Contemporary Music Review, 2002, Vol. 21, Nos 2/3, 133–142

Notes on the Late-Period Xenakis

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According to a number of qualified commentators, Iannis Xenakis' works of the 1980s and 1990s display certain features that may suggest a neo-classical return to the past. These works are thus more or less explicitly attached to a postmodern trend which, it should be stressed, the author of *Metastaseis* clearly denounced.[1] I will discuss here the changes lately observed in Xenakis' manner of composing by putting them into the context of the historical development of Western music. Two contradictory aspects will be underlined: on the one hand, Xenakis' initial willpower to break with the musical models forged by the Western tradition, which he replaced with models inspired by mathematics, physics, or architecture; and, on the other hand, the turn taken by his late works, which seem to get closer and closer to – and finally rejoin – that same musical tradition.

KEYWORDS: Xenakis, aesthetics, (Western musical) tradition, moderism, postmodernism

I. An Extramusical Starting Point

Unlike other leading contemporary composers like Pierre Boulez or Karlheinz Stockhausen, who claim the heritage of serial music, Xenakis conceived his innovative action apart from any musical reference. As French critic Maurice Fleuret put it, "his thought is born prior to musical creation and is prolonged well beyond it" (Fleuret 1978: 3). This could explain why, in avant-garde circles, he has been perceived as "radically other" (Messiæn 1981: 20), as someone who has no link with Western culture (Maurice Le Roux, in Matossian 1981: 169). His otherness actually results to a large extent from his Greek heritage. For Xenakis' main intellectual sources date from well before the advent of the Christian Western civilization that he called "barbarian and uncultivated" compared to Greek antiquity (Xenakis 1971: 56). In fact, he is, as he described himself, a "Classical Greek living in the twentieth century." This formula properly defines the man who assumed the task of closing a long bracket in the cultural history of humanity by joining again the golden age of Pythagoras, Parmenides, and Plato.

The mathematical and architectural competence of Xenakis, unusual for a composer, certainly helped him to free himself from Western musical models (which he never completely assimilated) and from the Western cultural mold in general. His approach to music composition thus illustrates a remark of French philosopher Mikel Dufrenne according to which, for a musician, to free oneself from culture means to redefine the notion of musicality outside of the musical realm. In the same context, Dufrenne mentions a double process by which "reality comes to music and music reifies itself."[2] Xenakis' work may be

Contemporary Music Review
ISSN 0749-4467 print/ISSN 1477-2256 online
http://www.tandf.co.uk/journals
DOI:0749446022000022693

described in these terms. His *glissandi*, equivalent to curves, his sound masses corresponding to clouds and to human crowds, his arborescences inspired by archetypal morphologies, not to mention his polytopes, can all be viewed as attempts to make reality "musical". Conversely, they also represent a kind of reification of the reputedly immaterial musical realm.

On the one hand, Xenakis thus contributed much to the opening of the musical field toward an "infra-musical" domain, including the concrete world of natural sound and noise. On the other hand, his extensive use of mathematical formulas indicates a quest for abstract, metaphysical foundations residing – as in the Pythagorean and Platonic visions of the music of the spheres – beyond (audible) music, in the realm of "meta-music." But the later Xenakis appears less and less concerned with the infra-musical or metaphysical domains. He seems to have rediscovered the "so-called musical music,"[3] to which, in the 1950s, he had opposed the idea of formalized music. However, this "return" should not be seen as disavowing his extra-musical starting point. Actually, the late works of Xenakis rather tend to prove that there is no incompatibility between this starting point and the Western musical language.

II. Metamorphosis of the *Glissando*

The transformations undergone by the *glissando* – a sonic signature – reflect Xenakis' stylistic evolution since the 1950s. His earliest *glissandi* resulted from a direct conversion into sound of a visual element, the line. They provided a solution to a thorny problem with which Xenakis was confronted at the time when he composed *Metastaseis*: how to connect large vertical aggregates in a logical way. For him, replacing traditional harmonic writing – discontinuous chordal entities – with continuous lattices of *glissandi* was, in fact, a way of cutting the Gordian knot of serial hyper-complexity. In his orchestral works of the 1950s, the massed *glissandi* create a kind of sonic morphology,[4] the evolutive shapes or figures also evoking the notion of "gestalt." These shapes would still play an important part twenty years later, in compositions such as *Empreintes* (1975).

