying like – I tried to put on headphones. I don't hear anything. And he was like, "There's no music yet." And it kind of took off from there. Like, this looks like the perfect game I'd like to write music for. So yeah, that's how I got started. *Lamplight City* was the first game I actually worked on.

JW: Well, that's fantastic. So there's a moment where you went, "Here's my card."

MB: Yeah, yeah. In some ways… for starting composers, I think it can be really intimidating. "Where do I find my first job?" Because with the internet nowadays, people are getting bombarded by composers asking like, "Do you need a composer? Do you need a composer??" And in some ways, the face-to-face contact is really the way to make those connections. And I was lucky to have just found Francisco right when he was looking for a composer.

JW: I was just looking at your YouTube channel and one of the videos was your thesis where it was [about] the limitations of the Game Boy. Where it's basically three channels equipped for musical tones, bips and bobs, and then that fourth wonderful channel, which would be associated with noise, but that was just a way of saying this is how we're going to get a percussion sound out of this very basic music chip.

And then it was out to the composers. "Come on people, now you need to do something with this fairly limited hardware." Tell me about that thesis and then how it led to you basically having a small little orchestra performing behind you.

MB: Yeah, exactly. Just to start off, I'm glad to hear that you're very familiar with the [sound chip] technology and everything. Because I know you do your own music enhancement project with ScummVM. So it's good to talk to someone who's very familiar with that game audio history.

That ties into where I got inspired to write music in the first place. I grew up on *Pokémon Red* and *Blue* for the Game Boy, and that music was the soundscape of my childhood. And I remember having this really distinct thought of when I was [listening to] the Pokémon Center theme, hearing it and just... I don't know how old I was, like 8 or 10 – who knows – but just having this distinct thought of, "How did they make this? How did the composer write it to be so catchy? How can I sit here for 20 minutes and not get bored of this music? How is it literally coming out of the Game Boy?"

That started a very long journey, a journey I'm not anywhere close to being at the end of. But that led into, "What does the sound chip in the Game Boy actually look like?" And like you said, it's three channels of pitched square waves and a noise channel for percussion. And that research just took me into like, "They could do it back then… Why don't I try to do it myself and learn the hardware." Actually nowadays they make emulators for the sound chips so you can program it exactly like they did, but use a software program. The one I use is called Famitracker and I'm not sure if you're familiar with them, but for the audience, it's almost like programming line by line and the program will read the code as it scrolls down. So it's a very different way to look at

music, but a very fun way. And a way you can appreciate composers from the 90s, how much they had to do just to get one note to come out of the sound chip.

JW: Indeed. And there's a thing in the musical community as well where they'll take that limited – I don't want to say limited in a hard way, limited in a hardware perspective, not limited in terms of the musical composition itself – and then take that to a full orchestra. And there's been many albums and concert performances where we've seen this to some really splendid results. And there's even people taking what started as an orchestral piece and going in the opposite way. "How can we do this in a more limited hardware version?" And isn't it wonderful how those two worlds still blend together even now?

MB: Yeah, absolutely. And that's something I've explored also with some recent covers I did. I did *Elden Ring* covers. I'm sure people listening are familiar that Elden Ring [has] a huge live orchestra soundtrack. And I took that opportunity to think, "What would this sound like in a chiptune style?" I'm definitely not the first one to do it, not the last one. It's great to see that, and other arrangers are referring back to this old era that I think is still just as fresh as when it was first made.

JW: Absolutely. You've already mentioned a *Pokémon* Game Boy title, but are there any others that ignited that imagination for you as you played the game?

MB: Oh, man. That's a great question. I grew up on the Game Boy, the Game Boy Advanced… What was it? *Mario & Luigi: Superstar Saga*, which was [composed by] Yoko Shimomura. That is a fantastic score. And that was a slightly different case where it wasn't the Game Boy sound chip anymore. You had more samples and more synthesis. So that's a different sound, but in similar ways also limited by the technology. And similarly to Pokémon, takes those limitations and does something fabulous with it.

JW: Nintendo particularly has a lot of titles. The *Mario* games, everyone will know the *Mario* main piece of music. *Tetris* is another great example where it's that Nintendo platform. They came out with some fantastic musical tracks that we'll remember for the ages. And it doesn't feel like *Tetris* or *Mario* unless you've got at least a hint of that subtle theme going on somewhere in the mix.

But in terms of game development, there's a lot of composers out there – particularly 20, 30, 40 years ago – where they needed to have some game development knowledge to be able to do the musical composition. It was no good to say, "Yes, I've written this beautiful piece. Here's the written notation version of it. Off you go." It was more of a case of, "I've got to figure this thing out and actually do some coding." How's that fitted into what you're doing and working in those two worlds and the collaboration that must happen as a result?

