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Musc 224-50

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Gabriel Fauré: ***The String Quartet in E minor, Op. 121***

Throughout history, many cases of deafness were labeled as unexplainable due to unknown diseases, exposures to excessive noises, and ageing. Hearing loss ended careers and even lives of an abundance of individuals. This was the traumatic source to the ending of the composer Gabriel Fauré's career. Losing his sense of sound as his age progressed, Fauré continued to write musical pieces until he was completely deaf. During this time, he relied on major rhythm structures as well as muscle memory and mathematical patterns that we today recognize in our math classes. While the deaf community is still considered a minority today, there are often valid ways of education within the school system which will accommodate these students allowing them to pursue as much of a normal life as physically and mentally possible.

Twentieth century works of Gabriel Fauré were often contradictory to others of his time. "Compared with string quartets of his younger contemporaries (Ravel and Debussy), certain of Fauré's organizational choices break from standards of the time." [1]

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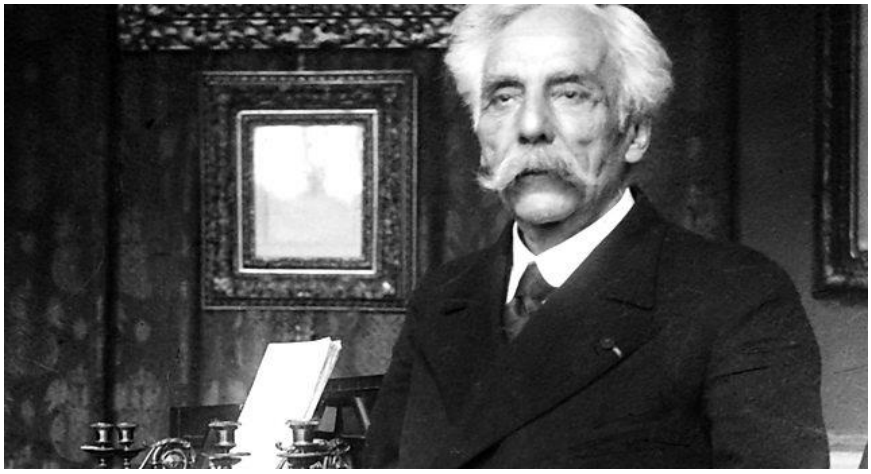
[1]Childs, Emma, and Dr. David Grayson. "String Quartet in E Minor, Op. 121: Dichotomies of Innovation and Tradition in Gabriel Fauré's 'Swan Song.'" (7)

Faure was one to create compositions not unpleasing to the ear of "barrier breaking" like Austrian composer Arnold Shoenberg, but pieces that often make one contemplate its meaning. "Trained in the formal tradition of counterpoint since the age of nine at the École Niedermeyer in Paris, Fauré exhibited lifelong deference to the erudite style of composition amidst the revolutionary musical changes occurring at the turn of the twentieth century."[2] But similar to many other composers before and during his time, Fauré created an equation of musical techniques he used when writing his pieces. Referred to as the "alphabet," Fauré used these quirks to better communicate his pieces to his audiences.[3]



Gabriel Fauré[4]

[2] ibid (1)

[3] "Chapter 4 Fauré's Compositional Techniques."

[4] MacLeod, Donald. Photo.

Reaching the peak of his life, Fauré unrecognizably began to lose his hearing. Leaving it a mystery to many from 1903 and on, he continued to write some of his most recognized and greatest works using this "alphabet" method. He had relied on this method now for many years. Fauré was often referred to as suffering the affliction of Beethoven. Beethoven had also gone deaf during his lifetime; however, he continued to write music, just as Fauré did. Throughout his lifetime, Fauré did not take the idea of going deaf very well. Nonetheless, he continued to try to recall what different notes and rhythms sounded like, in hopes of continuing his life of song writing. Fauré wrote, "I am doing my best to improve my health, hoping that thereby my ears will get better. And all the time I realize how much music escapes me, and that causes me greater sorrow!" As one can tell, Fauré did not quite understand that he could not get his hearing back. Once deaf, hearing does not return by exercising the ears like he believed. Hearing is not a muscle that can be built back up with exercise and therapy. Fauré decided the best thing to do for himself was to disguise his weakness, so that others did not look down or have pity on him. Having no money or source of income, he was adamant that he should not lose his place as a music critic of the *Figaro.* He did not resign from his critic job at the *Figaro* until the year 1919, when he traveled across the countries devoting the rest of his life to composing. [5]