At the end of the 1960s, Xenakis' *glissandi* started to change. In *Mikka* (1971), for violin, they reproduce the traces left by a hypothetical particle following a trajectory of Brownian motion. This results in a ceaseless wandering between the low and high registers of the violin (figure 1). A few years later, in *Jonchaies* (1977), for orchestra, the string trajectories appear less sinuous while the sonic result comes closer to traditional melodic articulation. The curves which, in *Mikka*, "translated" the musical notation in a visual language, are here integrated into the musical notation itself (figure 2). In *Shaar* (1982), for string orchestra, one still recognizes the Brownian wanderings of *Mikka*, though in the context of quicker rhythms and a widened ambitus. But this time, the trajectories of the *glissandi* are clearly punctuated with accents that highlight a lively rhythm combining quarter-notes, eighths, and sixteenths (figure 3). A comparison of the introductory gestures of *Metastaseis*, *Cendrées* (1973), and *Jonchaies* shows the *glissandi* evolving toward a progressive intensification or acceleration (figures 4a, b, c). The similarity between the three examples is striking, with each *glissando* starting from G3, the lowest tone of the violin, then ascending to the high register. But, between the pure line of *Metastaseis*, advancing slowly, the tumultuous

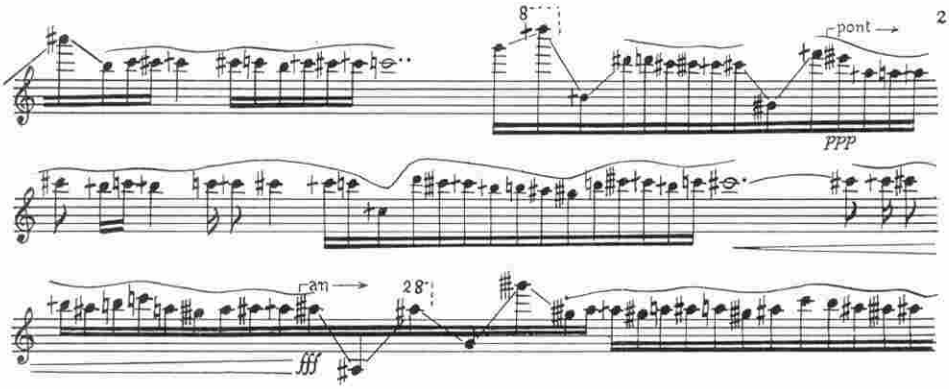

Figure 1
Mikka, excerpt from p. 2.

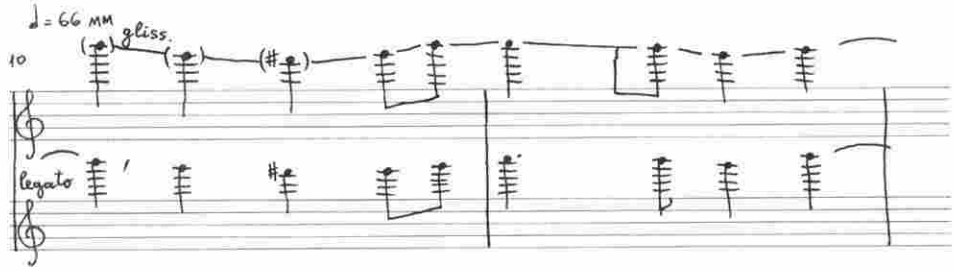

Figure 2
Jonchaies, mm. 10–11.

