Fear and the musical avant-garde in games: interviews with Jason Graves, Garry Schyman, Paul Gorman and Michael Kamper

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Introduction

In recent years a number of notable and hugely popular game titles have emerged which utilize the resources of avant-garde[1] composition and aleatory[2] composition in particular to instill varying states of fear and tension. Two particularly noteworthy composers who have drawn inspiration from this musical heritage, whilst also achieving popular acclaim, are Jason Graves[3] and Garry Schyman.[4]

Interestingly both composers are classically trained and studied at the University of Southern California in Los Angeles; Graves as a graduate of the *Scoring for Motion Pictures and Television* program (Thornton School of Music) and Schyman as a composition undergraduate of the same school, an education which was supplemented by private tuition with George Tremblay after graduation. Both composers have scored music for film and television as well as games, but currently channel most of their energies into music for games. The range and diversity of titles credited to them has resulted in a fairly eclectic mix of musical outputs,[5] each of which has been dictated by the most appropriate musical approach for the needs of the project in hand.

Both composers are well recognized for their work; Garry Schyman has received multiple awards, including the Academy of Interactive Arts & Sciences award, 'Best Original Score', for *Bioshock* (2K Games) - part of a 'triple A' franchise. Jason Graves is an Academy Award-winning (BAFTA) composer who has scored 'triple A' franchises such as *Tomb Raider* (Square

Enix) and *Dead Space* (Electronic Arts) and has also received numerous other awards for his work.

In 2008, the game *Dead Space* gained Edge Magazine's award for 'Best Audio in a Game'. The magazine's appraisal of the game states that, 'In Dead Space, the most terrifying ambushes come not from the shadows but from the speakers' (Edge, 2008). The review of the audio for the game specifically highlights aspects of Jason Graves's score before concluding that, 'for every cue it steals from the masters of horror, it does something bold and new' (Edge, 2008). It is interesting to note that whilst the review references the 'masters of horror', it also recognizes a departure from such horror blueprints towards something 'bold and new' (Edge, 2008). It seems likely that the move away from thematically driven approaches and polarized juxtapositions of consonance and dissonance in favor of a more experimental sound based score (one almost entirely devoid of thematic material), might be responsible for this appraisal.

Many similar accolades have made an appearance in the press, all highlighting the scariness of the game and its 'terrifying' audio (McKown, 2011). When the sequel *Dead Space 2* was released the *Dead Space* games became established in the public imagination as a franchise of fear. Scientific tests conducted by the company 'Vertical Slice' (Vertical Slice, 2011), measuring the response of gamers to various fear inducing games, concluded that *Dead Space 2* was the, 'scariest game on the Xbox 360', giving further gravitas to comments already made in the press and media. Not only did they find the game to be, 'universally frightening' for all those involved in the study, but discovered that it triggered, 'multiple types of fear response' (Vertical Slice, 2011).

Whilst the music for *Dead Space 2* incorporates more thematic material than its predecessor, the overall approach across both game titles is stylistically consistent and is firmly entrenched in the avant-garde. By contrast, Garry Schyman's music for the *Bioshock* games juxtaposes

the sound world of the avant-garde alongside nostalgic references to late romanticism and to the music of the early to mid-twentieth century. The result is music which mirrors the narrative, conjuring up a sonic picture of what 'Rapture' was intended to be, against the horrifying reality of what it has become; a vivid musical portrayal of a corrupted Utopian and artistic ideal. The reviews for Schyman's music in the *Bioshock* games draw attention to these musical juxtapositions. A review of *Bioshock 2* in the *Telegraph* stated that, 'Garry Schyman manages the trick of being creepy, beautiful and jarring all at the same time' (Cown, 2010). A comment which might equally apply to Garry Schyman's music for the game, *Dante's Inferno*.

Despite the different approaches found in the music of Jason Graves and Garry Schyman (no doubt influenced by client directives, differences in game narratives as well as compositional style), it is clear that the resources of the avant-garde have been a source of inspiration for both composers. In seeking to examine the approach of Jason Graves and Garry Schyman to the music of the avant-garde, two interviews were conducted in the summer of 2011. The following section is based on transcriptions of these interviews.[6] In order to contextualize the discussion further, additional questions were posed to the audio directors of *Bioshock 2* (Michael Kamper) and *Dante's Inferno* (Paul Gorman); the answers help to illustrate the significant role audio directors play in guiding the creative decision-making process and influencing the extent to which avant-garde music might be utilized and explored.

Talking to Composers

Interviewer: Do you think that there is something intrinsic in avant-garde music which evokes negative emotions such as fear and horror or do you think we respond in a negative way simply because we are less acclimatized to it?

Jason Graves: You know, I think there is something that is inherently built in to avant-garde music. It kind of depends how you're defining avant-garde music,[7] but to me, (and this stems

back to when I was originally trying to figure out the *Dead Space* franchise), what we as contemporary music appreciators have come to expect [Ö] is a regularity to everything; both in the way that it is structured and in the way that it's tuned. We've been listening to music like that since the fourteen and fifteen hundreds. So I think it's probably innate in ourselves as humans to have something regular and dependable - and that's why we listen to music anyway; we want to enjoy it. A lot of times you know, the more regular and dependable it is, the more pleasurable it is for us to listen to.

So when anyone mentions 20th century music I think of the more avant-garde, aleatoric type of music - which basically takes all the rules and throws them out the window. The original composers in the 40s or 50s were doing it to experiment. They just wanted to do something different; I don't think they were trying to scare people. It [negative emotion] becomes a natural extension, because the musical rug is pulled out from under your feet and there is no sense of tempo, no sense of pitch center. It makes you feel uneasy. Even if it's not put up against a videogame or a movie, it's like, 'well, that's not very musical is it', so a lot of times people automatically associate uncomfortable feelings with it. If you put it [avant-garde music] with a guy in a dark room and there's a monster running around the room someplace, of course it's going to make things a lot more uncomfortable for everyone.

