

Xenakis' Calculated Sound Chaos

The primal forces that the architect / composer Iannis Xenakis, portrayed in Xenakis 1234, unleashed in his music were based on mathematical formulas, as well as on intuition, war violence and natural sounds. [These elements] resounded through the work of a man who worked in France, but never forgot his Greek identity.

DOOR FRITZ VAN DER WAA

Like Chopin and Stravinsky, the Greek Iannis Xenakis (1922-2001) was one of the great exiles of music: a reluctant cosmopolite, the sound of whose music always expressed a longing for the homeland. Xenakis was a political refugee. In the final years of the war, when he was a 22-year old resistance fighter in Athens, he was seriously wounded by a grenade, which left a mess on the left side of his face. In 1947 he fled the country, and was sentenced to death in absentia during the Colonels' regime.

Xenakis landed in Paris, and through his engineering training, was fortunate to find work at the office of the famous architect Le Corbusier. Although he had a passion for music, no one suspected that he would go on to become one of the great postwar composers. Unlike his peers, Stockhausen and Boulez, who as precocious youths created a furor, Xenakis was a late bloomer. His approach was totally different. In his view, the principles of serial music, where different musical variables were determined by means of series, led to a fragmentation. Xenakis was interested in mass, evolution and groups - whether it was about the chant of a demonstrating crowd, the crackling explosions of anti-aircraft, the clatter of rain, or the chirping of cicadas. He also loved to glissandi, quarter tones and the wringing sounds of various noises - sounds that do not fit in with the still highly rated serialists chromatic scale.

This is also reflected in his architectural work, where he gladly stepped outside the bounds of horizontal and vertical lines. The most famous example is the *Philips Pavilion* that he designed under the flag of Le Corbusier for the 1958. The building is constructed from curved surfaces with rightfully parted straight lines - a principle derived from his music - where the gliding strings and trombone tones form an internal part of his idiom. It was Olivier Messiaen, who had an eye for Xenakis' special compositional talent and encouraged him to that path: "He was a man of such unusual gifts, I said, 'You're lucky enough Greek to be an architect and to have also studied mathematics. Take it to your advantage. Use it to your music.'"

The Netherlands was an early and enthusiastic advocate of Xenakis' music. The Xenakis Ensemble has been active here for years. But the true pioneers were the musicians of the Asko Ensemble, who in 1967 committed to his work. It is therefore logical that Asko|Schonberg forms a major part at the Holland Festival Xenakis 1234, where nine of his compositions will be heard. It contains his seminal pieces from the sixties and seventies. As a part of the festival, at the Music Building aan't IJ, is an exhibition that illustrates the parallels between Xenakis' compositional and architectural works.

Chance and Chaos

The only composer with whom Xenakis had, to a certain extent, something in common, was the equally quirky, almost forty years older Edgard Varese, to whom the 2009 Holland Festival devoted extensive attention. But unlike Varese, Xenakis really used mathematical models. Chance and chaos are an important factor in many of his works, but he went out of the way of the sheer coincidence used in the work of John Cage. The chaotic passages in his music are calculated. Eventually he introduced the concept of "stochastic music." That does not mean that such music is cold and cerebral. Instead, he allowed himself, this is particularly [noticeable] when viewed in a greater context, to be lead just as much by intuition.

Architecture and Composition

Given Xenakis' background as an architect, it is obvious that he also paid attention to the design of musical space. A good example is *Terretektoth*, which was performed twice during the festival by the Residence Orchestra. 88 musicians were sitting among the audience according to plan. The first few minutes sound like a tone going through space in circles and spirals. Xenakis himself, referred to this as a "sonotron" - a particle accelerator of sound. Over the years Xenakis applied various mathematical models to his music, which range from game theory to the formulas that described the Brownian motion of gas molecules. It also seems reasonable that he immersed himself in electronic music. *Kraanerg*, the five minutes long 'ballet' that was performed during the concert, is a combination of electronic and instrumental sounds.

But it was the field of computer applications that Xenakis really pioneered. Already at the end of the seventies he created the *Úpice* (Unité Informatique du Polyagogique CEMAMu), a musical tool that once again betrayed his interest in the graphic and the tactile. The interface is not a keyboard, but a drawing board where the user can literally outline waveforms and musical structures - a process that is so clear and direct that it can be used by children.

Primal Forces

Although Xenakis was naturalized Frenchman, was married to a Frenchwoman and lived in Paris, he remained at heart a Greek and an outdoorsman. He preferred to spend his free time in Corsica, where the nature reminded him of his homeland. There too he sought the extremes, climbed mountains in the searing midday heat and went out to sea in stormy weather in his kayak. That same aloofness can be heard in his music, which is always earthy and satisfying to the ear, containing a barely perceptible tenderness. Fascinating are the primal forces that were unleashed through a merger between the extremely complex and the extremely rudimentary, especially in some work papers, as is reflected in the *Pleiades*. This quasi-primitive is also used in the relatively frequently played musical work on Aeschylus, *Oresteia*. "I do not want to imitate the music of ancient Greece," he said, "but to bring the spirit of ancient Greece to life." Before he drew - paradoxically - inspiration from Japanese Noh theater, which features an extremely stylized aesthetic, closely related to his own.

Four years before his death in 2001 - now ten years ago - Xenakis begun a passionate activity. "In fact, he continues his political struggle on another plane," [says] his friend and colleague Francois-Bernard Mache. The pieces that he wrote the sixties and seventies, however, in general show a greater vitality and are brighter than his later work, in which he made less use of mathematical techniques and relied more on his feelings. His last composition, completed in 1997, is called *O-mega* - the last letter of the Greek alphabet. A new musical theater work about Prometheus - the titan who brought fire to the people - he was not able to finish.