mi poema electrónico
a "fictional" story
tldr;

This is a paper about Edgard Varèse with some fake bits. Our professor wanted us to consider creating an alter ego from this semi-fictional character. The name of this alter ego is Edgar. The real persion, Edgard Varese, on whom this character is based, is a 20th century composer who, in his later years, became a champion of electronic music.

intro

For my final paper assignment I decided to learn and write about Edgar Varèse. I was first introduced to Varèse when I was writing my thesis at NYU. Given the nature of my research it was only natural that I write a few pages about the composers that have motivated the development of spatial audio systems. Wherever I write about fictional aspects of the character I will explicitly specify it so that the reader can learn some from the factual writing without worrying about the veracity of these statement. The creative writing bits are written in green to differentiate them from the rest of the text. There are a few references included in this paper as footnotes, these papers are freely available online.

the life and love

Edgar was born in Paris on December 22, 1883. When he was nine his father Henri, an engineer, moved the family to Turin. Edgar fought to study music against the wishes of his father who wanted him to follow in his steps. Edgar studied and composed privately until he was seventeen. Through the director of the Turin Conservatory, Edgar eventually managed to become a percussionist for the Turin Opera. He had the honor of conducting a performance of Rigoletto at a very young age as a result of the conductor falling ill. At nineteen, following the death of his mother, Edgar left Turin and moved back to Paris. Even in this new *milieu* Edgar

fought against the conservative approach of his new musical mentors. He renounced multiple schools over these creative differences. As a student in Paris, he became highly inspired by music of the Renaissance era. He was also particularly interested in writing and conducting music for choirs, much throughout his lifetime.

Edgar befriended Claude Debussy (FR, *Claire de Lune*, *Prélude à l'Après-midi d'un Faune)* in Paris around 1907. He left for Berlin in the winter of 1907 in search for a new "music scene". Ferruccio Busoni would become his new teacher. Richard Strauss (*Also Sprach Zarathustra*), a German composer, and another one of Edgar's teachers, would encourage Edgar to present his first major work in 1910. Edgar's first success as a conductor would come in 1914 when he got to conduct the Czech Philharmonic in Prague. The program consisted of contemporary French music. Unfortunately, WWI would suddenly stop Edgar's career in it's tracks. Edgar would serve in the French Army, eventually getting discharged due to medical reasons. In 1916, Edgar arrived to America.

On April 4th, 1917 Edgar conducted Hector Berlioz's (FR, *Symphonie Fantastique*) *Requiem (1837).* The performance was meant as a "memorial for the fallen of all nations". The choir featured 300 performers along with 150 in an orchestra. The event was sponsored by the Guggenheims, the Pulitzers, the Whitneys and more. He would have been able to ride that wave of success had he only pandered to the whims of his audience. In 1919, during the opening concert of the New Symphony Orchestra, a new ensemble created for Edgar to perform new music with, only a single familiar composer was represented. Pieces by Bartok, Debussy and others would prove to be too radical for the audience. Edgar had to resign as leader of the orchestra after refusing to change the program.

champion of sound

Two years later, on May 31st, 1921, Edgar founded the International Composers' Guild (ICG). The guild's sole mission would be to champion new and intrepid musical compositions, often at the expense of being scorned by both performers and patrons. The ICG would premiere works by Bartok, Ravel, Stravinsky, Schoenberg, and many more. Edgar would go on to form various different national and international organizations around the world promoting new compositions. The unrelenting request for traditional forms, however, caused the downfall of many of these. In 1928 Edgar founded the Pan-American Association of Composers promoting North, South and Central American compositions with the help of Charles Ives, Henry Cowell and many others. The organization gave concerts in the USA, Latin America and Europe in the 30's. Edgar was instrumental not only in promoting "new music" of his time, but also from past composers who had never been acknowledged.

