Working title: Game audio narratives

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That auditive impact on the video game:

When the medium of video games first arrived to the homes of the public in the 1970's, sound was crude and almost a forgotten or kept hidden piece of the design, yet the need for feedback audio to improve the players experience was of course not only present, but in great need.

Video games are still to this day, by many in the commercial audience, not considered a serious medium, yet, not only, budgets, salaries and income has greatly increased and surpassed the film industry, and the need for serious and professional craftmanship and out of this world creativity is required to create modern games.

Sound has come a long way, with the introduction of the 1989 audio milestone, Creative Labs – Sound blaster, audio card expansion for pc's[1], sound where not only here to come, as they where already here, but here to get better; To be what is it today, where almost real-time physical modeling of sound and sound generation from grains is possible, from the time where sound was just something needed, it is now crucial to the players experience and used as a great tool to support both immersion (Calleja 2012) and narratives of games (Jenkins 2012), as with films, sounds have for long been the tool to use if suspense, references and other things where to work together, and the use of the old terms of sound production for film, soundscapes and similar medium are still to be used in game production today, but new terms and are also needed for new mediums. (Chion and Murray Schafer 80's and 90's), as the old expression "Sound is half the picture", one could argue that sound is half the game.

The sounds of pong, sounds that are still today considered some of the most efficient of it's kind when it comes to feedback audio, engineer and accidental audio engineer Al Alcorn[2], has said that it was almost shere dumb luck and out of this world creativity that caused the sounds to be the way it was. When sound was something that was probably wanted to sound like the real thing, everybody back then knew that this sort of audio production was impossible and Al Alcorn has told that the requests from the game designer where basically impossible to achieve with what was actually present in the electronic internals of the Pong system.

As with the term immersion, as nailed by Dr. Gordon Calleja[3], sounds and images, almost no matter their visual or auditive origin have an impact on the player or audience of the film. As with the players of kick-off 2 (Dino Dini 1988), where the players in the game where just three dots and two of them moved and then acted as feet, many a player from those days can agree that to them this

1 Creative Labs, Singapore based electronics company, founded by Sim Wong Hoo. Not the first release of a sound card, not even their own first release of a sound card, but the first succesfull release of a sound card to hit the commercial audience.

2 Statement taken from Al Alcorns quote in "The ultimate history of video games" – By Steven L. Kent. 2001: Three Rivers Press. "Screw this, I don't know how to make these sounds anyway and don't have the equipment needed"

3 Game Immersion. MIT Press. More info to come.

was an actual football player and not just dots on a screen. This effect may directly be transfered to the use of audio in both film and games, but in games, where an actual players actions causes actions and interaction with the game itself, be it on or off screen, diegetic or non-diegetic, the use of feedback audio or just feedback itself in the sense of audio will great increase the players experience. So the intense and noisy, very electronic sounding ping and pong, squarewave sound of pong, will have the same impact on the game players as newer and higher quality produced or even real life foley recordings of the actual sound would have.

From the sounds of space invaders and pacman on the Magnavox Odyssey II (in Europe released as the Phillips G7000 system) to the use of the FM synthesis possibilites or the Commodore Amiga and Commodore 64/128 in the 1980's and 90's, it became clear the when something is interactive, ergodic, modern video game ludicism or anything else remotely similar, the use and need for feedback audio is immense. A type of feedback not used much in experimentation before this, apart from certain interative art installations, those of John Cage, Carl-Heinz Stockhausen and other similar pioneers of the electro acoustic music industry, and when hitting the number pad of the ATM or pushing the buzzer of a doorbell, the use of audio feedback was limited to such mediums and only considered as necessary natural feedback or the natural event when hitting the buzzer of the door as an informative medium, which where not to increase any type of auditive or narrative experience.

Diegesis and that acousmatic effect:
Michael Chion created the term acoumastic, as a definiton of sounds that not yet had a certain source, from the listening perspective of the audience.
Along with older terms, such as diegetic and non-diegetic comes a lot of questions and answers. Acousmastic and de-acousmatizing are terms often used in film, when a certain voice or audio source is suddently reveiled, and could a new and much easier to use term also arrived, when the mystery of the voice was reveiled, it could be named "de-mystifying" (David Sonnenshein 2001) where diegetic and non-diegetic where terms to cover wether sounds are from a visual source or added to support the scene, a great comparison is music played by a band on screen, counter to the non-diegetic version of the exact same where music is just added to the background to support a certain suspense or atmosphere.

