

McDonald, Gilles Tremblay, Maja Trochimczyk, Lorraine Vaillancourt, Stéphane Volet, and Arnold Whittall.

I have been welcomed as a researcher at the following institutions, where otherwise unobtainable materials have been accessed: the Getty Research Institute (Beth Ann Guyann), the National Arts Centre of Canada (Gerry Grace), and the National Ballet of Canada (Sharon Vanderlinde). In the quest to track down copies of all the scores and other publications—an extremely difficult task living far from Paris—the music libraries at the following institutions have been particularly useful for me: McGill University, Université de Montréal, University of California at Los Angeles, University of Southern California, and Wilfrid Laurier University.

Articles and reviews incorporating aspects of this research have appeared in various publications along the way. For providing a venue for my work, thanks are due to *All Classical Guide* (Gerry Brennan), *Canadian University Music Review* (Mary Cyr), *Computer Music Journal* (Thom Blum, Curtis Roads, and Doug Keislar), *Leonardo Online* (Roger Malina), *Musical Times* (Antony Bye), *Musicworks* (Gayle Young), *Muzyka: Polish Musicological Quarterly* (Maciej Golab), *Sonances* (Jean-Michel Boulay), and *Tempo* (Malcolm MacDonald).

I would also like to express my appreciation to Robert Robertson of Harwood Academic Publishers, followed up by Oona Campbell, for not only agreeing to publish this work, but also for taking the project on with encouraging enthusiasm, and for putting up with its protracted gestation. Thanks also to Peter Nelson for his support of the project as editor in chief of the Contemporary Music Studies series, and to Richard Carlin, of Taylor and Francis, for his help editing the manuscript and seeing it through to publication.

Of course, the greatest acknowledgment must be accorded to Iannis Xenakis himself. He graciously provided assistance by making various crucial materials available, and was also willing to put up with questions and requests that would surely have been tedious given the pressures of innumerable such items pouring from all sides and, more important, his ongoing preoccupation with his own creative work. Thanks too, to Françoise Xenakis, for welcoming me into the lives of her and her husband on occasion. I have had the privilege to experience Xenakis as a teacher, as well as a composer and administrator (at CEMAMu). For all the harshness of his music, and the occasionally unsympathetic words in his writings, he was always patient and kind, even while challenging those surrounding him to be dedicated and uncompromising in their work. Perhaps most important to note is the inspiration his work and example have provided.

For their support and encouragement, for enabling me to pursue my dreams, I would like to dedicate this work to my parents, Audrey and Norman Harley. I would also like to dedicate it to my children, Ania and Ian, for helping me to live out those dreams.

1 The Outsider

Iannis and his two brothers, Cosmos and Jason, spent most of their childhood in Braila, Romania in the care of governesses. By all accounts, Iannis, the eldest, was nonetheless deeply devoted to his mother, who unfortunately died when he was five. He was, in Matossian's words, "deeply scarred by his mother's death. He clung to the few experiences he had shared with her: the gift of a flute whose sounds had astonished him, her wish that he should enjoy music" (1986, 13). After her death, however, he received little encouragement, and precious little affection. Xenakis has said he developed a "defense mechanism" against certain kinds of music associated with his childhood "because it awakens very sad memories in me." "I reacted against [this] music because I felt I was too sensitive. Music could even bring me to tears" (Varga 1996, 10, 8, 11).

Language was another element acting in a powerful way on Xenakis's early sense of alienation. While he was tutored in Greek, Iannis had his early schooling in Romanian, and was no doubt teased for being a "foreigner." In addition, the succession of governesses spoke their native tongues to their charges, giving the Xenakis boys exposure to other languages, including English, French, and German. While this would have been good for their intellectual and cultural development, it would also have made intimacy all the more difficult. At age ten Iannis was sent off to a Greek boarding school on the island of Spetse, where, belatedly, he discovered his own Greek culture, beginning a lifelong fascination and study. Mâche points out, though, that Xenakis may have endured derision because of his accent, coming as he did from another country. Paradoxically, it was this ostracism that drove him to the library; for solace in solitude, certainly, but also to a rich interior world filled with the poetry and philosophy of Greek history.

Matossian paints Xenakis's adolescent years as often troubled, and mostly solitary. After graduating from the school in Spetse, Iannis moved to Athens in order to prepare for the entrance exams to the Polytechnic Institute (Matossian 1986, 14–17). A growing interest in the sciences led him to study mathematics and physics, but he kept up his passion for ancient Greek philosophy and literature. In 1940, just as he passed the entrance requirements, the Italians invaded Greece and the Polytechnic Institute was closed. A “normal” route through the university to a career was not to be. The politics of Greece during that period were intricate, with the Italians supplanted by the Germans, who were then replaced by the British, leading to civil war.² Along with many others, Xenakis joined the Greek resistance, at first through student groups, then as part of the Communist Party. Eventually, he was involved in armed resistance, as part of the EAM, the national liberation front.³ Although he was fighting against the succession of authorities in power, and was thus acting “outside” the law, this must also be seen as the period during which Xenakis was most closely involved in collective activity. Certainly this experience was crucial in shaping the aesthetic of the composer that was to come.