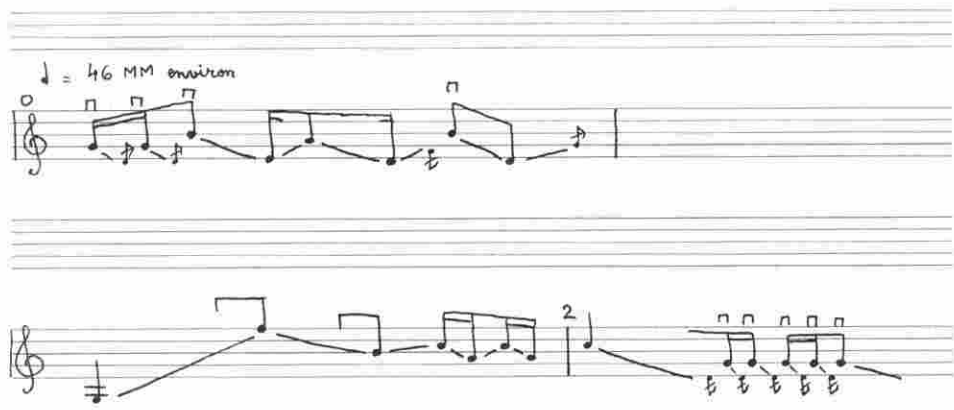

Figure 3
Shaar, mm. 1–3.

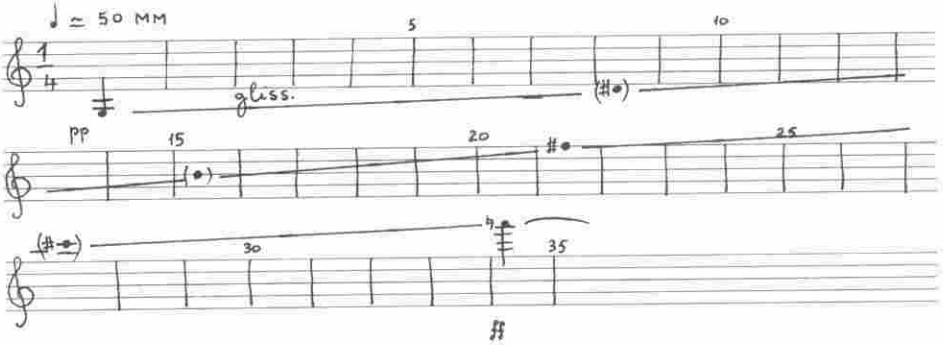

Figure 4a
Metastaseis, first violin, mm. 1–35.

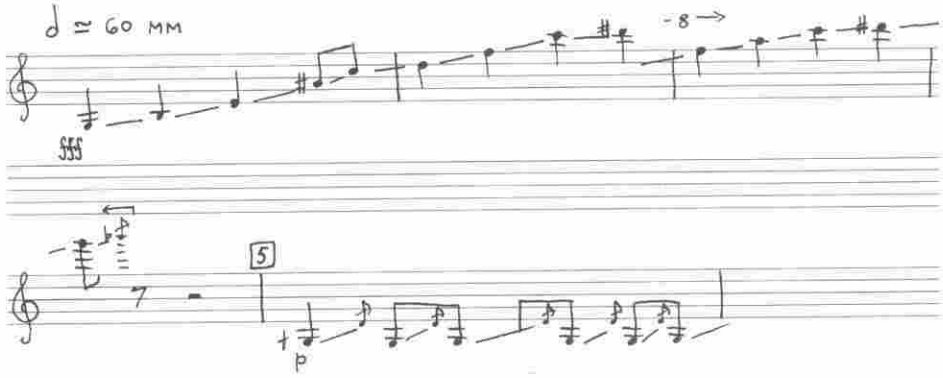

Figure 4b
Cendrées, first violin, mm. 1–5.

