SUMMARY

The subject of the doctoral dissertation, which is part of the procedure for obtaining a doctoral degree in musical arts, in the artistic field of composition and music theory, is a composition entitled *n-Cyclus* for a symphony orchestra. The score of the composition is accompanied by a written theoretical reflection in the form of analytical commentary.

n-Cyclus has been composed for a symphony orchestra consisting of: three flutes (including piccolo), two oboes, English horn, two clarinets, bass clarinet, two bassoons, four French horns, three trumpets, three trombones, tuba, four percussion groups, celesta, piano, harp, 12 first violins, 12 second violins, 10 violas, 8 cellos and 6 double basses.

The composition is based on the original technique of overlapping cycles. It was inspired by an attempt to systematize the phenomenon of process in a work of music. The technique has been developed with regard to two aspects: numerical aspect and sound aspect. With respect to the first one the technique of overlapping cycles consists – generally speaking – in repeating certain combinations of numbers, which usually form arithmetic sequences with a common difference of 1 or -1. Every element of the sequence has two movement possibilities – it moves either up or down by 1. In the composer's opinion, the structure of these sequences most closely reflects the idea of processuality. The sequences of numbers are repeated and form the cycles suggested by the title of the composition.

Having worked out the system for describing the phenomenon of process numerically, the composer translated the numbers into musical parameters. The processuality has been achieved in music by means of gradual and limited movement of individual elements of a given sound parameter. There is a clear analogy in the translation of sequence elements into the elements of musical parameters: just as subsequent elements of the sequence move by an elementary value of 1, the individual elements of a given musical parameter move in a gradual way, for example the interval between successive sounds is increased by a semitone and the successive rhythmic values are lengthened gradually by adding an elementary rhythmic unit. In *c-Cyclus* numeric sequences have been used to organise most of the musical parameters, including those related to pitch, rhythm, articulation, tempo and instrumentation.

The theoretical description consists of an introduction, five chapters, conclusion and bibliography. The introduction presents the genesis of the technique of overlapping cycles. The first chapter contains basic information on the composition, including the interpretation of the title and the discussion of the instruments used in the composition, their grouping and arrangement in the score. The second chapter reflects on the connection between numbers and sounds and discusses selected 20th-century composer's techniques based on the idea of translating numbers or numerical

operations into music. The third chapter presents general principles of the technique of overlapping cycles with regard to numbers and sounds. The fourth chapter focuses on how the technique of overlapping cycles has been used in *n-Cyclus*. These issues are discussed from the perspective of Józef M. Chomiński's idea of sound material regulators. The analysis refers to individual regulating factors which manifest themselves in three main regulation aspects: diastematic regulation, regulation of time and movement and sound regulation. The last, fifth chapter presents the higher forming category of higher order cyclicity. The functioning of this category in *n-Cyclus* has been discussed with reference to diastematic, tine-and-movement and sound aspects. The closing chapter recapitulates the major issues, presents final conclusions and discusses prospective uses of the technique of overlapping cycles in composition. Additionally, it places the phenomenon of cyclicity in a broader musical and philosophical context.

Adam Porębski