MB: Yeah, that's a really great point to make. As we talked about with those sound chips – a lot of the composers back in the day were actually the programmers because

by nature you had to learn how to program [music] into these sound chips. And what's interesting is nowadays that barrier is a bit smaller in the sense that there are a lot of working composers these days that don't necessarily need to know anything about the actual programming. Because nowadays big companies have an entire audio department – which is great to see – and there are people dedicated [to sound] like the audio importers, the audio programmers who can actually handle that. So you do see some composers who are just focused on recording their orchestras and can send it in, but nowadays you have just as many composers who are familiar with the audio programming.

Now instead of programming it line by line we see the use of middleware, which is a great development. I want to say it's recent, but it's actually been around for quite a while. The forefront programs that I would mention are like Audiokinetic's Wwise and FMOD. These are middleware sound engines that can be implemented into a game engine and allow for greater control of a composer's music.

To go through an example so people can understand what I'm talking about: One of the projects I worked on was *Wolfenstein: Youngblood* where I was doing audio implementation on that game. The composer, Tom Salta, wrote some fantastic combat music that would transition when an enemy first spots you, then it needs to go into this certain stage. And then when they actually start fighting you, it needs to go to this other stage. And then if there's 10 enemies around you, we want to increase the intensity to a second layer.

What the audio implementer would do – and what my job was – was to essentially take these separate tracks of music, program them into a software – Wwise, which is the one I was using – and use variables to say, "Okay, when this happens, crossfade into this track." We have parameters for how many enemies are around you, so I could say, "Once this parameter is a certain number, or at least a certain amount, then let's crossfade in that second layer to make it more intense.

That kind of work, you have people dedicated to doing that. You have music designers these days, audio designers. It's become way more collaborative in the sense that a composer could talk to the audio team and be like, "How does this sound? Can I throw 10 tracks into this random container and have it randomly select whatever track for this section of the game?" And the audio programming would be like, "Yeah, no problem." So I think there's no better time to be a composer. There's no better time to be an audio programmer because what's possible nowadays is just limited by your imagination.

JW: We've certainly gone beyond the four channels, that's for sure. But let's talk about that musical technology. You've spoken about your use of the Game Boy, but what sort of hardware and software were you using when you first started dabbling and experimenting with what you could get out of the equipment you had?

MB: Yeah, that's a good point. There's definitely a benefit with all this new technology coming out, there's so much possible. There's so many great sample libraries out that are extremely realistic. But I think the one downside is financially, it's become a bit of a barrier to creating certain types of music, especially orchestral music. When you're competing with composers who record with a live orchestra – and that's the sound you're going for with samples – it can be tough to accomplish that unless you have sample libraries that literally cost thousands. There's certain companies that sell just the orchestral families alone. The strings could be $700, the brass could be $800…

So that's definitely something I faced when I was working on *Lamplight City*. I was fresh out of school, the budget of the game – it's still an indie game and It was a good budget to have for one of my first games, but I could not afford to buy $5,000 of sample libraries at that time. So referencing back to our talk on limitations of sound chips, I think there's still limitations these days, but they appear in a bit of a different way. My limitation working on *Lamplight City* was: I wanted to write an orchestral score in the style of *Vertigo*, Hitchcock films from the 50s, 60s – that kind of dark orchestral sound. But how was I going to do that, if I don't have the budget to hire a live orchestra? That's out the window. And I don't necessarily have the budget to buy the best samples of every single instrument family.

What I ended up doing was I said, "I'm going to limit myself. There's going to be no woodwinds on *Lamplight City*. It's just going to be strings and brass and what other instruments I have." So in a way, that was just a limitation set on me because I couldn't afford it. But in hindsight, I think that was one of the best creative decisions I ended up making. Because instead of saying, "I'll just throw flutes in there." It's like, "I don't have flutes. What are some other instruments I could use instead?" So that's where I picked up, "Let's go into vibraphone. Let's go into a hammered dulcimer. Let's find some other colors here and other instruments that could fit just as well for what I'm trying to do."

JW: And it's that thinking again, isn't it? Working with, in that case, it was a financial limitation. It could have cost a ridiculous amount of money to get the whole suite of orchestral instruments and beyond. You took it down to a smaller subset of instruments and went, "Okay, let me maximize what I can out of those." And maybe that in itself made you more creatively think, "What can I do to make this sound a little bit more [like what] I'm aiming for." Rather than like you say, "I'm just going to throw a flute in cause that's the obvious instrument I'm going to pull in for that kind of thing."

MB: Exactly. Especially when I was starting off, facing those limitations is in some ways a rite of passage as a starting composer. But also a way to really train yourself as a starting composer. Something I like to say is, if we took a starting composer and just threw them into Hans Zimmer's studio or Junkie XL's studio, where you have everything available to you, like, yes, I think they would create a lot of cool music, but I think there will be an aspect where you're just overwhelmed by everything. And your music would sound a bit generic. Those aren't instruments you programmed or samples you set up. It wasn't a template you set up. And I think going through those stages as a composer in your career of like, "Here's what I have, let's make a template. I have these stock samples in Logic or Cubase. Let me actually go through them and see

what I like." It's that time you spend going through that I think creates your voice as a composer and it certainly helped me create my voice.