Garry Schyman: I suppose it depends how you define avant-garde music because there's such a large quantity of it. Music that is dissonant does have a disquieting sound versus very tonal, triadic music.[8] I don't know that I have the scientific explanation, other than perhaps it has something to do with the overtone series. But to our ear (although I think probably less so if you listen to a lot of 20th century music - the effect may be a little less disconcerting because it's familiar) and certainly to the average person, even to my ear, it can definitely have that

disquieting affect. But I think it also depends on context quite a bit as well, if you take it out of that context, the affect is not as dramatic.

Interviewer: The film scholar, David Huckvale has suggested that, 'A moral universe can perhaps only be expressed in musical terms by means of opposites and contrasts' (Huckvale 2008: 42). So for example, depictions of evil, fear and so on, might be depicted by atonality; innocence and goodness might be represented by tonality. Would you agree with this and, if so, how do you think it relates to your own compositional approach when creating music for games?

Jason Graves: I think to a large extent, being a media composer, I'm basically working in pop culture; it's not necessarily pop music, but it's definitely [pop culture]. There are preconceived ideas. I read an article someone had written back in the 60s [Ö] on how boring music had gotten and how film music had no real inherent artistic value. [If] you want to do something romantic, you do a suspension with major chords, if you want to do something scary it's in minor chords, if you want to have a stinger you make it a diminished chord.[9] There is definitely a very pre-set, preconceived vocabulary that my clients expect me to manipulate in certain ways.

If I were doing something stand-alone, outside of games or film that I had more creative freedom over, I would probably try to get outside of that world, but being that I am working in pop culture (I don't want to use the word confined because, even for something like *Dead Space,* they really let me do anything I wanted to do), I understood inherently that there was a certain kind of musical universe I needed to stay in.

Garry Schyman: I haven't really given it that much thought; clearly tonality is something that can, certainly in a major tonality, express a positive, warm, happy base. Minor tonality less so of course, that carries a sadder quality; but you know, I find it difficult to assign. I think music is too complicated to simplify in that manner, I really do. I think it's a mistake to totally quantify

- to me that's too simplistic of a statement, put in that way. I certainly would give it more thought but there's a germ of truth to it.

Interviewer (to Jason Graves)**:** I noticed that in one interview you said that while working on *Dead Space* you became so acclimatized to dissonance that you couldn't tell whether or not it was really scary. If aleatory approaches become more common do you think there's a danger that gamers could also become similarly desensitized?

Jason Graves: I think there's a very distinct possibility of that, especially within specific genres. If the whole aleatoric, orchestral 'horror thing' becomes really prevalent, I think fans of that specific genre will probably start to grow a little numb to it; but that's the way of the pop culture machine isn't it. If something works they start cloning it and stamping out new versions of the same thing - whether it's a TV show, a movie, a soundtrack style or anything like that. Over time, it's no longer fresh and innovative, it becomes more clichéd. The one thing I do try to appreciate as the composer [is that] I'm so innately connected to the music (if I'm watching a film or playing a game listening to that particular score); I'm paying so much more attention to it than say ninety-five percent of the people who are going to be experiencing the exact same thing. The nice thing about 20th century music is it's so visceral. It grabs you immediately; whether it's scary or not scary and it works on a subconscious level (especially if you're talking about textures and things that are almost more sound design - very abstract). That kind of music will probably be more effective over a longer period of time, because you don't necessarily notice that there's music playing; you don't feel like you're being manipulated - it's a lot more subliminal because it's more textural. [In] a lot of the scores and games I'm working on right now they're asking for more textural stuff and film has been moving that way for a long time. They don't want a huge theme playing in your face all the time. To a certain extent I miss it, but to another extent I can appreciate it because it is hopefully, less cliché in a way.

Interviewer (to Garry Schyman): The way in which you combine avant-garde and more lyrical or romantic elements is intriguing, but do you worry that your creative approach could be imitated to the point of cliché?

Garry Schyman: I don't think I spend any time thinking or worrying about it, but it is certainly possible. Any successful technique can be imitated - I suppose that's a compliment in a way, in the same way that John Williams' scores have been imitated or Bernard Herrmann (one of the most famous composers, whose music is imitated all the time). The famous *Psycho* [Hitchcock, 1960] [Ö] it once was, but is no longer frightening; it's funny, it's a joke - it becomes funny because it is such a cliché now. So yes, I suppose there's that concern, but in a way I only hope I have that level of success! It would be a good thing; they're really listening and caring what I'm doing!

Interviewer (to Garry Schyman): If experimental avant-garde approaches become more common do you think there's a danger that gamers could become desensitized to them?

Garry Schyman: I think I do, I would agree with that. I think that the more you become familiar with it, the more cliché it becomes, certainly in film music in this day and age (more than maybe forty or fifty years ago where directors [and] producers just wanted a good score [and] there was no attempt to break new ground with every new score). So I think those sounds, aleatoric or whatever, usually become cliché; although I have to say, because it's such interesting music, there's always new ways, new techniques, that can refresh it a bit. Certainly anything that's overdone will become cliché. At the moment I'm trying to veer away from those types of effects when I can; they certainly still are effective and useful.

Interviewer (to Jason Graves): You once said that you were concerned that the music for *Dead Space* would be considered too dissonant and abstract and were somewhat surprised when it

was those qualities that got the music noticed. Within the industry would you say that game horror is exempt from the usual commercial pressures for palatable and saleable music?