These terms also have their impact and use in game audio. Wether a sound is a direct descriptive sound of an in game object or it's use, or feedback audio from an action happening within the game, as to sounds being used in the cinematic ways of supporting player experience, such as background music or a tiny drone in the background whenever the next boss fight is near.

Narrative audio:
Narratives of games, any kind of game, have often been discussed, and in these modern times of sound, almost real-life metagames have narratives, which make people flee from the horror of their regular life into their "second life". (Jenkins).

That bike ride to work, where the metagame of tour de france takes places in the minds of the bikers imagining the Champs Elysees final stretch and the sound of the audience is clear to the player of this game and yet you can still hear the voice over of the tv commentator and the metagame where your promotion is announced and you can almost hear the fanfaric like music being played as you approach the bosses office. Or even better, when in certain moods, and actually listening to music, one may look out the window and suddently think of, or become the mood of the music, and the music and the visual from the real life melt together in perfect harmony creating a whole new imaginative world to the person living this situation.
As in audio either imaginative by the player, or existing audio suddently supporting the mindset or experience of the players situation, increasing ones immersion into any real-life or game-life

situation, removing the boundaries and frames of their differences causing new life or game situations, creating new or increasing the narratives of any situation, be it game or real-life.

Non narrative games, to become narratives through audio:
Many games, be it board games or video games, or even metagames, does not have a narrative, it simply does not need one to exist. But with audio, we can "easily" create one.

Chess, a great game of 64 squares, where usually wodden characters with certain abilites move across strategically in turns to eliminate a specific character within the opponents side. Often played with a more sportsman like approach, where skill is greatly needed and the "fun" during the actual game play is almost non existing, but where fun is released when the game is over and the joy of winning or the learning experience of loosing hits the player.

A game such as this, doesn't need a narrative to exist, but chess has a great potential of creating narratives, as already back to my description of the game, not many terms needs to be added for the game to not only consist of wodden characters, but giving them names or having a painted chess board or play in certain surroundings will change the experience. But adding audio to the game, changes it completely. Of course, some players lacking the imagination of such a game will probably never experience the narrative, but let's assume that we are dealing with players open to the subject of narratives.

Adding a sound to the characters, adds a great chance of creating a narrative. Almost as battle chess did it when released for the first time in 1984. Whenever a character is eliminated from the game, the actual game of chess says, by the rules, that the eliminated character should be removed from the board and that's it! Quite a boring approach compared to something which could be a witch named Darlya Baba-Yaga (greatly inspired by the Sierra game – Heroes Quest 1) whom with her magic fireballs coming straight from her hands, totally annihalates Prince Harold and his horse by blasing his head off in the morning mist, deep in the forest of Utopi, in the lands of Mantanga, deep beyond the mountains of great fire which to this day is still untouched by humans.

The sound of the fireball is great and her silent footsteps, still heard, but so vagely that nobody would notice until it's too late are also there, combined with the sound of the morning mist and forest, which is a dark drone and forest animals, never heard before by humans lurk in the dark of the woods.

Actually all this fantasy descriptives is not required to create a narrative. The game of chess does not contain a narrative, and does not support the creation of one by itself, but with the simple adding of audio, when two characters collide, we have feedback.
Feedback is essential for the creating of a narrative, as we may have some really well made and designed characters on our chess board, their actions still remain silent whenever performed and are still bound to the rules of chess. Whenever a pawn moves across the board and the difference between his or hers footsteps are heard, as he moves, the human mind will instantly think of the sound heard and create a link between the sound and a real life object. Creating a minor narrative of the characters movement – of course having sound for just one character does not create a narrative by itseslf, the sound of all the characters is a different thing.

Audio Denial:
Fact is that audio cannot be denied, closing your eyes may relieve you of your sight, but holding your ears will not totally eliminate sound. Even in an anechoic chamber, there is still sound, I will then argue that a medium completely without sound, is actually missing an essential part of what the human brain considers as one of the key sensory elements to support a narrative.

In psychoacoustics, the mind works in mysterious, yet explanable ways. Our ears, combined with our brain works constantly in the subconcious, and the mind will quickly adapt to the sounds around us and also add the natural human filter of important and not so important sounds. Our ears are just a microphone which receives everything around it, but combined with our brain we subconciously have a constant filter, filtering out the not so important sounds of our world.
Therefore I will argue that to have sounds in a game, which supports narratives and increases the immersive effect of the game, the sounds does not only need to be well thought out in the sense of when playback occurs, but also how are they mixed, which is why the importance of audio design craftmanship can never be neglected or this could be considered shooting one self in the foot during the production period if so. Also the fact that game audio is not totally linear, as it is with film audio, the individual sounds and their mix, to which the sound designer has not total control of whenever the game is released makes a great obstacle to climb, when deciding how to mix ones game audio.