JW: So how far down that sound rabbit hole did you go to rather than just saying, "Okay, here's a cello?" Did you think, "I'm going to add a little bit more depth by tweaking this controller here and I'm going to adjust the decay…" How far did you go down to customize it or was it just that limited set?

MB: That's an interesting aspect where you have to really get to know your libraries you have, because some sounds just might not sound good alone, but blended with other instruments they could sound great. I'm just thinking back to *Lamplight City*. I had a string library by the company 8dio – this is not sponsored, I legitimately just like that library – and I ended up using that a lot on *Lamplight City*. There were just some really good long string lines that sounded great, some good tremolo lines, and I would end up building tracks around what I knew sounded good and that shapes my composition [process]. Because for some of the tracks, the tremolo [samples] – I just really liked them. So I would end up starting with some tremolo lines and then that would just turn my mind in a certain direction.

I would like to say that as a composer I just hear it all in my head and I can put it straight to the page and then mock it up. But sometimes it's the opposite. You have great sounds and those inspire you to move in a different direction.

JW: Absolutely. And you mentioned an interesting aspect there because the libraries now used for sounds are all software based. So years ago, the Game Boy – that had hardware to play back that music. For PCs it moved from that internal PC speaker – which was, trust me, even more basic than what the Game Boy was doing – to then along came MIDI music and MIDI modules. If you were lucky enough your sound card had FM synthesis for your music playback or if you had quite a few more hundreds of pounds you'd have maybe an external MIDI module like the Roland MT-32, the Sound Canvas, or some Yamaha derivative. And it'd be the hardware that meant you could have the same piece of music in this [MIDI] format – which would be a very incredibly small file with absolutely no sound sampling stored, which is why you have games on floppy disk – and then it was the hardware that stored all the samples. How we've turned now from that into software libraries.

And you mentioned Hans Zimmer. It did make me smile because I thought, "Blimey, we really have gone professional with sound libraries now because rather than being generic, brands are built bringing either individual sounds or libraries together. Hans Zimmer, of course, known for soundtracks like *Gladiator*, which is absolutely phenomenal. There's a Hans Zimmer percussion set, which I noticed. And I thought, "Hans Zimmer is very heavy in the whole percussion side of things. It makes sense." Hans Zimmer has his name on a sound library. And that just shows you where we're up to now.

MB: Yeah, that's a very good point to make in that the sample library companies are reaching out to these composers to actually make sample libraries because they've created their own sound. And that [sound] has become so iconic that sample libraries want to make that accessible for other people to recreate or spin off into their own music productions. I think that in a way almost reinforces to go in the opposite direction, because if you're using all the same sample libraries created by other people with a sound, that can soften your own creative voice. There's definitely a lot of great things that have come from that, but it can also be a bit of a danger for, again, early composers who rely on that sound or just want to sound like another Hans Zimmer.

And the truth of it is we don't need another Hans Zimmer because he's here. He's making incredible music. We need more "yous," more of the people coming up and working. So, I think that ties into [the topic of] limitations, creating your own voice and finding a way to make that happen.

JW: Absolutely. Is there a time where you sit down at an instrument and go, "This is the thing I like to play. This is what gets me going into a flow." Like I play a little bit at the keyboard and it drives my wife nuts because funnily enough, the one I like to play is *Gladiator*. She'll always know when I'm going to be playing the keyboard for a half an hour to an hour because she'll go, "Here we go, he's starting with *Gladiator*." It's my warm up to loosen my fingers a bit. Is there anything when you go on an instrument and think, "I'm going to start with this." Or when you're composing, "I want to start with this sound." How does that work for you?

MB: Yeah, I'm also a piano player, so some composers I grew up playing – Debussy was a huge one. And whenever I'm bored, I just start playing a little bit of Clair de Lune. That always gets the inspiration flowing, playing some of the greats and Rachmaninoff is one of my favorites for sure. Just his skill at writing for piano, his command for an instrument – [he went] so deep into learning that. So that is very inspiring to me. If we're talking about how these ideas actually flow, a lot of it starts off either with a piano sketch or just playing at the piano. Or like I mentioned before, finding sounds I like and starting with that and just seeing where I go from there.

JW: So your musical setup, you sit down at your desk I assume, and maybe you've got some – how does it look? If you sit at your desk and you're going to write some music, what's your screen set up? Have you got a keyboard in front of you? How's that work for you?

MB: I have two monitors, one next to the other. And then I have my desk and then my keyboard is under my desk and it can slide out. So I know some composers can have a keyboard to the side but for me – I know this is going to sound so spoiled. But turning 90 degrees, just something about that ruins my flow – and my back! So I really love having everything in front of me. I'm pretty minimalist. To be honest, I do a lot of my writing just with headphones. Just being able to really get the ideas down is important.