Edgar has been on occasion compared to Russolo (*The Art of Noises - 1913 - It).* Edgar however said: "the Futurists (ie. Russolo) believe in reproducing sounds literally; I believe in the metamorphosis of sounds into music." Edgar was also regarded as a Dadaist (whom ridicule the meaninglessness of the modern world) due to his relationship with Marcel Duchamp (*The Fountain (*1917) *- FR).* Edgar however did not consider himself an iconoclast[1], as the dadaists were. Rather than criticizing or tearing down former aesthetics, he believed in adding to music by offering new styles, forms, philosophies and methods. He did however criticize neoclassic composers as these sought to return to the formulas of the past. In regards to Schoenberg's twelve tone system, he described it as "a necessity for the time" which "brought back music to the domain of sound".
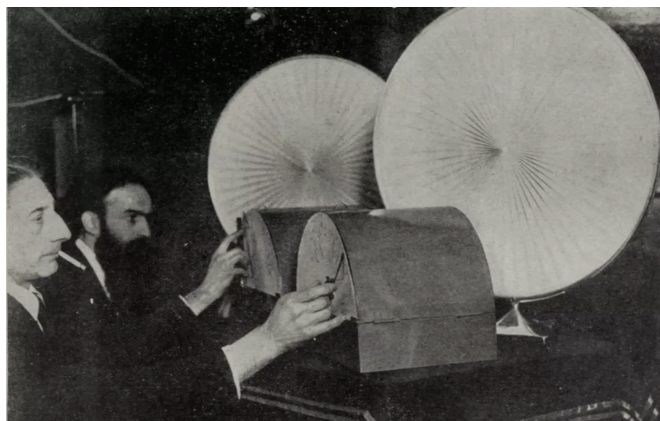
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[1] person who attacks cherished beliefs or institutions.

"Good works are not the result of favorable circumstances, new devices, exploitation of new formulas; they are produced often in spite of them."
- Edgard Varèse

(Lecture given at Columbia University, 1948)

In 1913, Edgar met René Bertrand, inventor of the Dynaphone (one of the first monophonic synthesizers). Edgar continuously looked for new ways of expanding his compositional palette throughout his life. He applied, with the support of Harvey Fletcher (Bell Labs, Fletcher-Munson curves, stereophonic sound, critical bands), to a Guggenheim Fellowship to further develop electronic instruments with Fletcher but was sadly rejected. He tried to get his hands on equipment by applying for work at Hollywood studios which denied him. Eventually Léon Theremin (Russian inventor 1896-1993) designed two instruments for Edgar which he used in *Ecuatorial.* The first version used two theremines, devices playing with the interference caused by hands on an antenna. The final version uses the waves Martenot (wiki). The German-American painter Alfred Copley (L. Alcopley) later gifted Edgar a 401A Ampex tape recorded anonymously, allowing him to start creating the "electronically organized sounds" found in *Déserts.*

famous last notes

In 1955, Pierre Schaeffer (FR, musique concrète, *Études aux Chemins de Fer*) invited Edgar to finish his piece *Déserts* at ORTF. At the insistence of Le Corbusier (Swiss-French architect), an admirer of Edgar, Edgar was invited to compose *Poème Electronique* at the Philips Laboratories in Eindhoven, Holland. This piece, perhaps his most famous, was presented at the Brussels Worlds Fair of 1958 in the "pavilion designed for Philips by Le

Corbusier"[2]. The pavilion was outfitted with illumination, electro-acoustic equipment, and projection equipment. Le Corbusier described the event as an "electronic poem". He designed the pavilion to resemble a stomach. He envisioned the digestive organ "absorbing the public, 500 people at a time". Every ten minutes 500 new patrons were admitted by automatic means. The participants remained standing and were allowed to move about the empty space, allowing them to experience the piece from multiple different angles.