Jason Graves: Yes, definitely, because you have your own rules in horror music – [namely] that there are no rules. So given that freedom to explore, especially with a new film franchise, a new game franchise, I think composers have a lot more freedom and there's a lot less pressure - especially I've got to say, with games; they want you to be original. The more original you are and the more original your branding [of] their game or their intellectual property, the happier they are. So yes, there is definitely a lot more freedom and ideas are less confined as to what horror music sounds like (other than it's supposed to make you feel scared). I think the biggest thing is basically just fear of the unknown. That's why having no meter, no particular tonal center, [means] you don't identify it necessarily as music and it makes you wonder; it's like having the shark fin on the water without seeing the shark and the anticipation of what's coming really pulls you in. As long as you're doing that with horror music, all the rest of the rules are out the window.

Interviewer (to Garry Schyman): Within the industry would you say that game horror is exempt from the usual commercial pressures for palatable and saleable music?

Garry Schyman: Certainly [Ö] if you're talking about the very expensive, hundred million dollar movies, there's an enormous amount of pressure on the entire team to produce something that's going to make money, which may indeed limit creativity. I think right now is not a particularly good time for film music, it's not all that interesting; it's somewhat ambient [Ö] certainly from a composer's standpoint, not challenging [Ö]. From a purely creative standpoint, [game music] is certainly as [interesting], if not more interesting than feature films. I feel that the producers of these games want iconic, strong musical statements [Ö]. Yes there's certainly

a need for ambient music that sets the mood but they also want strong music that really is a statement.

Interviewer: Do you think that having recognizable themes and motifs is less important in horror genre games than other types of games? If so, why?

Garry Schyman: No, I wouldn't make that statement. I think there would be games like that, but I think there will be others that do. So I don't know that the [horror] genre is exempt from strong thematic themes, in fact I think maybe the reverse. That doesn't mean there wouldn't be examples of much more ambient styles.

Interviewer: Some film scholars have suggested that although the horror genre has championed the musical avant-garde it has in some way compromised or undermined it. As someone who has drawn on the musical avant-garde to depict horror, what's your own position?

Garry Schyman: Well, no more than film composers have undermined the triad or any other technique - maybe that's a facile answer. It's a difficult time for scholars and those who are academic [particularly] in their relationship with film and video game music. I think it's a complex relationship: on one hand they may appreciate what we're doing; on the other hand [Ö] there may be legitimate feelings that we are cheapening the genre or whatever. But you know, you can wring your hands with that; you can't pass a specific law about which type of harmony and techniques are legal or illegal because it's cheapening. It's certainly possible that it is, but if you look at quality music (an analogy would be the music of the thirties, forties and fifties, that imitated Richard Strauss or whatever) I'm not sure that Richard Strauss's music suffered from being imitated. So I think that great avant-garde music of the twentieth century is safe and secure and is no more threatened by what film composers do than by bad avant-garde composers - they're certainly as threatening as anything. So I think that good avant-garde

music is safe because it's just that, it's really good and it's well constructed - it's more than some facile techniques.

Jason Graves: I think some of the best horror music wasn't written for film. If you look at *The Shining* [Kubrick 1980] and of course anything that Stanley Kubrick directs - he's a master at taking classical music and using it in such a way that it elevates both the film and the music itself and the art of how music can be used in film. I thought *Shutter Island* [Scorsese, 2010] was great; a lot of it was very unexpected for me - I would have never written anything like that. It built tension without getting in the way. I think there's a happy medium to be had. *The Shining* [1980] to me is the perfect example of horror music and he's [Kubrick's] using Penderecki's music all over the place. Let's face it, Penderecki in the 50s (the aleatoric, orchestral music of the fifties and sixties) [Ö] pretty much did everything asides from cutting instruments in half. He explored all the sonic possibilities and Kubrick knew that. He used those great pieces in those key elements of *The Shining* [1980]- I think it really elevated both.

Interviewer: Do you think that the extensive use of highly dissonant or atonal avant-garde music could be applied to other, non-horror games, perhaps even to games dealing with more positive themes?

Jason Graves: Well, that's the beauty of that kind of music [Ö] I actually did this in college when I first started school and [Ö] I didn't know enough about it to appreciate it or really work on it, so the 12-tone matrix[10] that I constructed was actually all major triads. They were disjunct from each other, but in and of themselves, each three or four notes was a major triad. So you can still be specific and follow all the contemporary music rules and still have something. John Adams has some great music [Ö] [so] I think the answer is yes and that's actually what I'm kind of interested in exploring; the idea of, not necessarily chaos, but more freedom in the

performances. It doesn't have to be five notes that are all a half a step apart played as fast as you can (a menacing thing), you can make it a major seventh chord[11] and give them those four notes and say, 'play any of these notes as fast as you can' and all of a sudden the texture is still there, but the harmonic quality is a lot less avant-garde. It's less disturbing because it's a major chord.

I still always go back to Penderecki, I think he does a great job of balancing the really dark elements; *St Luke's Passion* [1966] or any of his choral music, sounds like something Jerry Goldsmith would do - it's uplifting and beautiful, then in a second it turns on a dime and gets dark. The beautiful music is also very contemporary sounding.

Garry Schyman: I do think that avant-garde techniques can be used in serious drama certainly. I don't think they are so useful in happy movies. Certainly in serious dramas they can easily portray the inner pain of a character or the psychological unhappiness or whatever. Absolutely I think that these techniques can be used and valued in the right hands (carefully done and not overdone).

Interviewer: Do you think that a serial[12] approach, however loosely interpreted, could work within the context of composition for games and be successfully integrated into a dynamic mix?