If we're talking about some of the software, I use Cubase which is a pretty common digital audio workstation. I have a template with all of my common samples that I like using. They're all in a template, but they're unloaded. So the samples aren't actually in my computer's RAM, but they're just five seconds away from activating. I haven't checked how many tracks it is, but I think it's over a thousand at this point. And it sounds like a lot, but just having things at my fingertip that I know I use, and just being able to delete that barrier between my brain and what I'm looking for – it's easy to get lost in templates and samples and looking through menus. For me, finding what I like and having it readily available that I can just load in and start playing – that helps me a lot.

JW: And for speed. I'm sure when you get into that creative mode, you don't want to go through 20 flutes to find the flute before you can start actually writing the flute piece. You want, "This is my go-to flute. I can maybe customise it later, but this is the one I'm going with for now."

In terms of *Rosewater*, which is the [game] you've completed and has been released last month, tell us about the game and then tell us about what they gave to you as a brief, as a composer, to write for this game?

MB: For those of you who aren't familiar, *Rosewater* is a point-and-click Western adventure game that takes place in the Wild West of a fictional alternate universe in the 1850s in a land that's basically America, but it's called Vespuccia. You follow an ex-boxer-turned-writer named Harley who goes to a small Wild West town, ends up meeting a whole group of companions, and they go on a treasure hunt. It has that old Wild West story vibe and feel mixed in with a bit of a road trip with some more steampunk, fictional elements. There's aethericity which is this fictional electricity in the air that technology tries to enhance and and take advantage of. It has that grounding in the Western genre.

When I worked with Francisco on his previous game, *Lamplight City*, [it] was a detective game. So in the back of my head, when we finished that, I'm like, "We're probably going to do like another detective game, right?" And then Francisco says, "No we're going to do a Western next." That was actually very exciting for me because I grew up with the Westerns. It's one of my favorite genres of film. I remember watching *Shane* for the first time, which is composer Victor Young. *The Searchers* by Max Steiner, *The Big Country*, Jerome Morose. There's a whole wealth of orchestral music from film that really digs into this genre. And so I was inspired from the word "go" to really dig into that.

In terms of Francisco asking any kind of direction, certainly we talked about references. *Red Dead Redemption* was a big reference for him, both musically and in other aspects for the game. But really, I think he trusted me from there to shape the sound into its own thing. Just to quickly touch in terms of shaping it and making it unique – the concept of aethericity that I mentioned before, where it's that steampunk fantasy fictional element, that's where I started leaning towards this instrument called

the ondes Martinot. It's a French hardware synth from as early as the 20s. Way ahead of its time, very similar to a theremin. And that instrument just perfectly represented aethericity in the game in the sense that it's this new technology that people don't really understand. It's dangerous in some ways. It's defying physics and other things. I like to imagine that when people first designed the theremin and the ondes Martenot that probably had a similar reaction, like, "How does this work?!" So I felt something like that was a perfect way to create my own sound for the West, while also obviously touching base to a lot of these references that I mentioned.

JW: So how are you careful given you've obviously got a lot of experience in watching and listening to these TV shows, movies and soundtracks that would have come out of them? How do you make sure you don't drift in what you're writing actually then turns out to be a piece you may have heard five years ago? Do you have a process where you hide yourself away for a while or do you just expose yourself to it and trust your instincts?

MB: A fair bit of how I work is trust and knowing if I thought I was going way too close to a reference or I was taking something, I would catch it. This takes me to an aside: I saw a talk by Gordy Haab, who's the composer of lots of *Star Wars* games that have come out recently. He gave a talk about… How do you keep your sound unique without just copying? Because he had to do the scores for *Star Wars* games, which obviously John Williams' sound is inseparable from *Star Wars*. So he talked about that challenge of how do I make my music sound like it fits the *Star Wars* universe without just straight ripping off what John Williams did. He had a lot of insight about that where you can summon a lot of the same emotions by looking into instrumentation. What are the colors that these composers are using? You're not actually tracing a piece of art, but if a certain piece uses reds and blues, if you have those in your palette then you could make something that fits the idea, but you're not just tracing something.

Maybe to use a more clear example: Ennio Morricone, he's known for a lot of his spaghetti Westerns. And one of the iconic sounds for him that really stuck in my head was using guitar for a duel or a showdown scenario. That sound to me was very inspiring. And so I ended up using electric guitar on my own showdown track to summon that nostalgia and musical language that we understand without necessarily outright being able to say it. But also taking it in my own direction by using my themes that I've set up for the whole game and incorporating that and making it really feel like, "This is *Rosewater*." It can try to stand on the shoulders of the giants that came before me.

JW: No, absolutely. It must be terrifying as a composer to dip into certain genres because with country and Westerns in particular, there's a whole heritage of it. This is what it sounds like. You need to take some of that so it has the feeling of that, but still make it your own. I don't envy you, but I've listened to the soundtrack in full and there's some really great tracks in there. Particularly what you've done with a singing section, which we'll talk about a little later, because I thought that was a nice addition to the soundtrack in its entirety.