It should be noted that in many respects this piece was only accomplished due to the cooperation between Edgar, Le Corbusier, Philippe Agostini (filmmaker), Jean Petit (graphic designer and editor) and Xenakis (composer and architect) who designed the scaffolding of the building. Friction over who had actually come up with the idea for the parabolic shape of the pavilion led to Xenakis leaving Le Corbusier's firm a year after the fair. Edgar's eight minute score for the fair consisted of "three synchronized tracks" which were played over multiple speakers in the pavilion (some sources estimate as many as 350). Edgar composed the score independently of the images or light effects. His piece consisted of machine-like bells, sirens, human voices, noises and gongs spliced together. Le Corbusier assembled the images in a similar disparate fashion. The images used featured "prehistoric figures, tribal sculptures, science and technology". Le Corbusier also showed off some of this architectural work in the

[2] All the information before this footnote was taken from: Wen-Chung, Chou. "Varèse: A Sketch of the Man and his Music." *Musical Quarterly* (1966): 151-170.

image sequence. This sequence was composed of black and white photographs. Color film existed in 1958, the decision was aesthetic. Independently of the film lights artificial lights emitted color around the room and projectors were also used to project colored shapes around the room. In addition to these elements, 3D forms hung from the celling[3].

The concert also featured elephants, tigers and birds flying around the pavilion. There were carnival acts performing feats of bravery and foolishness while the music surrounded spectators. One of the most memorable parts of the installation was the use of robotic zombies which chased patrons around. Unfortunately most of the robots complained about the taste of human flesh, which they found bland compared to motor oil. There was also a whale swimming under the floor which was visible through the glass floor. The pavilion was also levitating in the air using a technology that Philips never revealed again.

the patch

In response to *Poeme Electronique* I wrote a MAX patch that used samples sounds and images, much like the original piece, but also incorporates synthesis and some modern visual elements. The piece is called *Death of a Robot* because it looks like what one might imagine a robot sees when it is dying. The initial idea was to get a big dataset of sounds and images and use these as the foundation but I didn't want to just play a bunch of sounds and show a bunch of pictures without any transformations since I thought it look dull. The final patch has many images being quickly changed (one every 100 ms) but in addition it uses a shader to make the video look a lot more glitchy. In addition to sampling many sounds from the FSDKaggle [dataset] I also applied a feedback effect to these sounds and used the ICST ambisonic package in case I want to use multichannel in the future. At that point I wanted to add some synthesized sound so I opted for the circular-FM patch that Tom Erbe showed us last quarter (Spring 2019) during

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[3] All the information since the last footnote came from: Kiyak, Açalya. "Describing the ineffable: Le Corbusier, le Poème electronique and montage." (2003).

his graduate MAX course. In the patch I change the parameters of three of the four components every 100ms to synchronize with the video. There is a second voice which is shaped noise oscillating at different speeds which uses [lores~] and a final voice that is simply a triangle wave that drones on throughout, intermittently changing frequency to create some movement.

links

While doing research for this project I came across a number of different media links that I wish to share with the reader.

* Here is a video of the VR project done at the University of Torino where they created a virtual simulation of the Pavilion. It might be interesting to try to make more of these much in the same way that Miller has been replicating pieces of music from the past we could look for information regarding various important musical events in history and try to "recreate them".

http://www.cirma.unito.it/vep/VEP_documentary.html

* Here is a an article written by Frank Zappa describing how Edgar influenced him. It is rare (I think) to hear rock musicians talk in this fashion of experimental composers. I found it really interesting to hear how Zappa actually corresponded with Edgar at one point of his life and just how much he idolized him despite how different their music was. Upon listening to Zappa I realized there are trace elements of Edgar's style.

http://www.hugoribeiro.com.br/biblioteca-digital/Zappa-Varese_idol_my_youth.pdf

* Natacha showed us this site which is the absolute bible on the development of electronic music instruments. This is where I got the first picture of the Dynaphone. The second picture was from wikipedia, the one of the pavilion.

http://120years.net

notes

Afterthoughts:

* I wish I had been able to use more sources for this paper but I was short on time. If I had to do it again I would go to the library to get my hands on different books so that I can have more sources since the stuff online is a bit limited. I only found two good sources unfortunately.