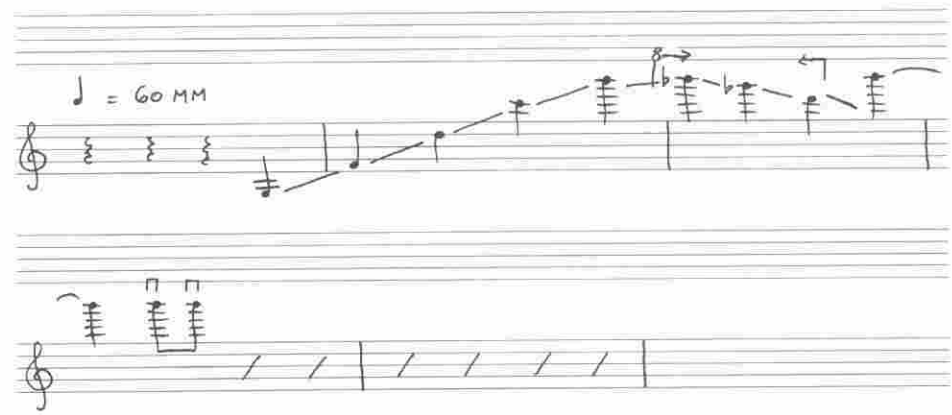

Figure 4c
Ionchaies, violins, mm. 1–5.

gushing of *Jonchaies*, and the measured rise of *Cendrées*, the diversification of the role allotted to the *glissando* is striking.

The earlier example from *Jonchaies* (figure 2) highlights the difference between two related sonic outlines: (i) one string group, in ordinary notation, "très legato;" (ii) the other filling the space between the notes with *glissandi*. The sonority that results from the superposition of these two articulations represents an intermediary phase between the continuity of the *glissando* and the discontinuity of traditional sound space. Even touched very lightly, the intermediary notes introduce a rhythm in an otherwise amorphous sonic space.[5] Any change in the direction of the *glissando* entails indeed a brief stop, a "point" marking a discontinuity, a kind of furrow in the continuity of the sound-flow.

If Xenakis' *glissandi* have been defined as a "flattening of the melodic contours," the converse phenomenon may be noticed in the later works: a progressive striation of the *glissandi*, which generates melodic lines (cf. Solomos 1996: 67). In *Shaar*, continuity and discontinuity – smooth and striated sonic space – still coexist, entailing a hybrid articulation; in *Dox-Orkh* (1991), a concerto for violin and orchestra, the *glissandi* are reserved only for the soloist, while in *Paille in the wind* (1992) they are completely eliminated. Xenakis rediscovered, or reinvented, a style of writing which, since the birth of plainchant, has been the foundation of Western musical tradition. But, it is not likely that he would fall into old stereotypes, like the neo-classical composer, or reduce musical invention to a manner of recycling the past, like the postmodernists. In fact, he does not really compose melodies and harmonies, since he continues to apply more general concepts to the music, such as complexity, (dis)symmetry, (a)periodicity, (dis)order, etc.

III. Sieve, Scale, Mode

The preference accorded by Xenakis to a discontinuous sonic space is related to his idea of "outside-time" ordering structures called sieves, which he conceived as a generalization of the concept of scale. Deployed in time and applied to pitch organization, sieves can generate rhythmic patterns, sequences of melodic intervals, and harmonic configurations. They structure, for instance, the growth of the tree-like sonic morphologies (arborescences) conceived by Xenakis at the end of the 1960s as a generalization of the concept of melody. In fact, the works based on arborescences indicate a reconciliation with linear polyphony, something Xenakis had categorically rejected in the 1950s as he denounced serial music. According to François-Bernard Mâche, the heterophony of these works occasionally seems even "to return to the tangle of serial counterpoint" (Mâche 1981: 163).

Through the concept of scale, the sieve opened the way to a resurgence of traditional modal principles. While underlining the difference between sieves and modes, musicologist Makis Solomos observes that certain passages of *Jonchaies* give rise to a "modal esthesis" which recalls the ancient idea of modal ethos (Solomos 1996: 89–90). To be sure, Xenakis rejected modalism, but he nevertheless admitted that his music is likely to create a modal ambience (cf. Varga 1996: 144–145). He also remarked that certain scales possess an "intrinsic power" which sometimes suffices to make the music interesting (cf. Varga 1996: 159). Commenting on *Jonchaies*, he acknowledged that he had privileged the

scales (sieves) too much, to the detriment of sound masses and other sonic architectures. On this point, he was ready to admit that he had made an error (cf. Restagno 1988: 60). But what really seemed to bother him was that, as soon as they are effectively applied to a musical articulation, the sieves tend to be perceived as modes.[6]