MB: Thank you.

JW: But you mentioned John Williams, and of course John Williams came up with so many iconic soundtracks. And one of those was *Superman*. And the title sequence at the very start of the movie… You're in. He sets the scene and we're ready for something heroic and dramatic. And then they went to Hans Zimmer going, "We're going to redo a *Superman* movie. We need you to do the soundtrack." I would have been quaking in my boots.

MB: Yeah, it's scary!

JW: Hans Zimmer took it on and he took it in a completely different direction. And it's still fantastic. So it's great. That's where these composers, of course, have the skill. And you've done that with *Rosewater* by taking that essence, but still making it… It's *Rosewater*. It's definitely its own thing within the gaming landscape.

MB: That's a great point to make where in the case of Hans Zimmer with *Superman*, it's an entirely different direction. I also think back to his score for *Batman Begins*, where obviously *Batman* has been done before by Danny Elfman and a few other composers, but really [Zimmer's score] feels like its own thing. And it ties into like, people hire you ultimately because you have your own voice. If they wanted to hire John Williams to do *Superman*, they would just hire John Williams. So I think it just reinforces that Hans Zimmer was brought onto those scores because he had a unique vision, a unique sound to go for it.

JW: So in [*Rosewater*'s] soundtrack then, how many tracks did you have that ended up not getting in the final game for whatever reason? And tell me the length of the project as well. When did it start and when did you get to go, "Right, signed, sealed and delivered. I'll take my check. Thank you very much." How long did that process actually take?

MB: That's a good question. I'm fortunate that I worked with Francisco on the last game, so I was with him from the very start. This was 2019. We'd released *Lamplight City* 2018. He'd taken a bit of a break as he was well-deserved. And then we started around 2019 with just some brief ideas. He knew it was going to be a Western. and from there I ended up sketching some themes, some preliminary ideas. And that's actually where the original theme comes from. When I say theme, in the first track of *Rosewater*, there's a rhythm that plays in that track that I call it the Rosewater rhythm. [Sings rhythm.] That became my central theme that works its way into all the tracks.

But to answer your question before I forget it, if we're talking about how much music I ended up writing and how much actually ended up in the game – this is going to be very unusual. I would say 90% to 95% of the music I wrote ended up in the game. And I say that's surprising because I think most of the case it's usually the other way around. It can be easy to end up writing multiple versions just to get it right. And if you're working

with a new developer or a new client, they might have a certain idea of what it should sound like, and it might take a while to get there. But I'm a bit spoiled by Francisco because also with my collaboration with him on *Lamplight City*, I want to say 90, 95% was accepted. And I just attribute that to us being on the same page, having the same ideas for what the game should sound like. I consider myself very lucky to have a collaborator like that.

JW: What sort of evidence of the game did you have in front of you when you started composing? Was there a script? Did you have screenshots or was there character art? And how did that work later on throughout the game's development? What sorts of influences were provided to you? Because I'm probably imagining you didn't have a final game or anywhere close to it as you were working. You were working from bits and trying to piece together some of the gaps as yourself.

MB: Yeah, definitely. There was some concept when we first started on the project, so some of that was helpful. But a lot of the spaces weren't really ready. A lot of them were placeholder rooms. After you finish the game, there's some bonus content and you can see sketches of the rooms that Francisco made. And a lot of that was what I was looking at. We worked off of a description of the actual music. What it's supposed to be like. For a lot of those areas, it was just verbal descriptions like, "Mark, this room is supposed to have this feel, this sound." And I like working off of emotion in the sense that like, "When we're here, what's the main emotion we're supposed to feel?"

ROSEWATER SPOILER ALERT

There's a scene in *Rosewater* where one of your partners dies. And that emotion was a very important thing to tie into. It needs to sound like a funeral, melancholic. For that I didn't even have to see the scene. I just needed to know, how long are we going for? I have the emotion and a lot of cases that's enough for me to go off and write.

END SPOILER

But other cases, there are times where you really need to know a lot more and have the scene in front of you. One of the biggest challenges on *Rosewater* to score – and I say challenges in the literal sense just because it was a complicated production – was for the very end, "The Showdown." That track is actually separated into three different parts where it's essentially three intensities. You have the first minute looping on its own, then there's a transitional second minute, and then a looping third minute that has the highest intensity. And that [scene] I really wanted to see before I wrote it, just so I could tap into exactly what we're feeling there. And this is a long answer –

JW: No, carry on.

MB: But to go in another direction: there are also cutscenes in the game. The opening part of the game is basically a short film. It's a two-minute cutscene introducing Harley and the world. And so that I really needed to be picture-locked so that I knew exactly

what moments to hit, where to bring in the themes, where to tie it to what's going on. It's a long-winded answer to say: some parts you don't need anything; you just need an emotion and you're set to go. Other parts you really need to see what's happening.

