Iannis Xenakis (Greek pronunciation: [ˈjanis kseˈnakis], Greek: Γιάννης Ξενάκης) (May 29, 1922 – February 4, 2001) was a Romanian-born Greek ethnic, naturalized French composer, music theorist, and architect-engineer. He is commonly recognized as one of the most important post-war avant-garde composers. Xenakis pioneered the use of mathematical models in music such as applications of set theory, stochastic processes and game theory and was also an important influence on the development of electronic music.
Among his most important works are Metastaseis (1953–4) for orchestra, which introduced independent parts for every musician of the orchestra; percussion works such as Psappha (1975) and Pléïades (1979); compositions that introduced spatialization by dispersing musicians among the audience, such as Terretèktorh (1966); electronic works created using Xenakis's UPIC system; and the massive multimedia performances Xenakis called polytopes. Among the numerous theoretical writings he authored, the book Formalized Music: Thought and Mathematics in Composition (1971) is regarded as one of his most important. As an architect, Xenakis is primarily known for his early work under Le Corbusier: the Sainte Marie de La Tourette, on which the two architects collaborated, and the Philips Pavilion at
In 1938, after graduating from the Spetsai school, Xenakis moved to Athens to prepare for entrance exams at the National Technical University of Athens. Although he intended to study architecture and engineering, he also took lessons in harmony and counterpoint with Aristotelis Koundouroff. In 1940 he successfully passed the exams, but his studies were cut short by the Greco-Italian War, which began with the Italian invasion on 28 October 1940. Although Greece eventually won the war, it was not long before the German army joined the Italians in the Battle of Greece, in April 1941. This led to the Axis occupation of Greece during World War II, which lasted until late 1944, when the Soviet Army began its drive across Romania, forcing the Axis forces to slowly withdraw. Xenakis joined the communist National Liberation Front early during the war, participating in mass protests and demonstrations, and later becoming part of armed resistance—this last step was a painful experience Xenakis refused to discuss until much later in life. After the Axis forces left, Churchill ordered that British forces step in to help restore the monarchy; they were opposed by the Democratic Army of Greece, and the country plunged into a civil war. In December 1944, during the period of Churchill's martial law, Xenakis (who was by then a member of the communist students' company of the left-wing Lord Byron faction of ELAS) became involved in street fighting against British tanks. He was gravely wounded when a shell hit his face; that Xenakis survived the injury has been described as a miracle. He survived seriously scarred, and lost his left eye.

The Technical University worked intermittently during these years. Despite this, and Xenakis's other activities, he was able to graduate in 1947, with a degree in civil engineering. Xenakis was then conscripted into the national armed forces. Around 1947 the new government began hunting down former resistance members and sending them to concentration camps. Xenakis, fearing for his life, deserted and went into hiding. With the help of his father and others he fled Greece through Italy. On 11 November 1947 he arrived in Paris. In a late interview, Xenakis admitted to feeling tremendous guilt at leaving his country, and that guilt was one of the sources of his later devotion to music:

For years I was tormented by guilt at having left the country for which I'd fought. I left my friends—some were in prison, others were dead, some managed to escape. I felt I was in debt to them and that I had to repay that debt. And I felt I had a mission. I had to do something important to regain the right to live. It wasn't just a question of music—it was something much more significant.

In the meantime, in Greece he was sentenced (in absentia) to death by the right-wing administration. The sentence was commuted to ten years' imprisonment in 1951, and only lifted some 23 years later, after the fall of The Regime of the Colonels in 1974.

1947–1959: Architecture and music

Although he was an illegal immigrant in Paris, Xenakis was able to get a job at Le Corbusier's architectural studio. He worked as an engineering assistant at first, but quickly rose to performing more important tasks, and eventually to collaborating with Le Corbusier on major projects. These included a kindergarten on the roof of an apartment block in Nantes (Rezé), parts of government buildings in Chandigarh, India, the "undulatory glass surfaces" of Sainte Marie de La Tourette, a Dominican priory in a valley near Lyon, and the Philips Pavilion at Expo 58—the latter project was completed by Xenakis alone, from a basic sketch by Le Corbusier. The experience Xenakis gained played a major role in his music: important early compositions such as Metastaseis B (1953–4, also known as Metastasis) were based directly on architectural concepts.

