

Game audio can be the next big step in music composition if we succeed in changing people's misconception about it.

If someone asked you to think about one serious topic, there is a very high probability that you would never think about games. Famine, Health, Wars: All these topics seem a lot more important, as games are frequently seen as an 'entertainment for children' or something dispensable, and nobody dies because of them. All these last topics are relevant, and I am fully aware that they should never be put aside if we intend to make the world a better place to live, but there is a big field that is as important as those and which is usually undervalued; a field that is what basically differentiates us, human beings, from all the others forms of life; a field that makes our lives much more interesting and fun: the Entertainment. As the character John Keating, played by Robin Williams, said in the movie *Dead Poets Society* (1989):

"We don't read and write poetry because it's cute. We read and write poetry because we are members of the human race. And the human race is filled with passion. And medicine, law, business, engineering, these are noble pursuits and necessary to sustain life. But poetry, beauty, romance, love, these are what we stay alive for."

In other words, people do not listen to music, watch movies, or read books because they *need* it, in the physical way. They do it because their minds ask, and that is why the Entertainment field is as important - and needed - as any other. But even when people talk about entertainment, games are a topic that usually seem to have less value than others. Few people would deny to talk about music, movies and books, because the general thought is

that they usually have some kind of value and complexity - and it is a fact that adults tend to prefer these options instead of games - but when the talk goes to games, discredit faces tend to appear. This lack of interest is probably a result of the image that electronic games were born as simple experiments (like *Tetris* or *Pong*, games with no story and very simple rules), so they cannot add any important knowledge or experience to the player. We cannot remember the time when any other of the main forms of entertainment were born, so we are used to their complex and already developed forms which we interact to in our everyday life. There is where the misconception lie.

Electronic games had in the past three decades a greater development than any other art (yes, they are already considered art) probably had in so little time, and if it is hard to believe that, let me introduce to you some interesting data: *Tetris* (one of the most famous and influential electronic games of all times) was developed as an experiment in 1984 by three young Russians, for their own pleasure. Its earliest version had no story or sound, and it was so small that it could fit in one single floppy disk. *The Legend of Zelda: Ocarina of Time* (1998), was a mark in the history of games. It has a much more developed plot - compared to *Tetris* -, a 3D environment, cut-scenes, better quality audio, and a far more extensive main campaign. At last, *L.A. Noire* (2011) is a game that recreates faithfully the city of Los Angeles as it was in 1947, in which the player assumes the role of a LAPD¹ Officer who is trying to solve some of the worst (based in real facts) crimes that were committed in that year. As you can see, in less than 30 years electronic games have been in constant change, and had a considerable development in terms of graphics, music, plot, but mainly, in terms of intention. A professor could give any student a five-hour lecture about how the city of Los Angeles was

¹ Los Angeles Police Department.

in the year of 1947, but that would seem a waste of time compared to the experience of playing *L.A. Noire*, the experience of *being* there (as a character, of course).

Games have a great potential not only as a form of entertainment, but also as a source of knowledge, and its development was broad in so many levels that it created a whole new field in other mayor form of art - the Music. The fact that game audio was born with games is quite obvious, so we can say without a doubt that this is one of the newest music genres, which includes not only the game's soundtrack, but also all of its sound effects. As game audio is something that is composed exclusively for the greatly neglected (when compared to other important topics) games industry, people also tend to have a misconception about it. Therefore, through the next few pages I will explain why game audio has a great value as a form of art not only in the field of Games, but also in the much more ancient and well-seen field of (Instrumental) Music.

The most common arguments used by the people who disbelieve in the potential - and in the importance in the field of music - of the Game Audio are that its sound quality is poor, and the games' soundtracks are only simple melodies that never have the complexity or depth of any instrumental piece written by some already renowned composer, such as Beethoven or Chopin. In order to explain these - not so wrong - thoughts and then show where they fail, let me introduce you to some facts: In the field of Classical Music, a composer can write whatever he or she wants, for any playable formation (Trio, Quartet, Symphony Orchestra) and then look for musicians who want to play; the result: almost endless possibilities. On the other side, when a composer is working with recorded data, he has always to think about where the music will be displayed. Back in the 1980s, personal computers and the early video game consoles had in their memories a very little space that

was specifically intended for the audio, so the compositions could not use many instruments at the same time or use recordings with a good sound quality - which demand more space - otherwise that would be less space left for the video data. Because of that, instead of thinking about an epic orchestration or about a long sonata, the game composers had to think about small, simple (in terms of the quantity of instruments and the quality of sound), catchy tunes, such as the one present in the first stage of the original *Super Mario Bros.* (1985), for the Nintendo Entertainment System.

The music created for the early game systems used all of their resources, but the original ideas of the composers could not fit in the small space that was reserved for the music in the games disks; so, with the development of new consoles and the improvement of the personal computers, the companies that developed hardware made great improvements in the audio capabilities of almost each new system that was released, in order to give more options to the composers (and the recognition from the players was remarkable). As the space for music in the games disks increased, the compositions for games continued to be something used to enhance the experience; they always relate to the part of the game in which they are, so it is not wrong to think that game audio (for the games in which the plot is a big part of the experience) not only use *leitmotiv*², *but also* has its roots - partially - on the Program Music³. In the words of the chairman of the Audio Engineering Society (AES) Technical Committee on Audio for Games, Martin D. Wilde:

“We should be able to associate sounds with specific characters or objects in a game, and those sounds should be synchronized with the visual rendering of that object.”⁴

² *Leitmotiv*: A theme that represents a character, a place, a thing or an idea;

³ A term created by the Hungarian pianist and composer Franz Liszt for a music that describes a story.