JW: I appreciate that in-depth answer. And let's go back to that introduction because it is like a short movie. You're getting to know a little bit about the main character and the journey she's going on. And then she suddenly leaves a station and then she meets a person straight away. But there's all that build up. At that point, when you're scoring that part of the game, how much of that was really finalised in terms of timing? How much of it was manipulated a little bit and extended to fit your score? Or was it more the other way around, that you had to get the timing to hit the beats of what was happening in the introduction?

MB: The beauty of having a composer on early in a production is that there is some of that give and take. I would write to a first cut of that section, and then he would give some notes. Like, "What if the theme was a bit different or a bit longer here?" So then he would recut it and then I would adapt to that. And then to really sync with certain points I was aiming for without me having to cut a beat or change tempos, he was like, "Let me just adjust it there." So it was a very collaborative process for us which I think, again, is just a benefit of us having worked together before, having that trust in each other to bounce off each other. Rather than something you might see in a bigger production of like, "We just finished our film. This is the picture. It's locked. The composer just needs to match exactly what's going on."

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In terms of that main title [sequence] specifically, there were certain moments I knew I wanted to [hit] thematically. There's a moment about a minute into the sequence where [Harley] talks about, "Ideas swirling around in her head." And I used that moment to reference the *Lamplight City* theme because something that she explains later is her brother, Bill – who is actually a character in *Lamplight City* – she's thinking about him. She never says it outright in that scene, but I could tell that's something that would be on her mind. And I knew I wanted to reference [*Lamplight City's* main theme] as a way to inform the player of something without necessarily it being outspoken. I hope people caught on to that who played *Lamplight City*. And honestly, I credit that idea completely to Howard Shore from *Lord of the Rings*. He's the absolute master of that technique. You have Bilbo and Frodo, they start talking about home and then slowly The Shire theme swoops right in and you know what they're talking about. You know what they're thinking. That technique was a huge inspiration that I tried to do myself for that sequence.

JW: That's a nice reference there because in *Lord of the Rings*, that theme – you wouldn't necessarily expect it. That theme comes from where they've got the hills, you've got the lovely little houses with the big round doors. But then it's also played much later near the end of the third movie where they're reminiscing near Mount Doom at that point and they're surrounded by this scary looking mountain behind

them. They're really mucky because of the journey they've been on. Then all a sudden that theme comes in again because they're remembering home and that's the thing that's keeping them going. And somehow it fits because that's, as you say, it's what they're thinking about. It's what's getting them through.

MB: Exactly, yeah!

JW: So you've mentioned dynamic music and there's also dynamic music in *Rosewater*. How does that work and what challenges does that present to you as a composer?

MB: Yeah, this was specifically for more ambient areas in the game. So Rosewater, the town itself, the desert outskirts outside of Rosewater, and when you're traveling in the desert and that alpine forest area – just for context. So this game, this other preface detail we need to talk about: the game was made in Adventure Game Studio. This is an old adventure game engine that doesn't have the technology to incorporate some of the audio middleware that I mentioned before like Wwise, which was used in *Wolfenstein: Youngblood* and FMOD, which a lot of other games use. So that was not an option on the table. We were, again, limited by what Adventure Game Studio could do. And in the spirit of this whole conversation, limitations can still lead to very creative solutions.

A solution we started for *Lamplight City*, we call it a "jukebox" system where for certain areas, you'll have a group of tracks [in a] random container and then the system will pick and choose at random a track to play. It'll keep doing that for as long as you're in the area. And so for *Rosewater*, for those areas I mentioned, we did something similar with that. But with *Lamplight City*, it was actually full-length tracks. So that was picking and choosing two-minute sections of music. It's random, but you're going hear two minutes straight of music. You're going have a sense of what is going to come next. With *Rosewater* we use that system, but shorten the length of those sections. So for Rosewater the town, there's maybe twelve or thirteen 10-25 second long segments that are thrown into the same random container. It just picks and chooses at random one to play between like 15 to 20 seconds of silence which is also randomized. It gives [the feeling of] like… waves of little music here [and there].

I like that approach better this time because given it's a narrative game, there's a lot of dialogue. A lot of voice actors. I want to take a quick moment to say that the voice actors in the game have been absolutely incredible. It's an honor to have my music underneath them. I'm almost like, "turn my music down! Lower, lower it, lower it. I want to hear some of these great voice actors!" But the voice actors are really the main instrument. They're the soloists of the game. As a composer, you need to acknowledge that your music is always, always, always in support of the narrative, in support of the story. So having those longer stretches of silence and having music that fades in and out, it spotlights those voice actors more, which is what should be spotlighted at any point in this game.

JW: So when you saw the final version of the game with the voice actors – usually the voice actors are one of the last things [added] because you have to have the story absolutely locked for you to spend the money to get the voice actors and all the editing done as part of that. When you saw the final version with your music in it, the voice actors, the animations – how did that make you feel?