At the same time, while working for Le Corbusier, Xenakis was studying harmony and counterpoint, and composing. He worked long and hard, frequently far into the night, and sought guidance from a number of teachers, most of whom, however, ultimately rejected him. Such was the case with Nadia Boulanger, who was the first person Xenakis approached about lessons. He then tried studying with Arthur Honegger, whose reaction to Xenakis's music was unenthusiastic. As Xenakis recounted in a 1987 interview, Honegger dismissed a piece which included parallel fifths and octaves as "not music". Xenakis, who was by that time well acquainted with music of Debussy, Béla Bartók, and Stravinsky, all of whom used such devices and much more experimental ones, was furious and left to study with Darius Milhaud, but these lessons also proved fruitless. Then, Annette Dieudonné, a close friend of Boulanger's, recommended that Xenakis try studying with Olivier Messiaen. Xenakis approached Messiaen for advice: should he once again start studying harmony and counterpoint? Unlike Honegger and Milhaud, Messiaen immediately recognized Xenakis's talent:

I understood straight away that he was not someone like the others. [...] He is of superior intelligence. [...] I did something horrible which I should do with no other student, for I think one should study harmony and counterpoint. But this was a man so much out of the ordinary that I said... No, you are almost thirty, you have the good fortune of being Greek, of being an architect and having studied special mathematics. Take advantage of these things. Do them in your music.
In 1982 Xenakis developed his Music Timbre and Cadence Scale which is used quantifying musical styles in modern music. He continued to use his computer system called UPIC, which could translate graphical images into musical results, as it was being perfected. The drawing is, thus, rendered into a composition. Mycenae-Alpha was the first of these organic forms and architectural structures. These drawings' various curves and lines that could be interpreted by UPIC as real time instructions for the sound synthesis process. The drawing is, thus, rendered into a composition. Mycenae-Alpha was the first of these pieces he created using UPIC as it was being perfected.

In 1953 Xenakis married Françoise Xenakis (née Gargouil), journalist and writer, whom he met in 1950. Their daughter Mâkhi, later a painter and sculptor, was born in 1956. In late 1954, with Messiaen's support, Xenakis was accepted into the Groupe de Recherches de Musique Concrète. An organization established by Pierre Schaeffer and Pierre Henry, dedicated to studying and producing electronic music of the musique concrète variety. Shortly after that Pierre met conductor Hermann Scherchen, who was immediately impressed by the score of Metastaseis and offered his support. Although Scherchen did not premiere that particular work, he did give performances of later pieces by Xenakis, and the relationship between the conductor and the composer was of vital importance for the latter. By late 1950s Xenakis slowly started gaining recognition in artistic circles. In 1957 he received his first composition award, from the European Cultural Foundation, and in 1958 the first official commission came through, from Service de Recherche of Radio-France. In the same year he produced a musique concrète piece, Concrét PH, for the Philips Pavilion, and in 1960 Xenakis was well-known enough to receive a commission from UNESCO, for a soundtrack for a documentary film by Enrico Fulchignoni.

Later life

After leaving Le Corbusier's studio in 1959, Xenakis was able to support himself by composition and teaching, and quickly became recognized as one of the most important European composers of his time. He became especially known for his musical research in the field of computer-assisted composition, for which he founded the Equipe de Mathématique et Automatique Musicales (EMAMu) in 1966 (known as CEMAMu: Centre d'Études de Mathématique et Automatique Musicales, since 1972). He taught at Indiana University in 1967–72 and (established a studio similar to EMAMu there), and worked as visiting professor at the Sorbonne in 1973–89. Xenakis frequently gave lectures (for instance, from 1975 to 1978 he was Professor of Music at Gresham College, London, giving free public lectures), taught composition (notable students include Pascal Dusapin, Henning Lohner, and Miguel Ángel Corta), and his works were performed at numerous festivals worldwide, including, for instance, the Shiraz Arts Festival in Iran.