Jason Graves: I do: you know the technology we have now, where you have all these stems[13] (seven or eight stereo tracks of music playing); technology isn't the obstacle anymore and I don't think the creative aspect of it is either. It's really the music budgets with games, because to do all this 'stuff' (it's what I had to do with *Dead Space*), you have to record all the sections of the orchestra independent of each other so you have that control and it just takes more time. Obviously [Ö] more time with the big orchestra is more money, and really I think a lot of it leans back on the publishers just trying to realize the importance that a particular kind of score

can have on their game - investing in it. But yes, totally, I think it's doable, especially with the interactive aspect of music.

Garry Schyman: You know, I studied serial music for three years with a wonderful composer, George Tremblay and I have really struggled trying to utilize those techniques, because you're sort of a slave to what note comes next. Certainly many of the techniques I use resemble 12-tone music at times but I don't want to have to [feel], 'damn it, I've got to use an A flat' and I really [Ö] want to go to that D. So really, I've struggled, but it doesn't mean it's not possible. Of course Jerry Goldsmith's score for *Planet of the Apes* [Schaffner 1968] is well known for utilizing serial techniques [Ö] (I don't know whether he's slavish to it, I have no idea if anyone's ever done an analysis of it). In fact when I was studying with George Tremblay there were a couple of composers who were also studying with him and they were using those techniques in TV dramas, but I found their music uninteresting, [Ö] it sucked the drama out of the music. If anything, good dramatic music, whether it's for films, TV or games, has to be compelling [Ö] it certainly should not drive the tension away from the drama (like, 'what's that note doing there', even if it's just subconsciously the wrong note). So for me at least, serial music is problematic because it's too dictatorial.

Interviewer: Theodor Adorno and Hanns Eisler advocated the use of modernist music in film [Adorno and Eisler 1947], suggesting that the lack of a tonal center or the requirement for developed leitmotifs provided structural freedom and was creatively liberating for composers. Do you think that the same might be said of music for games?

Jason Graves: I would say that it probably is, just because the less rules you have to follow, the more opportunities you have to be creative. It is creative freedom. You're not bound to having to work the harmonic situation out [Ö] you just go and do what you want to do.

Garry Schyman: I really feel total freedom to tap any style that seems relevant to what I'm working on. I certainly think that, yes, compared to fifty years ago, or sixty or whatever, we have a great deal more freedom creatively [Ö]. What was acceptable to the ear back then and what the producers and directors expected was from a fairly limited number of resources. It wasn't until the sixties, seventies on that composers were given options to tap any kind of music from pop music to the most serious of avant-garde styles. I don't know; I would just limit it to that one specific comment, I would generally say, yes, we have a great deal of creative freedom. Of course we're still working for someone so they have to agree with us and like what we're doing otherwise we're not going to get very far. So it's always within the context of delivering something that our creative partners also understand and appreciate.

Interviewer: Would you like to see a further disintegration of the distinction between sound effects and music in games, and would you consider this an extension of avant-garde approaches (which place great emphasis on sounds of all kinds, even 'non-musical' sounds)?

Jason Graves: I do think that there is a big bonus to doing things like that. However, my answer is kind of a double edged sword; when the first *Dead Space* came out, a lot of reviews said that it didn't have any music because it was so non-musical [Ö]. I guess the game was a big hit and the audio got some attention, so that turned into my 'thing' and so that's what a lot of people have been asking for, 'we want more of a textural score'. So of course I think it appeals and can benefit game-play a lot, but I don't necessarily want to hear everybody else doing it because it's just going to get old!

Garry Schyman: I've never given that thought. There are certainly sounds that composers use now and have for some time that [Ö] are not musical, and in fact in *Bioshock,* I did use real world sounds you know, as part of the sound that I was going for. I think I don't want to see

music just become ambient [Ö] where you could buy the audio director a set of samples and hold their finger down on a key and that's composition. I would be concerned if music becomes indistinguishable from sound effects and at that point it doesn't really require a composer, especially in this world of samples. You don't have to know how music techniques are generated, how avant-garde or aleatoric techniques work, you just need to buy a sample library and mix it together. So if anything I worry about music becoming indistinguishable from sound effects and losing something in the process.

Interviewer: Tôru Takemitsu said that if music is constantly saying, ' "Watch out! Be scared!" then all the tension is lost. It's like sneaking up behind someone to scare them. First, you have to be silent' [Koizumi 2009: 79]. How important is silence when creating tension in games, or does the pressure to immerse the player in the gaming experience prohibit the use of silence or minimal sound?

Jason Graves: That's the trick isn't it, the balance between when you're trying to manipulate them and when you're willing them to cower to the fears in their own head - when nothing is going on. All the best scares in movies happen after silence, even if it's only a couple of seconds. If I'm watching a movie, I know when they're walking down the corridor and you can hear them walking and it gets really, really quiet, that something is going to jump out at you, because it's the contrast of the silence with the non-silence. I think music in games is just as important as spotting music in films, where you don't really want to have ninety minutes of music in a ninety-minute film. The absence of music is just as important as the presence of music and when it comes in, especially in games, if you're exploring something when the music comes in or when the music goes out, you know you're guiding the player on a subliminal level. You're telling them you're in a new part of the map, or you were here before or you just achieved something, even if the music just stops. It makes all the difference in the world -

finding the right balance in the game-play, so that you're not just turning the music into wallpaper, where the player subconsciously just stops listening because it's playing *all* the time - I think that's very, very important.