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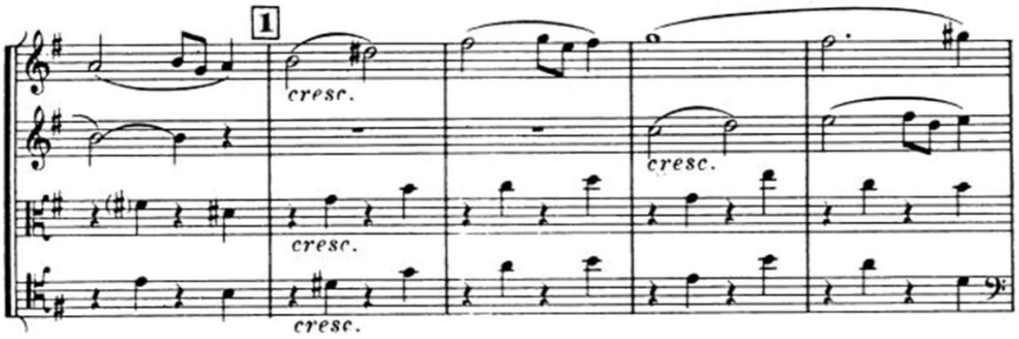
[5] Landormy, Paul.

Fauré completed his final piece, titled *The String Quartet in E minor, Op. 121,* shortly before his death. This oeuvre is quite often referred to as an original "swan song," because of the ancient belief that swans sung a beautiful song before they died, after being silent all their lives. Fauré's final piece can be considered the most well-known and beautiful piece he had ever written. With his decreasing health and hearing, Fauré was expected to devote this piece as somewhat of a "farewell" to the world he was leaving behind. However, Fauré created an unpredictable twist by making his last piece one which built tensions, hardly coming to any resolution at all. In a letter to his wife, Fauré stated that the quartets of Beethoven should cause any man attempting the string quartet "to be terrified of it".[6]



Measures 22-26 of Fauré's "Swan Song"

[6] J. Barrie Jones, Gabriel Fauré – A Life in Letters (202)

The idea of musicians continuing to create new pieces of music with little to no hearing was not unheard of at this time. Musicians before Fauré, including Beethoven himself, completed some of their magnanimous and most world-renowned works after losing their hearing, the commonly believed most important sense. Nonetheless, music is not subject to solely being written based on hearing. The art of music is comprised of many different mathematical equations. In Fauré's final piece, he used the time signature known as *Alla Breve,* meaning cut time or common cut time. *Alla Breve's* signatures are often used for marches or fast orchestral pieces. Fauré exemplifies this time signature when he executes the piece with a tempo of one hundred and twenty-one beats per minute.

All parts of music adopt a form of math. Even in elementary school, math is introduced to students in their music classes. They learn about beats, tempos, and counting measures. The tempering Fauré used in both the "swan song" as well as in his *Fugue in A minor* is a simple multiplication equation. By splitting an octave into twelve equal semi-tones, each octave shows the frequency being multiplied by two. This makes each semi-tone represent the frequency times the twelfth root of two.

Fauré's loss of hearing helps listeners comprehend why he relied so heavily on math to create his musical compositions. When someone can no longer pursue their passion or do what they love, they find a compromise. It is a part of human nature. Understanding that Fauré turned to math is reasonable because of the many connections

between the components of music and math. The world of mathematics contains many elaborate elements that can be taken in by only a select group of people. Logics, analytics, and visuals are all encompassed into the broad spectrum of math and must be understood to comprehend the pieces of math needed for music composition.

Music and math not only connect mathematically, but they connect analytically and logically as well, not just in Fauré's pieces but also in all representations of music. For mathematician's, music can easily be discerned. When understanding the concept of how music is written and how a simple measure is constructed, mathematical thinkers can analytically correspond a certain note to a value, such as an open circle (whole note) to four beats. This can be compared to Euler's Number in the realm of mathematics. The cursive 'e' in an equation corresponds to the decimal 2.718. Many people are often confused as to why mathematicians do not just write out the number 2.718, but the same can be thought of about music in a way. Why can a musician not just put a '4' on the 'A' space of a staff? Math and music are connected in a visual manor simply for ease. Seeing a symbol and corresponding it to a unit of measure is easier to comprehend than seeing an assortment of numbers crowded on a page. Therefore, whether there is a half note on a staff or a theta symbol in an algebraic equation, math can be seen all throughout music.

When looking back at the second half of the life of Gabriel Fauré, one can see how much he relied on different units of math. In particular, it is amazing how Fauré was

able to complete his final work *The String Quartet in E minor, Op. 12* while deaf. Gabriel Fauré memorized his 'alphabetical' way of thinking and multiple differing patterns in semi-tones. He was a successful and resilient composer and critic, who showed that no matter if someone can hear the music or not, it is not all about the hearing and listening. Rather, it is more about what someone can take away from it. It is hard to comprehend how to truly understand music without hearing it; however, Fauré relied on many other aspects, including the vibrations he could feel through the piano and floorboards. Fauré, through the creation of his final piece written when he was deaf, exemplified the connect of music to math, and he demonstrated that anyone can do anything if they put their mind to it.

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