Xenakis was seriously wounded in December 1944. That he did not die is surely a miracle, but somehow he survived, scarred and minus his left eye. Eventually he recovered enough to return to his studies, graduating in the summer of 1946 with a degree in civil engineering. Unfortunately, the authorities began rooting out people formerly active in the Communist Party, rounding them up into what amounted to concentration camps. Fearing for his life, Xenakis, with the help of his father and others, fled the country, landing first in Italy, and then, after various maneuvers, arriving in Paris on 11 November 1947. Unattracted by Paris at first, in the throes of its own postwar difficulties, he had intended to continue on to the United States, where his brother Jason was already studying philosophy. Without proper papers, and with no money, this dream did not come true (although he later ended up teaching for a period of five years in the States). Xenakis soon landed a job in the architectural studio of Le Corbusier, a figure who would exercise a major influence on his creative development. In the midst of all these life-wrenching experiences and dislocations, Xenakis had decided that, if ever he got the chance, he would devote himself to music. He once explained, “In my loneliness and isolation I tried to hang on to something—after all, my old life and new circumstances, my old image of the world and the new experiences, all these were in conflict. I wanted to find out who I really was. In that process, traditional Greek folk music appeared to be a safe point . . .” (ibid, 26).

2

From the Personal to the Individual

While Xenakis would certainly have been an outsider to the new musical activities in Paris or Darmstadt, he had, during his student years, received enough training and musical acculturation to know that he loved music and could dream of devoting himself to it. His father was an opera fan, of Richard Wagner in particular, and his mother played the piano. Xenakis made a few short-lived attempts to study the piano over the years, and he sang in the boy's choir at the school on Spetse. He recalls “singing Palestrina and liking it very much” (Varga 1996, 12). He also learned notation and solfège, and became acquainted with Greek church music and traditional dances there. During his brief period in Athens before the outbreak of the war, he studied harmony and counterpoint with a Russian-trained musician, Aristotle Koundourov. Xenakis proudly recalls learning all the parts of Mozart's Requiem by heart (Varga 1996, 14).

Music held a special place for Xenakis, undoubtedly related to memories of his mother: “Music was more like a dream for me than anything else. I didn't think about it consciously” (Varga 1996, 12). It was also linked to his passion for ancient Greek culture, the world in which he often dwelt in the solitude of his imagination: “I felt I was born too late—I had missed two millennia. . . . But of course there was music and there were the natural sciences. They were the link between ancient times and the present, because both had been an organic part of ancient thinking” (Varga 1996, 15).

Xenakis's scientific training was much more rigorous, of course, leading him in the direction of a career in engineering. However, upon his arrival in Paris, with a job as an engineering assistant in Le Corbusier's architectural studio, his mind was filled with music. As Matossian recounts, “Xenakis compos[ed] far into the night. . . . Several notebooks from this period show that he must have worked long

phrases, sometimes overlapping, or as isolated punctuations. The harmonic structure of these chords varies a great deal, from dissonances to quasi-triadic configurations voiced in wide spans or grouped close together. At one point, at mm. 18–21, the woodwinds actually settle onto one high-pitched chord, repeating and sustaining it as the strings carry on melodically active material (all five strings move as a block, though not in strict parallel motion). The brass take over at m. 21 with a chorale-like passage leading to a final block phrase for the full ensemble before fading out as the soloist plays through to the end on her own.

The bulk of the soloist's material alternates between sustained rolls and short rhythmic phrases. Once the ensemble enters, there are no real resting points nor clear shifts in rhythmic character. It is notable that there are no clear repetitions of percussion patterns, and this certainly heightens the informational density of the music.

As the final effort of one of the major composers of the second half of the twentieth century, *O-Mega* may garner more attention than it would otherwise deserve. Nonetheless, the music is a dramatic statement in the concerto genre for percussion, a sonority Xenakis clearly felt a strong attachment to over his long career.

Epilogue

While the tempos had become slower and slower, the number of measures dwindling to a relative handful, Xenakis continued to compose with full integrity, right until the end. By then—1997—it was clear that the effort was too great for such a frail disposition. The title of his last work signals the end of a most remarkable outpouring of musical creativity lasting close to fifty years and spanning some 150 works. It is always uncomfortable seeing great artists give up their activity because of illness or old age; and few are at ease with such a situation. While he continued to be feted around the world (with the Kyoto Prize in Japan, the Polar Prize in Sweden, etc.), Xenakis had to give up his musical explorations of a new world, one of his own making.

