

"CRYSTAL" FIELD OF MUSIC (ON ONE RENASCENT THEORY)

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In the early twentieth century at the Emperor's Kazan University there worked the prominent physiologist professor A.F.Samoilov (1 867-193 0) who won fame with his experiments in the field of electric cardiology. Ample recognition was received by him in Soviet Russia where he became the first Lenin prize-winner(1930). Unfortunately, only a few people, even in the motherland, know about his theoretical works in the field of music. One of his articles was dedicated to the most intricate problem - the problem of the composer Skriabin's harmony Collection of papers "Melos", 1918, issue no.2), while the other one was called "Arrangement of musical intervals on a line, plane, and space"(Izvestiya of Russian Academy of Sciences, 1919).

Trying "to order" musical tones and intervals, he proceeded from the assumption that the rational and considered system of distribution of homogenous magnitudes not only facilitates to the memorizing process but can be also viewed as absolutely independent tool of research, since it reveals the previously unnoticed links and relations between the magnitudes and forms new points of view".

Examining the structure of pure harmonic pitch in musical acoustics, he comes to the idea of representing this structure in the form of a crystal rather than in the form of ordinary linear series (sound series) . We does it to compare the discrete intervals of tones with discrete distances between the crystal lattice points (in this case he suggests various octahedrons). He sees in it the visual realization of the fact that musical intervals are nothing but the independent irritants for ear (in contrast to eye where all attempts to represent the colour system as the three-dimensional body resulted in construction of volumes having undiscete, that is solid, structure).

One can consider the Samoilov's theory as the exotic splash of intelligence of the lofty brow aesthete. But it will be recalled that prior to him, such prominent people as V. Goldschmidt and K.Weiss(Germany) and, irrespective of them, V. Vernadsky (Soviet Russia) have also come to similar comparisons of musical pitches and crystals. All this taken together impels us to treat more attentively to this forgotten idea of Kazan scientist; this idea will make it possible to extend the scope of comprehension of symmetric structures and to reveal general regularities of nature of heterogeneous, and, at the first glance, incompatible, phenomena.