Garry Schyman: I think actually that wall-to-wall music, whether it's in a film or a video game, is not a good objective and I think it wears the ear out. I think it takes away from you the power of music when it does enter. So I'm not a fan of wall-to-wall music, I agree that silence, maybe just room ambience, can be the most disconcerting thing, then something (whatever it is) triggers the score to begin - and that's pretty magical you know; the visuals combine with the music and the player. So yes, I think I agree with Takemitsu in that sense; if you're constantly telling the player what to feel, it's like their mother constantly telling them to eat vegetables [Ö] (maybe that's a bad analogy)! [Ö] You don't want to be told how to feel by the music and remember [that] in games, almost always, the player has the option of turning off the music, so you don't want that - that's a bad outcome.

Interviewer (to Jason Graves): In *Dead Space* the development of 'fear emitters',[14] the 'creepy ambipatch'[15] and your so-called 'bucket of fear'[16] all help to keep the gaming experience fresh when playing repeatedly. As a composer, what technical developments would you like to see in future to facilitate the integration of your music into game-play and to give you total creative freedom?

Jason Graves: They're doing a pretty good job. I seem to go back to unpredictability a lot, but I would love for the game-play, as well as the music, to have more unpredictability. There is one title I was working on where, let's just say, you get out of your spaceship, you go around the corner and three aliens attack you and you die. You start the level over, you get out of your spaceship [and] you go around the corner, now there's some old lady by a fire [Ö] not three aliens to attack you. The three aliens who attacked you are around a different corner but there're

only two of them and they act a little differently *and* you have a different piece of music that plays; I think that's the trick. *Now* if you die and you have to restart something, you immediately know where everything is going to be, so you just blast through the level. I like the idea of unpredictability, of having a different game experience; having the music helps that out as well. That's a large part of the 'bucket of fear'- all the stingers for *Dead Space*. Even if the same thing did jump out at the same time, a different stinger would play, so it would affect you differently psychologically.

Interviewer (to Garry Schyman): I read in one interview that you expressed some concerns about developments such as algorithmic composition, which might have a detrimental effect on the creativity of the composer. Are there any developments you *would* like to see, that would give you greater control over the integration of your music into game-play? Is there anything that you would like to wish list into existence?

Garry Schyman: What could be valuable would be to be more directly involved in how my music is being used in the game; that is the purview of the audio director. I think that would be an ideal situation (maybe not in every project) [if] I could be more involved in integrating music, [or] at least make suggestions on how music can be used. To some extent, if you're hired to write sixty or even one hundred minutes of music in a game that lasts sixteen or twenty hours, they are going to reuse your music. You are delivering music in stems, so they are going to make use of the stems, sometimes by themselves without the other elements - to extend the score in ways so that it doesn't sound like you're simply repeating music. So I think that's where I could be useful at times, to be more involved and to make suggestions if asked.

But as far as any specific technical tools [go] - we certainly have a lot of them now. If anything I'd like to slow down this technical barrage. If anything say stop, we're done, no more! You know, I teach at USC and I tell my students that I probably won't be around, but when you

guys are doing this, you may be replaced by computers! It actually depresses them - it depresses me to think about it! In essence you know, it's sort of the *Wall-E* [Stanton 2008] thing; we're all sitting on these comfortable chairs, all these computerized technologies have basically replaced humans! [Ö] Someday a computer will be asking these questions of another computer, [Ö] I'll be able to access bits of information about every film and television score ever composed; even reference a particular note in bar 137 of a John Williams score [Ö]. So maybe I'm the last generation that doesn't get replaced by computers - I hope not!

Interviewer: As someone who has composed music for games and film and whose work is often described as cinematic, how important is film music as a point of reference or would you like to see music and sound for games developing along more independent lines?

Jason Graves: I think the biggest influence film music has in games right now, or maybe the biggest influence that game developers are hearing in film music (which is why a lot of film composers are getting hired for games) is their thematic quality and the sophistication of the music. You've got a composer who is used to churning out all these films; he's got a team of people that help him. Most game composers like me, it's just me - I am the team. I may hire a copyist if I have a recording session, but I'm pretty much doing everything else by myself. There's definitely sophistication in film music; you know they've been doing this film 'stuff' for a long time now - game music is still in its infancy by comparison. So while I appreciate the developers' desire to have a film-like quality in the music, I do think there are a lot of benefits and differences in game music, especially when it comes to interactivity that you can't get in film. I'm not saying a film composer couldn't do it, but I think the media of game music itself gives more opportunities for variations on something and that needs to be explored a lot more. Like anything else, [or] the film composer that's done three hundred films, you've got to do a lot [Ö] of interactive games and try different things to figure out what works and what

doesn't. You literally cannot sit in the studio, even if you had a year and figure out how it's going to play out. You have to give it to the developer and once you hand it over your hands are kind of tied, so a lot of it depends on the implementation. Fortunately, I've found that, pretty much all of the developers work on one game for five years and I'll work on 10 games in one year. So a lot of times they recognize they've been working on the same title for the last three years and I've worked on 30 different titles and they're willing to listen to input as far as interactivity goes; like, 'what would you suggest', 'how can we make this work', 'we were thinking about doing this, what do you think?' That's the big difference with games, the interactivity and the implementation. If you can take the emotional impact that film music has and put it into an interactive game and implement really properly in the game, that's the pinnacle of both genres – at least in my mind.