⁴ Wilde, Martin D.: *Audio Programming for Interactive Games* (2004), pg. 15.

If someone listen to the soundtrack of a game without actually playing the game, that person will probably not imagine the game environment, or its characters. But it would not be a surprise if the feeling when only listening to the music was similar to the complete experience (game and music). Game audio fit so well not only because of the assimilation with the video, but mainly because of the intention in which it was made. The early game soundtracks did not have a great sound quality and were not very complex, but they were filled with great intentions and interesting ideas. That might not be the quality which traditional musicians or instrumental music fonds expected from a new music genre, but these people cannot deny the impact that most of the good music (bad music always exist, in any genre) which was created for games had - and have - in their listeners.

An interesting fact that goes directly against one of the main game audio critics' arguments is that the sound quality has improved a lot in the last decades. As the renowned game composer Aaron Marks mentions in the second edition of his book *Game Audio: For Composers, Musicians, Sound Designers, and Game Developers* (2009)⁵, it went from 'electronically generated bleeps' to '(a) sound generator capable of three-part harmony', 'a dedicated audio processor.', 'five channels of monophonic sound.', 'six voices with stereo output' and several other standards, until '44.1kHz, 16-bit, stereo (CD-quality audio)... with some game consoles even capable of playing sample rates of 48kHz'. As the consoles' and personal computers' memory space also had a great improvement, fully orchestrated music can now be added to games, and the result is even better with the use of Surround Sound⁶- which is quickly replacing the Stereo Sound⁷ standard. At this point you might be convinced

⁵ Pages 3 and 6.

⁶ The use of several audio channels in speakers placed around the listener.

⁷ A model that simulates two or more sounds coming from different perspectives.

that game audio is at least a little more interesting and well-developed than people use to think, but if you still have no idea of how it can change something so huge as music composition, let me introduce you to a revolutionary concept and the most important part of this article: the Interactive Audio.

Interactive audio is the way that game composers found to link every action of the player with a change in the game sound. It is the perfect example of how music can be a lot more interesting if it attempt to adapt itself to the listener/player. A movie soundtrack is a good example of how music can enhance a visual storytelling, but we - as the audience - are not part of the movie experience. We always see a movie as someone else's story (besides it is true that sometimes it *seems* to be about us), but in a game we have a role, and it is very common to play the main character of its story. The key here is to evolve the player, and cause some impression on him/her; with that in mind, game composers are succeeding in taking this music concept to another stage: a stage where the listeners' actions influence the music.

Here is a brief example of how it works: in October of 2005 the game *Shadow of the Colossus* was release in North America, published by Sony Computer Entertainment for the company's own home console - the Playstation 2. The game puts the player in the role of Wander, a boy who has to walk through a really vast territory in search of sixteen 'giants of stone', called *Colossi*. Most of the time the player will find himself/herself alone (as there are no other humans in the game) or in the company of his/her horse, just walking in the huge field in search of one of the Colossi. When you are not fighting against one of the giants or you are not even close to one of them, the game has no soundtrack; you can hear only the wind and your own steps. This is an intentional resource that is used in order to create an

unique atmosphere, where the player can feel lonely, and it works really well. But the interesting part is that when you get into the territory of one of the Colossi, even if you are still far from the giant, a music comes in. Not an ordinary music, but a really deep one, that makes you aware of the danger that awaits ahead. It is a quiet music, but with such a good orchestration (and intention) that it creates a tension which - together with the fact that you are alone - makes the player really pay attention to the environment. Danger is close. If you go away, the music will stop, but if you go further and find the Colossus, another music will rise: a battle theme.

There is another deeply interesting aspect of Game Audio that should be mentioned here: it proved in the last few years to be an exciting and effective way of learning. Games that were created under the concept of Interactive Audio, such as the ones from the *Guitar Hero* series, are great examples of how someone can learn really fast something that is - or at least seems to be - difficult, as you can see in the words of Peter Shultz, PhD in Music Theory:

“Music games, such as the *Dance Dance Revolution* (hereinafter *DDR*), *Guitar Hero*, *Karaoke Revolution* and so on, require players to relearn habits of movement and thought, and the pay-offs are amazing: what was difficult becomes effortless, and what was impossible becomes simple.”⁸

These games that combine music and gestures are also used in physical therapy, and they work so well because of the immersion brought by the Interactive Audio concept behind of it. The act of playing is fun and engaging by nature, as the results of your actions are

⁸ Collins, Karen: *From Pac-Man to Pop Music: Interactive Audio in Games and New Media* (2008), pg. 177;

instantaneous. This is another reason why music composition for games, despite being a new - and still under development - field, can be a great part of music composition in a future that is not so far from us. The idea that as music earns another function it loses its primary one, as a pure form of art, can be easily put aside if we just think about how the vocal music practiced in churches in the Middle Age and Renaissance had a different function by that time - they had to serve only the religion, and not be seen as an entertainment - and today they are seen as art.

Game audio is the most expressive form of sound where we can deal with Interactive Audio, and the fast development of new Hardware made possible that the game compositions went from annoying bleeps to fully orchestrated, high quality, interactive musics in a little more than three decades. As a form of art, it showed to be highly creative, deeply immersive and full of intention; as a form of teaching, very effective and stimulating; and as the game industry grew so much that is now comparable to - and, in some countries, even more lucrative than - the movies industry, it seems to me that a new satisfying and rewarding career is rising from a place that could not be more recent: the electronic games. Music, in every single stage of its history, has always been something current and alive, that represents what we think and feel. Once again it is adapting to our needs, and once again we might discover something brilliant and unimaginable. All we have to do is to open our minds.