With *Paille in the Wind* (1992), a short piece for cello and piano, one does indeed hear the existence of a significant common ground between the notions of sieve (scale) and mode: their hierarchical internal organization. The pre-eminence granted to some of the elements forming the sieve, especially the recurrence of certain intervals and melodic cells, creates a modal ambience. In the passage quoted in figure 5 one can even note a kind of drone on the open strings of the cello: G (mm. 11–12), D (mm. 13–17), and A (mm. 18–21). In the piano part, certain repeated aggregates or sequences of aggregates acquire a preferential position. In this context, the numerous fermatas, which generally underline these same aggregates, are perceived as caesuras causing a sensation of cadential breaks. As with serial music, the need to provide aural landmarks in the flow of

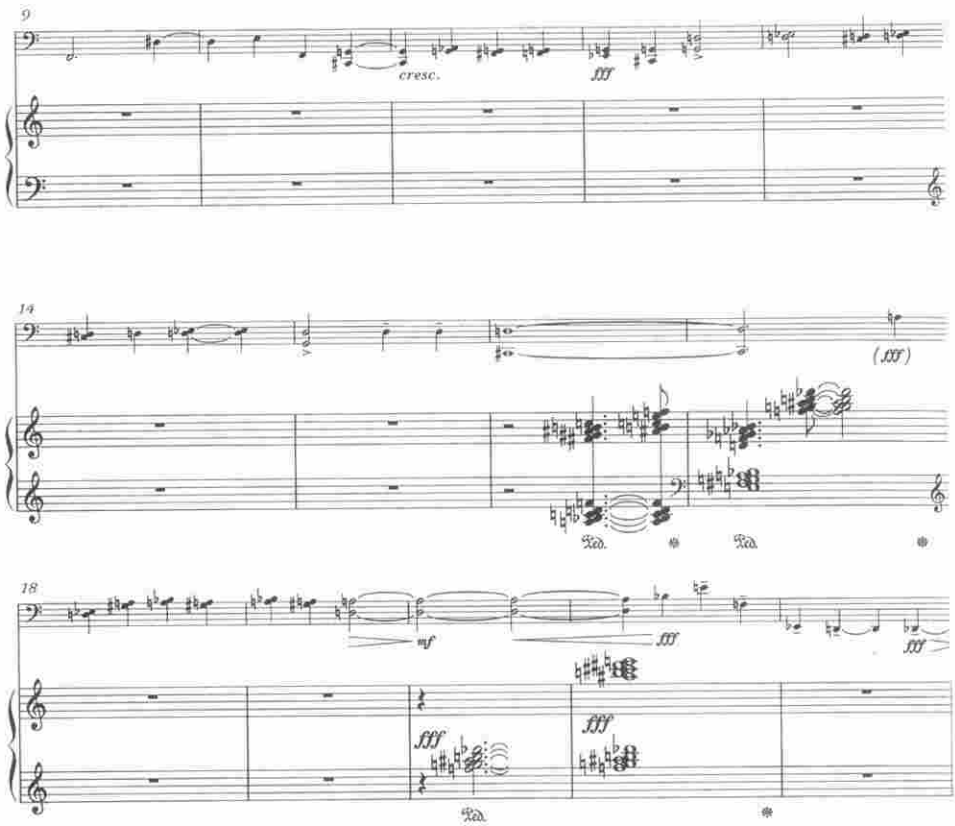

Figure 5
***Paille in the wind*, mm. 9–22.**

sound appears stronger than the principle of a perfect equality and neutrality of the sieve elements.

