

**ON THE THEORY OF ART:
STRUCTURAL - SEMIOTIC, INFORMATIONAL - SYNERGETIC
AND GENERALIZED SYMMETROLOGICAL APPROACH**

Vladimir Koptsik,

Moscow State University, Dept. of Physics, 119899, Russia,

The organic unity, interaction and hierarchy of symmetries of different kinds together with different symmetry violations is the principal compositional law of the morphology of art. The manifestations of this law in Escher's graphical works are analyzed in the report from the position of a new generalized symmetrological, synergetic and informational - semiotic approaches in the theory of art [1,2] in connection with the celebration of centennial anniversary of the artist.

Every artist creates his/hers own world. And Escher's world is really his own one which may not be confused with any other. This world is ordered and disordered, symmetrical and dissymmetrical, crystallographic and not crystallographic, common to all humankind at the same time. It is a transformational one.

Escher's world is especially rich: it is a polydimensional, polyfunctional and polysemantical one, full of hidden metaphorical and allegorical senses. It is a paradoxical world, the creation of a genius. The semantics and poetics of the ornamental design was extraordinarily enlarged by him. The impossibility turns into a possibility, the perpetuum mobile, the metamorphosis and transformations became possible in this world.

The extraordinary enlargement of the ornamental design's semantics, the creation of a new genre of ornamental painting are the principal achievements of Escher as an artist. To disclose the different senses of his paintings the report applies both the traditional comparative historical methods of art studies and the appropriately adopted methods of synergetics, information theory and the generalized theory of symmetry. An artistic creation is considered as a complicated semiotic system consisting of the plans of expression and of meanings. And the symmetry of a work of art is defined as a set of artistic language's transformations preserving the sense of this work a metaphorical analogue of the symmetry group.

This report is accompanied by a series of concrete analyses of Escher's works which illustrate our general approach.

REFERENCES

1. V.A. Koptsik. Creative power of asymmetry in science and art. In: Katachi and Symmetry. Ed. by T. Ogawa et. al. - Tokyo: Springer, 1996, pp. 363 - 371
2. V. A. Koptsik. On the eve of XXI century: a dialogue of natural sciences and humanities. Proceedings of International Conference "Mathematics and Art". Moscow State University, 1997, pp. 77-87