Garry Schyman: I definitely think that [the] cinematic reference is important because there's this long history of music for films and a sense that music written for films is different from concert music (classical concert music) [Ö]. Film music is about the visual in music and how the music enhances the visual. That's where the resources of film and a lot of amazing talent have been drawn from. So definitely, what we're doing in games and certainly *have done* in scoring films is not dissimilar. However where we diverge is in the interactive aspect of our scores and that is one of the biggest differences (where the music can become actual layers). We never know (unless you have cinematics - a game movie), how, where or what [Ö] the player's seeing or experiencing, it's never quite precisely the same. Sometimes it can be staged, so it can almost be certain, but very often it can't. That's where interactivity (generally a new layer or other piece of music) try to almost mock the cinematic experience, so that the player is getting the right music to match what they're seeing and experiencing. So in that sense it is different and because of that it can develop in its own way and will develop its own unique

qualities. The Bach of game music may yet write intricate music that perfectly weaves together. I see the opportunity for good game music to evolve and do something unique that a score for a film cannot do.

Interviewer: what aspects of the avant-garde would you explore in your concert compositions?

Jason Graves: Let's face it, all good music is really about tension and release, so to me, if I had complete freedom to do anything I wanted for a classical piece, the avant-garde, more chaotic, kind of pointy sounding things would be the tension and then the more pleasing, musical-sounding parts would be the release. It's the combination of the two that take you on a journey and illicit emotions from you. Maybe I could do a fifteen minute piece of all tension, but it doesn't seem like there would be quite the emotional pay off you're looking for, you know. That might be the second movement of a three-movement piece, something that's really avant-garde.

Garry Schyman: My viola concerto[17] is fairly traditional. In a sense it's more like early 20th-century music - it's not particularly avant-garde (there's a little bit of that, but very little). It's a gypsy piece in a way. So imagine a gypsy violist (who's a virtuoso), inventing or improvising a concerto with the orchestra quickly following. You know, when I go to concerts and I hear a lot of avant-garde music now, I find about eighty percent of it very boring to be honest, at least on the first, initial listening. Part of the problem with music where someone is trying to reinvent the wheel, is that it almost has its own vocabulary and you have to become familiar with it - that takes quite an investment. So you've got to be cautious if you're asking the audience to make that kind of investment in your music; unless you're famous or quite brilliant - to make that investment worth their while. So my inclination is almost to write music that pleases me, that I want to hear, that would be fun for me to write, that would be a pleasure for the audience to listen to (not necessarily a pleasure in the easy listening sense). I think there was a time in

the sixties, seventies and even in the eighties, when concert composers were really hamstringed in some ways, because if you wanted the respect of your peers, you had to write very specific music; it couldn't be very tonal. I think with the advent of John Adams, all the minimalists and John Coriglioni (writing a mixture of tonal, avant-garde and aleatoric music), we are free to really write music that delights the listener. Obviously there're schools in university composition faculties that wouldn't agree with me perhaps, but I don't care - I certainly don't care if I please them.

The Wider Creative Context – Audio Directors

Pleasing university composition faculties might not be a consideration for composers of music for games, but without question, pleasing audio directors is: capturing their creative vision in music and sound. Exploring the contribution of audio directors is central to understanding the creative decisions taken by game composers. In the interviews which follow, the audio directors Michael Kamper and Paul Gorman provide an overview of some of the creative decisions made when seeking to shape the musical direction of specific game scores.

Michael Kamper worked as the Audio Director on *Bioshock 2,* the sequel to the first *Bioshock* game (original Audio Director - Emily Ridgeway). Paul Gorman directed the audio for the game, *Dante's Inferno.* Both men worked with the composer Garry Schymann. The following edited interviews explore the creative direction given to Garry Schyman in terms of the 'temp tracks'[18] used during production, including a brief overview of any associated creative and directorial guidance.

Interviewer (to Paul Gorman – *Dante's Inferno*): When working on *Dante's Inferno* what music did you select for the 'temp track' and what were the reasons for the selections made?

Paul Gorman: I wanted a score that leaned more towards 20th century academic [music] as opposed to a Hollywood film score, but that line sometimes gets blurry. The 'temp tracks' were a mash up of both. Large-scale choral pieces such as Penderecki's *The Passion of St. Luke* [1966] and Ligeti's *Lux Aeterna* [1966] were heavily utilized. These were both naturals because they possess the right blend of, ether [and] other worldliness - standing on the edge of the abyss. I have always been influenced by how Kubrick utilized 20th century scores, particularly in, *2001: A Space Odyssey* [1968] and *The Shining* [1980] [Ö]. Penderecki's large-scale orchestral works were also key, but perhaps surprisingly, from [his] mid-career period like *Polish Requiem* [1980-84, further expanded 1993 and 2005] and *Seven Gates of Jerusalem* [1996], which fit better than his earlier pieces (*De Natura Sonoris* [1966], *The Dream of Jacob* [1974]).

Some of the soundtracks that were utilized were a bit obscure – Brian Reitzell's score for *30 Days of Night* [Slade 2007], Wojciech Kilar's, *König der Letzten Tage* [Toelle 1993]. *The Queen is Dead* [taken] from *The Queen of The Damned*, [by] Jonathan Davis [Rymer 2002], was used extensively as well as various tracks from *The Reaping* by John Frizzell [Hopkins 2007], which both had the right intensity for our earliest demo - which equated to the first chapter of the game that takes place before Dante descends into Limbo. The other key score was John Williams's *War of The Worlds* [Spielberg 2005], which, listening back to it recently with fresh ears may have been our most key influence, as it had the right blend of chaos, terror, action [and] immensity. All of this [Ö] was then heavily edited and then layered with Penderecki's choral textures, atonal orchestral hits and washes and Diamanda Galas wailings.