IV. Neo-classicism

Other arguments, besides its "modalism," allow one to interpret *Paille in the Wind* as an expression of a "turning point towards neo-classicism" (Solomos 1996: 96). The overall design, based on a sequence of phrases clearly delineated by "cadential" breaks, is of a remarkable limpidity. The music's unity is ensured by the presence of several recurring melodic cells, which occasionally undergo a quite traditional development. Figure 6 (m. 23) shows how one such developmental passage leads to an acceleration (sixteenth-notes), which announces the climax, rather like a Beethovenian sonata form. In fact, the meticulous preparation of this moment – the perfect control of the effects of tension and relaxation during the increasingly tight dialogue between the two characters, the cello and the piano – recalls the rhetoric and the teleology of the Classical-Romantic musical language. One is, in any case, far from the "outside-time" architectural vision which determined the musical form in the early works of Xenakis.

The sobriety of the instrumental writing in this piece, deprived of any artifice and any effect of virtuosity, also seems significant. The cello part, almost minimalist by comparison with that of *Nomos Alpha*, or *Kottos*, consists of ample melodic phrases using only one kind of articulation (arco, non vibrato, often in double-stops). As for the aggregate chords of the piano, they could be interpreted as a metamorphosis of the sound masses of the 1950s. It is as if, by a process of "condensation" (similar to the "striation" of the *glissandi* discussed earlier), the masses of sound were cut into vertical slices, thus giving rise to harmonic entities, which could be defined as cluster-chords. This results in a harmonic writing (figure 7) which is not unrelated (except for the roughness of its particular sound) to certain works of Debussy or Messiæn.

Paille in the Wind is not the only work showing parallels – but not true similarities – between the musical language of late Xenakis and today's post-modernist tendencies such as neo-tonalism, or "new simplicity."[7] In *Shaar*, for instance, one detects a "pole" G and a "dominant" D (Halbreich 1988: 231–232), while in *Jonchaies* one discovers "neo-tonal melodic lines" and even a "marvelous quasi-tonal harmony" (Lonchampt 1994: 102). *Ata* (1987) evokes "a certain French music of the pre-war period," "a caricature" of Stravinsky's primitivism of *Le*

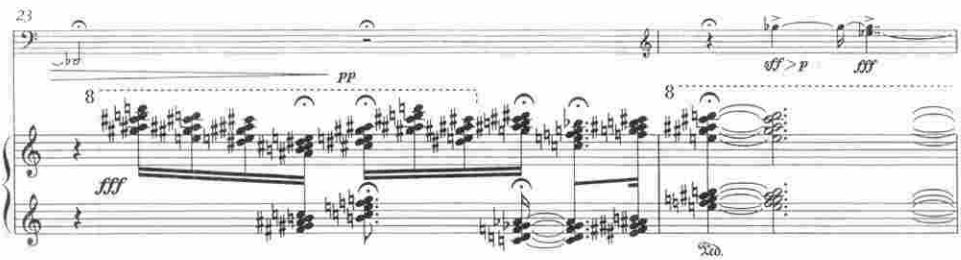

Figure 6
Paille in the wind, **mm. 23–24.**

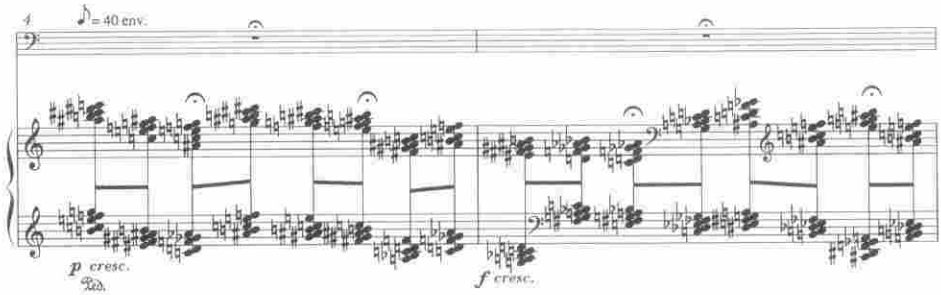

Figure 7
***Paille in the wind*, mm. 4–5.**

Sacre and of Messiæn's sonorous brass writing" (Rey 1991). *Tetora* (1990) recalls Shostakovitch's late string quartets (Solomos 1996: 96). *Nekuïa* (1981) reveals "Berliozian affinities" (Mâche 1991: 226) and other Classical or Romantic references could be also mentioned.[8] One may notice, then, "the breathlessness" of an inspiration which appears "turned towards the past," and one may even draw the astounding conclusion that: "after all, one was perhaps mistaken about the avant-gardism of the early Xenakis!" (Rey 1991: 13)