In a 1997 interview, when asked to describe his state of mind, Xenakis replied, with poignant directness: “A desert. . . . An endless desert . . . where nothing can grow any longer. . . . A desert with a powerful but unbearable past” (Lalas 1998, 43). One can only imagine what it must feel like to be unable to continue the creative activity that had been all-consuming for so many years. This quest had, to some extent, grown out of an urgent need to give expression to the intense, horrific experiences he had lived through as a young man, barely escaping from all that violence and upheaval with his life. As he confesses in another interview, music was connected with life in a fundamental way: “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 had 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” (Varga 1996, 47).

Xenakis certainly achieved “something important.” Simply put, he altered the course of music. His compositions are among the most original and forceful ever

composed. The rigor of his theoretical thought has challenged assumptions and trends, most notorious being his demonstration that serialism and tonal music can be understood as subclasses of a more general approach to the organization of pitch and other parameters. He, more than virtually anyone else, pointed the way to new ways of understanding music and of organizing it. In addition, his activities have ranged much wider than most composers, touching on writing, mathematics, engineering, architecture, multimedia design, and computer programming.

Ultimately, though, what remains primarily is the music. Powerful scores that challenge, provoke, thrill. Xenakis's music is best heard live—for the complex spatial distributions, the pounding, often layered, rhythms, and the massive, intense sonorities. And yes, even the modal melodies, the delicate moments, the starkly beautiful colors and textures.

Anyone who has glimpsed the wild landscapes of Greece knows something about where this music comes from. Ancient Delphi, for example, is set in the mountains, with sheer rock cliffs falling off into olive groves that spill down the valley to the salty, blood-warm waters of the Gulf of Corinth. In summertime, the heat is intense, the cicadas shrill, the shooting stars bright. As well, anyone who has put themselves out into the sea in a small boat or kayak knows of the dangers that hide beneath the sparkling blue waters: the currents that can pull you out or drive you onto the rocks, the swells, the sudden shifts of wind and weather, the sting of the salt and sand. Nature can be pastoral, as so many artists have evoked. But it can also be brutal and overpowering, savage and unforgiving.

The music of Xenakis evokes something of the violence of humanity as well as the striving of our creative impulses to understand and express the thoughts and impulses that swirl about our rational and unconscious selves. But equally, his music echoes the primal forces of nature, the wonders of the cosmos.

Of course, such an artist is doomed to fail. Fail, that is, to give adequate expression to the complexities and awe-inspiring power of the human spirit and the natural world. The composer is always doubtful, always questioning: "Everything changes. How, then, can we know something about anything?" (Varga 1996, 133). But Iannis Xenakis has indeed succeeded in creating sparks, in illuminating the universe in a unique way which is surely of some significance, now, and undoubtedly for some time to come.

Notes

Chapter 1. The Outsider

1. Newspaper reports of the revelations that came to light during the opening of inactive accounts in various Swiss banks from the period of the Nazi regime in Germany and World War II turned up the name of Xenakis's uncle.
2. Makis Solomos offers a succinct outline of the chronology of events in Greece during this period (1996, 38–39).
3. Xenakis had not readily discussed this intense, and ultimately painful, episode of his life until much later (see Fleuret 1981, 64–68; Matossian 1986, 18–27; Varga 1996, 14–19).

Chapter 2. From the Personal to the Individual

1. Jean Boivin (1995) has made a detailed study of Messiaen's pedagogical activities. Much of Messiaen's analytical materials have been published posthumously in seven volumes by Éditions LeDuc (see Messiaen 1994–).
2. The title *Chronochromie*, derived from two Greek works, "chronos" and "chroma," is remarkably similar to such bipartite titles as *Metastaseis* or *Pithoprakta*.
3. Boivin reports that Xenakis recalls meeting Stockhausen in Messiaen's class just once (1995, 112).
4. Mâche refers to the major collection published by Samuel Baud-Bovy: *Chansons populaires grecques du Dodecanese* (Mâche 1993, 200; see also Varga 1996, 26).
5. Solomos posits that Xenakis could have written this article, one of the few primary documents shedding light on the composer's concerns during this nascent period of his musical development, as early as 1952 (Solomos 2001, 3).
6. Mâche gives the unconfirmed broadcast date as 16 April 1953 (Mâche 1993, 198).
7. According to Radu Stan, of Éditions Salabert, *Zyia* also exists in a version adding a tenor chorus to the trio, and another adding horn and percussion. The score, with trio and chorus, was published for the much belated 1994 premiere at Evreux, France.
8. Xenakis also completed a couple of short vocal works during that time, including a choral work, *La colombe de la paix*, awarded a prize at the socialist World Student and