The temp tracks were also a reflection of what we didn't want to sound like. Our studio (Visceral Games) had just shipped *Dead Space*, which has an excellent score from Jason Graves, but I wanted differentiation in terms of not being as slavishly aleatoric, chaotic [and]

non-melodic. Also we had to steer clear of *God Of War*,[19] which was absolutely necessary due to the (admittedly) similar game-play. I also wanted to avoid the entire filmic sub-genre of 'holy warrior music', which can be directly traced back to Carl Orff's *Carmina Burana* [1935-6] in *Excalibur* [Boorman 1981], up through more current films like *300* [Snyder 2006] and scattered through endless game scores.

Interviewer (to Michael Kamper – *Bioshock 2*): When working on *Bioshock 2* what music did you select for the 'temp track' and what were the reasons for the selections made?

Michael Kamper: First of all, I spent a lot of time getting deeply acquainted with the music from the first game, since Garry Schyman's score was a huge part of the emotional impact of the *Bioshock* world. I got a hold of all the unused and sketch tracks as well and these made up the first bits of music that I added to our initial test levels, which I feel helped the team feel like they were really building a *Bioshock* game.

Just like the first game, each level would have its own theme and personality and I wanted the music to compliment and enhance the mood and character of the space. I spent a lot of time listening to a variety of film scores and period music that would fit each area the player was going to explore. I used selections of everything from *Titanic* [Cameron 1997], the *Pirates of the Caribbean* series [Verbinski 2003 onwards], *The Thin Red Line* [Malick 1998] and *The Ring* [Verbinski 2002 onwards] series, as well as composer Charles-Valentin Alkan. I also was amassing a collection of period popular music that would be found throughout the game that also helped inform what the score would be, such as the works of Bessie Smith, the Ink Spots, Billie Holiday and Duke Ellington.

Interviewer (to Paul Gorman): Garry said that his approach to *Dante's Inferno* was influenced by Penderecki's, *The Passion of Saint Luke* [1966] and also by George Crumb's vocal writing.

What creative direction did you give to Garry when guiding him towards your musical vision for the game?

Paul Gorman: The challenging part of *Inferno* was that it isn't horror genre outright – there is a healthy dose of action-adventure and a relentless pacing. That meant that there was usually a duality in the score. Through the temp track/demo editing process, a formula emerged which was, essentially, the choir supplying the sacred ethereality and after-worldliness and the orchestra and percussion supplying the action, intensity, chaos [and] brutality.

The key idea for the score that always stuck with me was: hell is a place that you will never be able to wrap your head around. It is as big and endless as outer space. It is always bigger than you and will eternally confound you [Ö]. It always knows what you're thinking - what your fears are. I think both Garry and I preferred to write for hell as the lead character, as opposed to Dante. Certainly many of the key influences (Crumb, Penderecki) are playing up the environ' as opposed to the protagonist.

The score, by necessity, needed religious overtones and Garry and I immediately agreed [Ö] that utilizing a chorus with extended techniques was a good match and that it bypassed the problem of sounding too rooted in Western religion (Penderecki might be deeply religious, but his choral music never feels overtly Western to me, it feels more universal), but it also supplied the necessary fear and ether that equates to what the afterlife might be.

To quote Laurie Anderson, we ran into trouble when we went unchecked making 'difficult music' and were getting executive pressure to keep the score on the melodic side, to play up more of the Dante-hero side of things. The early scores leaned more [towards] atonality [but] were deemed 'too backgroundy – textural' and as the project went on, the scores became more

traditional and melodic. Which I think all worked out well in the end – it was good to have a blend of both in this case.

Interviewer (to Michael Kamper): What creative direction did you give to Garry when guiding him towards your musical vision for the game?

Michael Kamper: When the Creative Director, Jordan Thomas and I began directly working with Garry on the score, the first thing we wanted to establish was the track that would be the main theme for *Bioshock 2*. Since the game is essentially about a father looking for his lost daughter, we wanted the theme to reflect that sense of loss and yearning. After about seven different variations, Garry finally came up with the track that would be called *Pairbond*, which really established the mood and tone of the rest of the score nicely.

After that [Ö] we had Garry [Ö] working on the tracks for different levels of the game. Each level had a collection of 'Ambiance' cues for establishing the mood, 'Reveal' cues for story moments and 'Fight' cues that would be used for combat situations. The direction for each cue came from the overall direction of the game level (at that time). For example, the level known as, *Ryan's Amusements,* was essentially a broken down theme park that was telling the back-story of Rapture and so the music of this section was supposed to hark back to the first game. The *Pauper's Drop* level was the ghetto of Rapture and [was] heavily influenced by early blues tracks by Bessie Smith and Billie Holiday. *Fontaine Futuristics* was originally supposed to have a lot more underwater game-play and exploration, so the cues were designed to work with the player experiencing the beauty and terror of roaming the open seabed. The *Little Sister* sequence in *Outer Persephone* was originally supposed to be the entire level and those cues were designed with the notion that the player would be exploring a beautiful but sad and scary dream-space.

Overview

In summary, what emerges from the interviews with Jason Graves and Garry Schyman is a picture of two composers who recognize the potential of avant-garde techniques to induce tension, to disquiet and disconcert; creating music which, like a shark fin cutting through the surface of the water, points to dangers hidden beneath and plays upon the imagination of those hearing it. This recognition is coupled with a sense of creative freedom to exploit these techniques within an emergent games industry, which actively encourages originality and strong statements in order to distinguish individual brands within a crowded commercial marketplace. The constraints of working within the sphere of popular culture and meeting client expectations have not prevented either composer from tapping the resources of the avant-garde, in fact quite the reverse. Popular associations between avant-garde music and specific film genres, such as horror, science-fiction, thrillers and so on, have most likely prepared the way for avant-garde approaches in the games industry.