V. Xenakis and the Western Tradition

Such opinions appear no less extreme than that, diametrically opposed, of Milan Kundera, according to which the bridges between Xenakis and the history of music were broken (Kundera 1981: 22). In fact, Xenakis did not quite manage to extricate himself from this history, which, indeed, he had so much wanted to ignore. He did not "expatriate" himself from this "barbarian and uncultivated Western world" which he initially tried, in reviving musical theories of antiquity, to reduce to a simple bracket in the cultural evolution of humanity. As seen in his later works, the *glissandi* become melodic articulations, the clouds of sound "condense" to form harmonic aggregates, the tree-like structures give birth to polyphonies. While continuing to apply models borrowed from mathematics, Xenakis thus seems to have taken more and more into account a compositional logic, which applies specifically to music. The composer who once rejected "musical" music integrates it into his vision of the "arts/sciences alloys." He thus joins the ongoing saga of Western music. In fact, observed French composer Michel Philippot, "far from being a revolutionary," Xenakis "adapts perfectly well to the Western musical concept" (Philippot 1981: 101).

He remains, however, a truly radical composer: an innovator, an explorer, a dissident, and a heretic. With his explorations, in the 1950s and 1960s, of new sonic and conceptual territories, he contributed to the widening of the musical field, of the notion of music itself. While musicologist Daniel Charles observed that, with Xenakis, "Western civilization turns back on itself as if to assure itself of its destiny" (personal communication, 1996), it should be stressed that this fate was not – and is not – known in advance. If the Greek immigrant who landed in Paris, the heart of the Western world, ended up by "being integrated," the radical otherness of his initial activity has left a durable trace. The venerable body of

Western musical tradition, however, has absorbed the shock of *Metastaseis* and *Pithoprakta*, and has managed to keep intact an essential part of its identity.

Certain elements of this identity have indeed been preserved during the past few centuries. Basic musical categories such as monody, polyphony, or harmony have been able to absorb even the most daring iconoclasts. Xenakis is no exception, though he let himself dream of the day when an exceptional event (such as the cataclysm which caused the extinction of the dinosaurs) will create, in music as in other manifestations of human intelligence, a completely new situation. He links such a development to the possibility of a radical change (which he hoped to accelerate) in the "mental structures" of human beings. Then, he observed, and his work seems to anticipate this moment, the human perception of space, time, and motion will change.

But Xenakis did not succeed in provoking such a cataclysm. He did not outstrip the limitations inherent to humanity, a situation he sometimes compared to a spider unable to leave its cobweb (cf. Rey 1984: 40). In fact, one may wonder whether, while considering the musical categories of the past as particular cases illustrating his all-embracing vision of formalized music, Xenakis would not have reached exactly the opposite conclusion. Wouldn't he have relegated his own innovations to simple resurgences, or particular cases, of these traditional categories?

Should we conclude then by noting – with a cliché of postmodernism – the inescapable failure of a modern Utopia? Let us rather underline Xenakis' real achievement: if the utopian architect of cosmic polytopes did not quite manage to transform the universe of sound (and, by implication, the whole universe) as radically or profoundly as he had dreamed, he did, nevertheless, impose upon it a singular correction of trajectory.

References

Ahnert, S. (1994) "Dämmerschein." *Neue Zeitschrift für Musik* 5 (September), 63.

Dufrenne, M. (1991) *L'oeil et l'oreille*. Paris: J.-M. Place.

Fleuret, M. (1978) *Xenakis 78*. Paris: Éditions Salabert.

Halbreich, H. (1988) "Da *Cendrées* a *Waarg*, quindici anni di creatività". In *Xenakis*, ed. E. Restagno, pp. 211–270. Turin: EDT/Musica.

Iliescu, M. (1996) *Musical et extramusical. Eléments de pensée spatiale dans l'œuvre de Iannis Xenakis*. Doctoral dissertation, Université de Paris I, Paris, France.