In addition to composing and teaching, Xenakis also authored a number of articles and essays on music. Of these, Musiques formelles (1963) became particularly known. A collection of texts on applications of stochastic processes, game theory and computer programming in music, it was later revised, expanded and translated into English as Formalized Music: Thought and Mathematics in Composition (1971) during Xenakis's tenure at Indiana University.

In 1979, he had devised a computer system called UPIC, which could translate graphical images into musical results, wrote Andrew Hugill in 2008. "Xenakis had originally trained as an architect, so some of his drawings, which he called 'arborescences', resembled both organic forms and architectural structures. These drawings' various curves and lines that could be interpreted by UPIC as real time instructions for the sound synthesis process. The drawing is, thus, rendered into a composition. Mycenae-Alpha was the first of these pieces he created using UPIC as it was being perfected.

In 1982 Xenakis developed his Music Timbre and Cadence Scale which is used quantifying musical styles in modern music.
In conversation, Iannis Xenakis frequently distanced himself from being seen in too strict terms; like many other composers for whom method and structure were the easiest aspects of music to discuss verbally, he sees the role of such things as relative. One way to envisage this approach is that the method constitutes a thematic germ, a starting-point, and from there the usual musico-aesthetics, personal obsessions and practical considerations play their role in finishing and shaping the piece. Indeed, from the 1970s onwards Xenakis's use of method became deeply assimilated into his general musical thinking and he reports in interviews from that time that the strict application of statistical processes was no longer necessary to produce the results he was looking for.

Xenakis appeared easily bored in interviews when people attempted to take an overly simplistic view of him as 'complex'. The various clichés surrounding him appeared to greatly annoy him in interviews and he would frequently make recourse to the wider aesthetics of music in general and the other arts in order to contextualise his contributions to music-making. In a sense his early statements about "looking at music statistically" were a response to what he saw as the mistake of placing too much emphasis on the likely benefits of rigorously applying methodology. It is also important to note, however, that this does not constitute any true dichotomy between Xenakis and his peers: the application of single-minded rigour to composition in postwar music was relative and momentary, and as with his own work, the poetic and aesthetic significance of the gesture as a modern equivalent to program music, as well as the vital role played by musicality and music-editing/shaping, has been widely undervalued in favour of simplistic characterisations of such music as purely intellectual.

Composers who have acknowledged being influenced by Xenakis include Julio Estrada, Krzysztof Penderecki and Toru Takemitsu.

Publications


Notes

^ Hoffmann, Grove: "[Xenakis] belongs to the pioneering generation of composers who revolutionized 20th-century music after World War II."
^ MSN Encarta encyclopedia, "Iannis Xenakis (Ιάννης Ξενάκης) (May 29, 1922 – February 4, 2001) was a Greek composer and one of the most important modernist composers of the 20th century” [1]. Archived 2009-10-31.
^ a b Varga 1996, 14.
^ Matossian 1986, 14–17.
^ Matossian 1986, 18–27.
^ Harley 2004, 2.
^ Barthel-Calvet A., "Chronologie", in Portrait(s) de Iannis Xenakis, pp. 25–82
^ Baltensperger 1996, 72.
^ Varga 1996, 47.
^ Harley 2004, 92.
^ a b c Hoffmann, Grove.
^ Matossian 1986, 37.
^ Harley 2004, 1.
^ Harley 2004, 4.
^ Matossian 1986, 48.
^ Harley 2004, 12.
^ Matossian 1986, 77–79.
^ Harley 2004, 23.
^ Harley 2004, 19.
^ http://www.polarmusicprize.org/iannis-xenakis/}
^ a b Leonardo Vol. 40, No. 1

References


