

# philharmonia orchestra

## **XENAKIS**     *Pithoprakta*

In *Metastasis* (1953-4) and *Pithoprakta* (1955-6) Xenakis turned the traditional orchestral medium on its head. He had grown up in Greece, studied civil engineering at the Athens Polytechnic, been active in the demonstrations against Nazi deportations, and escaped after the post-war Junta issued a death sentence. A refugee in Paris, he joined the office of Le Corbusier as an engineer; and it was this experience, as well as the mass phenomena, chaos and violence he had witnessed in Greece, that informed his first compositions. 'I shall never forget the transformation of the regular, rhythmic noise [marching] of a hundred thousand people into some fantastic disorder' he later recalled.

Xenakis worked for Le Corbusier at a time when the latter was moving from rectangular slab architecture to the flowing curvilinear asymmetry of the chapel at Ronchamp, arguably his masterpiece. Le Corbusier's first designs for Ronchamp date from 1950 and the building was completed in 1955. How far Xenakis was involved is unclear, but he was a key assistant in Le Corbusier's next project, the Couvent de la Tourette, and principal architect of the iconic Philips Pavilion built for the 1958 Brussels World Exhibition. It seems that his skill as a structural engineer enabled Le Corbusier to realise a long obsession with non-orthogonal geometry stemming from an admiration for Gaudi. Xenakis's brilliant execution of the pavilion's hyperbolic paraboloids (curved concrete) is difficult to describe, but 'a three-peaked nomadic tent', 'the interior of a cow's stomach', have been two attempts.

Turning increasingly to composition, in *Metastasis* Xenakis transferred the radiating lines on his drawing board into criss-cross glissandi for the strings. Superimposed string slides, each with a different gradient, create huge sweeps of sound that expand and contract asymmetrically. The plasticity and primal energy of the music was disturbingly new, and the first performance of *Metastasis* was controversial. *Pithoprakta* was more daringly radical, more brilliantly intuitive, yet quickly hailed as a masterpiece. The title means 'actions through probabilities'. The work is scored for forty-six strings (each with its own line), two trombones, a xylophone and a woodblock; and the many separate sounds spread over a wide spectrum produce a granular effect, in which individual sounds lose their importance to the benefit of the whole and their behaviour is governed by mathematical laws.

The piece opens with an insect-like cloud of unpitched tapping, punctuated by a single stroke on the woodblock: the first of its startling interjections throughout the score. Pitches enter, angular and forceful played with short bow strokes. The texture grows wilder and more chaotic, eventually settling in a sustained, 46-note cluster illuminated by a single pitch repeated on the xylophone. Into this dense mass is injected a frenzied plucking at different speeds. (Both the cluster and pizzicati are uncannily prescient of Ligeti). After a moment of silence, criss-cross glissandi ensue, punctuated by ever longer gaps, before an extended section of disparate activity delivers enormous energy, although within a basically static cloud. The only entry of the trombones (also with glissandi) is thrillingly timed, and heralds the single instance in the score where the strings pluck in rhythmic unison. It is a powerful conjunction, gradually fragmenting in brief after-shocks separated by silence. The final silence is broken into by a mass of swooping glissandi that gradually settle in a dense cluster like a swarm of bees, before evaporating in the upper reaches of the violins.