MB: Honestly incredible. It's easy to get used to [no voice actors] when you're working on a game. But once the voice actors come in, it completely changes the game, at least in my experience. It really makes it feel more alive, and I similarly had that reaction when I would get some of my performers to record music and record their instruments for some of the tracks. I would get so stuck with the idea of what a track is supposed to sound like. And then I would have someone like Zac Zinger record shakuhachi and replace everything. And it would sound... close to what I imagined, but just beyond what I could have thought the final track would end up being. It takes a lot of imagination to visualize and imagine what the music will eventually sound like. Similarly, I'm sure Francisco would talk a bit about this too. To be able to have that vision of knowing, "This is just what it is now, but once everything is in, it's going to be perfect." I think that takes a lot of trust in yourself, a lot of confidence.

JW: So what is the mix then between that virtual instrument world where you're using those libraries to sound as realistic as possible to then fit with live instruments being laid on top? Tell us about that journey, particularly when you get the singers involved as well.

MB: Yeah, definitely. If we just start from the beginning, it's obviously a budgetary discussion where you have to figure out, "How much money do I have to put aside to actually bring in these live players? Where can I get away with certain samples? Where do I like the samples?" That's something you have to figure out from the start. But when it comes to mixing with live players, even if you have, say, a whole track of samples, but you have one live soloist, it already changes the track completely.

So for me, one of my approaches was like, "If I could just get at least one live person on most of the tracks, that would just increase the realism." Even if it was just like in the case of one of the tracks, "Journey's End," and it's just live flute from Zac, but all the other instruments in that track are samples. But because you hear that live player, it enhances everything.

And in the case of other tracks like "Flor Silvestre", the sung song – that was a case where I definitely wanted everything live for that because the voice actor Christian Lanz recorded that himself. He's an incredible voice actor, probably an even more incredible singer by my ears. A quick aside: that song is written by Francisca's cousin, Christiane Ramirez, who did such a great job coming up with the lyrics and the music and having it really tie into the game. So really, my responsibility there was just to take Christian Lanz's recording, and I had my friend Clark Aboud record guitar on that and then mix that together. That was a case where I could not imagine Christian Lanz's voice with sampled guitar. It would just be a complete disservice to his voice. There are

cases where you want to do everything live and for [Flor Silvestre] it was just guitar and voice so that was a pretty simple production in the end.

JW: And no pitch correction.

MB: No! Honestly when I heard it I was like, "I don't want to touch it and even if things are [out of tune]..." This opens up a whole other conversation.

JW: It really does. It's a podcast in itself. I was questioning whether I should have mentioned it.

MB: Hah! No, because in other genres of music, it's easy just to be like, "I want all the pitches to be perfect." The technology is there these days. You can auto-tune. You can do anything you want to a vocal recording. But having that raw recording is a lost art where even if he was a bit pitchy in certain areas, I think there's a subconscious part of your brain that acknowledges it's a real person singing and it's an unfiltered performance. Like when people play live. I really wanted to preserve [that] for Christian.

JW: Right, right. I'll be very, very brief about this. Modern music is absolutely plagued with it to the point where even if they've got an absolutely beautiful voice to start with, if a producer feels they're a little off… I'll just tweak that to the line, the perfect line, that mechanical line. Because we don't want anyone to think she was a little bit flat or a little bit sharp. And then all the emotion goes. A lot of modern artists, even if they've got a very differential vocal, they all still hit the line perfectly, which means the expression is therefore lost with the characteristic that vocal could have provided.

MB: Yeah.

JW: So I'm glad you kept it raw because in that just a guitar and a singer style, it *is* raw and the emotion comes through. It's a great track and one that well deserves a feature in the soundtrack. And I'm glad you gave it what it deserved as part of it.

MB: Yeah. It was brilliant with Francis and Christiane just having the idea to write the song in the first place. It really adds a nice color to the whole game and I think a lot of people will find that a memorable moment.

JW: I was also listening to the *Lamplight* soundtrack and the game music you worked on there is a track with a full on choir, a choral piece. I was thinking, "Okay, hold on a minute." Early in the podcast, you were telling me about financial limitations and things like that. Yet somehow there's a choir, and we're not talking about a single singer here. There's quite a few people involved. Tell me the story there. How did you, 1) get to write the piece, and 2) get all those people involved to actually do the recording for you?

MB: Yeah, that was a moment where I knew I had to do it. It started off as an idea from Francisco. "Down Among the Dead Men" – that's the song we're talking about – it's actually an old English drinking song, which I'm sure people will recognize if they heard it. Francisco had this idea to adapt the lyrics for *Lamplight City* and have it as the final send off to the game and it would play during the end credits. At that point, there are no other live performers on the soundtrack. Everything else in *Lamplight City* is all samples, except this. I had gotten by with samples for most of it.