Using adaptive audio, has been increasingly popular over the past generations of game releases, from adaptive music of Far Cry, from Crytek and later in Hitman 2, IO Interactive. [4] - I will argue that the use of adaptive audio on the sound design plane and not only the musical plane will create a dramatic change to future gaming experience and even further increase the immersive effect of the game and the hopefully soon to come complete acceptance of the video game medium as a serious and professional business, where not only financials are the ruling factor, but where high-level craftmanship is required.

Adaptive audio design:
It has for long been used, with both great and lesser success, the use of adaptive gameplay, psychological profiling of players, to intensify the game play experience of the game. Silent Hill – Shattered memories, used psychological profiling to change the game environment with mediocre success, and never published game Eden, based on the movie Antichrist by Lars Von Trier, where to contain psychological profiling of the player to focus on his or hers fears and then constantly face the player with exactly that.

Taking this a step further, and using the same psychological profiling of the player to create an individual soundscape would increase the narrative of the game.
One of the major issues for this, is that many players have, not only the choice of turning off the audio, but they also use this option if the sounds does not appeal to them.
Making sounds that fit the player, but are still not directly interfering with their gaming experience is then of great importance if this type of audio production is to work as intended.

Another problem with this, is that if constantly focusing on the players fears and what the player considers annoying or frightening, as with the game of Eden, only a fraction of the players starting the game would finish, simply because the gaming experience would not be considered a nice and comfortable one, which as with so many other entertainment mediums, is of great importance for keeping the audience or players interest.

Of course the use of adaptive audio, would not only be in the use of the fears of the player, but could also be at a much lower level, supporting the players feelings. As with Games For Health, a collaborate game production across many producers in Copenhagen, where games where to help out on players suffering from post traumatic stress syndrome (a post war effect), trying through games to help them do the basic things of which they are now afraid.
Measuring the pulse of the player or other physical body factors, would then be an indicator of the players state of mind and physical state, and then changing the frequency of the audio or the rhytm

4 Both productions with the adaptive mindset and work of Thomas Bärtchi, with others. Earlier Crytek, now Audio Director of IO Interactive (as of April 2012)

of auditive indicators will then try to push the players physical state back to where it is wanted.

Using the cinematic approach:
The difference between games, and videogames. As well as this new phenomenon, making the director take control instead of the player, making games so "video" / film like – causing for new terms within games to arrise.

The need for high level sound, animation and so on has greatly increased, yet also an attempt to control the player and his or hers actions within the game battlefield has increased.
The need for adaptive music and sound effects has greatly increased, yet I will argue that these are used in vain.

The world of games has almost been graded down to an interactive film, yet there are great examples where these succeed as such, but also for the reason that they do not hide their intentions (heavy rain 2010). but games such as Call of Duty 4 – Modern Warfare, try to hide their intentions and give the player a gaming experience, as well as Uncharted, Where in both games all the ancient theories of games and interesting situations such as permadeath are completely removed.
Games like these have become the directors playground, and the strive for perfection has exceeded by far the levels of stupidity which players around the world needs.
Yet we can argue that the sales have gone up on games so significantly since the commercialism of games in the 1980's – that games have become better, or more socially acceptable.

You no longer need to manually save your game, there are checkpoints for every five meters that you walk, and whenever you die, the scene either fades to grey or bombarded with bloody effects, combined with a follow up sound effect, which tells you that you just did something wrong. Did not do as the director of the game intended, and therefore you are dead. The director stands up from his chair and yells "CUT!" - and the scene is taken over and over until you get it right.

The use of high level music, and famous composers in video games have made the video game genre one step closer to the film industry. The lust fore creating a film, which because of a few interactions by a player, is then considered a game has increased over the years. Using Hans Zimmer and other famous composers when creating the musical soundscape for games such as Call Of Duty, Modern Warfare supports this statement.

Audio feedback:
During the research for this paper, I have come across many interesting observations, made by non audiophile players of games. Most of them playing only casual games, such as multiplayer phone games, wordfeud, rumble and so on, where several of them mentioned that they preferred rumble of wordfeud because of it's use of time pressure, but several mentioned that Rumble, was a much more fun and intense game when played with the audio on.

"the feedback given by the audio of the game. it sharpens my concentration, and the instant auditive feedback when receiving points, and trying to enter a non acceptable word by the game, increases my lust for continuing my game and increasing my score."
– Lars Eriksen, Copenhagen. Interviewed April 2012.