However, far from being tied to film, music for games is portrayed as offering new and exciting possibilities. The rich foundational heritage of film music is clearly recognized, but the dynamic and interactive nature of music for games is presented as central to ongoing and future developments, as is the increased involvement of composers throughout the implementation process. If we couple this central distinguishing characteristic of game-play, namely unpredictability, with the openness of game developers to 'strong statements' and the creative freedom that this attitude nurtures, the potential of avant-garde approaches becomes apparent.

The interviews paint a picture in which the balance between creative constraint on the one hand and creative freedom on the other, seesaws decisively towards creative freedom. Clearly for this to be the case it would be logical to assume that audio directors must play an active role as enablers of these freedoms. The responses of Paul Gorman and Michael Kamper confirm this assumption.

Nowhere is this more evident than in the temporary musical selections made by them during game development. Gorman's concert music selections for *Dante's Inferno* appear fairly progressive in terms of popular and commercial musical tastes. Also of interest is the eclectic mix of music used for the temp tracks and the emphasis on film music – something that features in the selections of both Gorman and Kamper, clearly illustrating the significance of film music as a referential source of creative inspiration. The temp track selections, far from indicating creative restrictions, show real breadth of scope and diversity of influences; a willingness to embrace the old, the popular and the new, including avant-garde music (which to some might be synonymous with the unpopular).

Balanced against this synthesis of musical influences, some constraining factors have clearly also played a part in shaping the overall creative decision-making process. Gorman's responses illustrate the need to respond to executive direction and to ensure differentiation from other game releases. His answers show that in the case of *Dante's Inferno*, such considerations did inhibit the use of more extreme atonal or textural forms of scoring to some extent. Kamper's answers on the other hand reveal other creative considerations, foremost of which being the need to recapture the sound world created by the first *Bioshock* game, whilst addressing the new creative challenges presented by the sequel, combining continuity and development.

In balancing all of these influencing factors one common feature emerges, namely creative collaboration. It is quite clear that detailed creative dialogue underpins the development of the musical approach taken: whether determining the differentiation of game levels, specific types of cues or the focus of musical characterization; the role of the audio director is key.

Conclusion

In the depiction of fear and horror, the 'otherness' of avant-garde music continues to be a source of inspiration to composers and other creative personnel involved in films and games.

Associations between the musical avant-garde and what might be termed 'the dark side' are firmly entrenched within popular culture, as is the games industry itself. Although avant-garde music might not be 'pulling the crowds' in terms of concert hall box office receipts, within the popular context of horror and visual media it has become the sound of fear. Popular culture seems locked in an unlikely and somewhat paradoxical embrace with one of the most unpopular and alienating forms of music available today. Horror has, to a large extent, become the only channel through which most people experience avant-garde music today.

Against this backdrop and in light of its cinematic heritage, the game industry's apparent championing of avant-garde music is perhaps not surprising. However, the requirement to produce distinctive and original games; to keep repeated game play interesting; and to make gaming experiences more real and visceral, promises to drive the exploration of avant-garde approaches further still. The musical resources of the avant-garde lend themselves to an environment in which familiarity is the enemy of unpredictability and predictability is the enemy of fear and horror. In light of this, the marriage between the musical avant-garde and games promises to continue for many years to come.

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Notes

[1] The term 'Avant-garde' is defined here in 'populist' terms as something of a 'catch all' phrase for twentieth-century music exploiting experimental techniques, modernism and atonality. It is acknowledged that in musicological terms this definition is non-standard and historically imprecise, blurring accepted boundaries between modernism, experimental music and the avant-garde, but the responses to the questions posed and the interdisciplinary nature of the journal seemed to warrant a less prescriptive definition in this case.

[2] The term 'aleatory' is used to describe compositions in which chance elements are incorporated, generally requiring improvisational input from the performer(s). Composers usually provide directives or parameters within which the chance processes and improvisations occur; these can be fairly specific or very vague.

[3] For further biographical information see, http://www.jasongraves.com/biography/

[4] For further biographical information see, http://www.garryschyman.com/garrymain2.html

[5] Credits for Garry Schyman are available at the following web site, http://www.garryschyman.com/garrymain2.html. Music samples may be streamed from the same site. Credits for Jason Graves may be found at, http://www.jasongraves.com/credits/. Music samples are also available, please see http://www.jasongraves.com/music/.

[6] Edits have been kept to a minimum. The integrity of the original answers has been preserved.

[7] See note 1.

[8] A Triad is a three-note chord, consisting of the root note with the third and fifth notes above.

[9] A chord made up of minor thirds stacked on top of each other.

[10] See note 12.

[11] A major triad with an added seventh

[12] The term is most commonly applied to 12-note serial compositions - based on a 12-note row or series, using all the notes of the chromatic scale. The series has 12 transpositional levels and can appear in three different forms; inversion, retrograde and retrograde inversion.

[13] Within the context of "adaptive audio", in which the music is non-linear and adapts to changes within the game (triggered internally or externally), individual musical elements or "stems" are layered together by the game engine to create adaptive musical cues. Within the linear context of film, the term "stem" refers to premixes of specific types of sound, such as foley, dialogue, effects and music.

[14] A game object, which attaches to other game objects, reacting dynamically in response to the location of avatar. The fear emitter adjusts the mix to ratchet up the sense of tension and fear as the avatar approaches.

[15] A dynamically changing RAM based 'patch' designed to recreate something of the player's internal and subconscious mind.

[16] A large number of 'stinger' cues triggered in moments of high intensity. 'Stingers' are sudden onset cues designed to startle.

[17] Title: *Zingaro*

[18] Indicative, temporary musical tracks used in film and game production before the original music has been composed.

[19] An action-adventure video game series first launched in 2005 (Sony Computer Entertainment)