Iliescu, M. (2000) "Xenakis and Thom: a morphodynamic of sound". *Les sciences de l'art en questions (Cahiers d'Art et Sciences de l'Art* 1), ed. D. Chateau, pp. 181–204. Paris: L'Harmattan.

Kundera, M. (1981) "Xenakis, prophète de l'insensibilité". In *Regards sur Iannis Xenakis*, ed. H. Gerhards, pp. 21–25. Paris: Stock.

Lonchampt, J. (1994) *Le bon plaisir*. Paris: Plume.

Mâche, F.-B. (1981) "Iannis Xenakis: introduction aux œuvres". In *Regards sur Iannis Xenakis*, ed. H. Gerhards, pp. 153–166. Paris: Stock.

Mâche, F.-B. (1991) "De Nekuïa à Dox-Orkh". In *Musica*, Cahier-Programme du Festival de Strasbourg.

Matossian, N. (1981) *Xenakis*. Paris: Fayard.

Matossian, N. (1988) *Programe du Festival de Donaueschingen*.

Messiæn, O. (1981) "Hommage". In *Regards sur Iannis Xenakis*, ed. by H. Gerhards, pp. 19–20. Paris: Stock.

Philippot, M. (1981) "Vingt ans avant, vingt ans après". In *Regards sur Iannis Xenakis*, ed. H. Gerhards, pp. 13–112. Paris: Stock.

Restagno, E. (1988) "Un'autobiografia dell'autore raccontata da E. Restagno". In *Xenakis*, ed. by E. Restagno, pp. 3–70. Turin: EDT/Musica.

Rey, A. (1984) "Expliquez-vous, Xenakis". *Le Monde de la Musique* 71, 34–40.
Rey, A. (1991) "Le progrès ça n'existe pas." *Le Monde*, 26 March, p. 13.
Solomos, M. (1996) *Iannis Xenakis*. Mercuès: P.O. Éditions.
Tabachnik, M. (1991) "Xenakis vu par un de ses interprètes attitrés". *Dissonance* 28 (May), 14–17.
Varga, B. A. (1996) *Conversations with Iannis Xenakis*. London: Faber & Faber.
Xenakis, I. (1971) *Musique Architecture*. Tournai: Casterman.
Xenakis, I. and Véret, J.-L. (1984) *Cité de la Musique, Parc de La Villette* (text unpublished).

Notes

1. Speaking of "after-modernism" in the arts, Xenakis severely condemns the tendency to imitate the past, which he links to a damaging "laxism" and to a "climate of idleness and narcissism" (cf. Xenakis and Véret 1984).
2. Dufrenne is here quoting Francis Bayer (cf. Dufrenne 1991: 101).
3. "To the devil with the so-called musical music," exclaimed Xenakis in the 1950s (cf. Matossian 1981: 220).
4. About Xenakis' vision of sonic morphologies and its similarities with the theories of French mathematician René Thom, see Iliescu (2000).
5. In his analysis of *Shaar*, Harry Halbreich (1988: 235) notices a "reconciliation between the pulsated-measured rhythm and the long glissandi, which thus are articulated in time."
6. Halbreich (1988: 231) notes certain melodic profiles in the late works of Xenakis of which "one could say they have a modal character."
7. This term has been applied to Xenakis' orchestral work, *Ata*, by Mâche (1991: 226) and Matossian (1988).
8. According to Sven Ahnert (1994: 63), *Dämmerschein* (1994) "calls strongly into question the classico-romantic tradition, but does not deny it." In fact, Xenakis is sometimes described as a "great romantic," in the tradition of Brahms (cf. Tabachnik 1991: 14). Commenting on *Dox-Orkh* (1991), Mâche (1991: 227) remarks that the violin part recalls the most dramatic concertos of the nineteenth century. The rhetorical construction and "romantic" opposition between the piano and the orchestra is noted in *Keqrops* (1987), as is the neo-classical aspects of *Ergma* (1994) and *Hunem-Iduhey* (1996) (cf. Iliescu 1996: 311).