But with lyrics, how am I supposed to get a sample library of singers to actually sing [the lyrics] exactly? I say that – there are actually phonetic libraries where you could do it syllable by syllable. But it's not going to sound convincing. It's not going to sound good. It's going to sound forced. So in my eyes, the only real solution to make that happen was to actually hire musicians. The story behind that is I had gone to Los Angeles about a year before for a conference called GameSoundCon where a lot of game audio people collectively show up and talk about game audio. It's as nerdy as it sounds and it's as awesome as it sounds, I'll be the first to say. I met [Angel Mannion] at this and he had this organization called Folklore Guild, which was his choir that he was organizing. And I just approached him. I was like, "I want to record this for choir. Is this possible with this budget?" And he was like, "Let's do it."

So I didn't have quite the budget to hire a massive orchestra, but this was a group of 13. And the reason it sounds larger on the soundtrack is I ended up layering multiple takes. So it sounds like a giant choir, but it's really 13 people recorded in a church. It was such a great process because this was a remote recording where I was in New York at the time and his choir was in California. And so they had a live recording of the session, I think delayed by 10 seconds just because of the latency. But I got to see them record it live and type feedback like, "Can you try this pronunciation instead?" It was a really smooth process. I was just lucky to have met him and lucky to have got the money together to afford it. Ultimately [it was probably] one of the best decisions I made on that soundtrack just because I think it caps off what I would want this soundtrack to be. If I had an unlimited budget, I would hire everyone, I would get a live orchestra. That [track] comes the closest to really sounding like what I hear in my head, if that makes sense.

JW: It does indeed. So what are you working on next?

MB: With *Rosewater* done it's like, "What else? This huge project is done, what else do I have in my life?"

JW: We need to pay the bills. What's next?

MB: Yes, exactly. I've been working with another studio called IceToad Studio, and we're releasing a mirror puzzle game called AiliA. That's coming out this year. It's a really cool project because it's inspired by Chinese culture, so I got to dig into more traditional instruments like the erhu and guzheng, which is similar to a hammer dulcimer, for those who aren't familiar. That was really fun.

And I have an unannounced game that I'm working on that I'm co-composing with one of my great friends – and honestly a big inspiration for myself – Clark Aboud. Some people might be familiar with his work from [games] like Slay the Spire and Kind Words. He's also someone I met in Los Angeles at that conference and has been a big supporter of me. A good friend. And it's an honor to be working with him and working with someone I consider a friend. So that's one of the things I'm really excited about coming up.

JW: But given you've obviously had quite a bit of experience now composing things by yourself… What's it like to co-compose? How does that work? It's a good job he's your friend. I hope he's still friends at the end of the process.

MB: That's the ultimate goal!

JW: How does it work exactly? Is it like, I'm doing a track, you're doing a track? Or are you doing certain instruments?

MB: It's even more collaborative than that. Some tracks one person sketches, sends it to the other person, fills in parts, sends it back. It's very collaborative. And you're definitely clued into one of the big dangers of working with people in the sense that you really need a lot of trust in each other. Trust in the process to make that work because it's easy for ego to get in the way. Like, "I ended up doing 60% and you ended up doing 40%, but we both decreed on 50%/50%." It can open up a lot of drama or tough discussions. I'm really happy to say that Clark and I have that trust. Or at least I have the trust in him. He might be hiding something! But no, I have full trust in him. And I think having that is probably the most important thing.

Honestly I'm having a blast because just on a recent track, I sent over a little idea that I thought, "This is kind of crazy. We're probably not going to use this. It's just not a great idea." And then he sent it back. He's like, "I recorded it on so-and-so instruments. How does this sound?" And I was like, "That's not what I was thinking in the sense that you made it into an idea so much better. I wasn't even thinking that was a possibility."

It's a lot of trust, a lot of discovery. I think that's what keeps composing fresh for games. Being able to work with people and push yourself beyond what you think you're capable of.

JW: That's good. It sounds like you've got a great foundation to start with. So everything else is now "going with the creative juices," so we say. Because in Hollywood in particular, how many directors have left or been fired because of creative differences? Now I'm sure part of that is, "We just didn't like the guy." And that was just used as an excuse. But that creativity, going from solo to then working with someone – I'm glad it's going so well so far.

MB: Thank you.

JW: Please keep it that way. It sounds like you've got everything working in your favour.

MB: Yes. Fingers crossed. Fingers crossed!

JW: It's been an absolute pleasure talking to you, Mark. Where can we find out more about your work?

MB: Likewise, it's been an absolute pleasure talking to you. *Rosewater* is available on Steam and GOG, the soundtrack is equally streamable on all platforms, and you can find it also on Bandcamp. Most of my work is also on those streaming platforms.

JW: Well, thanks again, Mark. You take care of yourself, and we look forward to hearing more of your soundtracks in the future.

MB: Great. Thank you, James. Pleasure to be on.
With thanks to Mark Benis for assisting with this transcript of the interview.

For the full video and audio recordings, visit https://www.pixelrefresh.com/game-music-composition-interview-with-rosewaters-mark-benis-game-gadget-podcast-40/