

МАТЕМАТИЧЕСКАЯ ЖИЗНЬ

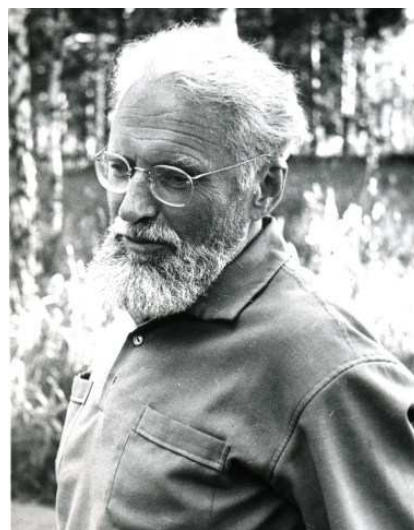
THE LIFE AND WORKS OF A. D. ALEXANDROV

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Life's Signposts

Aleksandr Danilovich Alexandrov was born in the Volyn village of the Ryazan province on August 4, 1912. His parents were high school teachers. He entered the Physics Faculty of Leningrad State University in 1929 and graduated in 1933. His supervisors were Boris Delauney (1890–1980), a prominent geometer and algebraist, and Vladimir Fok (1898–1974), one of the outstanding theoretical physicists of the last century. The first articles by Alexandrov dealt with some problems of theoretical physics and mathematics. But geometry soon became his main speciality.

Alexandrov defended his PhD thesis in 1935 and his second doctorate thesis in 1937. He was elected to a vacancy of corresponding member of the Academy of Sciences of the USSR in 1946 and was promoted to full membership in 1964.



Rectorship

From 1952 to 1964 Alexandrov was the Rector of Leningrad State University. These years he actively and effectively supported the struggle of biologists with lysenkoism. Genetics had been in the syllabus of LSU in the 1950s whereas this happened in the other domestic universities only in 1965. The name of Rector Alexandrov is connected with the uprise of the new areas of science such as sociology and mathematical economics which he backed up in the grim years.

Alexandrov was greatly respected by established scholars as well as academic youth. “He led the University by moral authority rather than the force of direct order,” so wrote Vladimir Smirnov (1887–1974) in the letter of commendation on the occasion of Alexandrov’s retirement from the position of Rector.

Contribution to Science

Alexandrov owned the first class results in geometry, partial differential equations, real function theory, and mathematical crystallography. He paid much attention to the geometrical problems of foundations of relativity and achieved significant progress in this area.

Alexandrov's studies in geometry started within the theory of mixed volumes of convex bodies in which he significantly developed the results by Minkowski and other classics of this science. One of the most brilliant results of Alexandrov is his solution of the Weyl problem on realization of a convex surface with a given intrinsic metric.

The works of Alexandrov on the theory of irregular surfaces developed the geometrical conception of space, which makes them everlasting. These contributions by Alexandrov deserve commendation along with the achievements of the best geometers such as Lobachevsky, Riemann, and Cartan. His contribution is reflected in [1–8].

Siberia

In 1964 Mikhail Lavrentyev (1900–1980) invited Alexandrov to join the Siberian Division of the Academy of Sciences of the USSR. Alexandrov moved with his family to Novosibirsk where he found many faithful friends and students.

By 1986 he headed a department of the Institute of Mathematics (now, the Sobolev Institute), lectured in Novosibirsk State University, and wrote new versions of geometry textbooks at the secondary school level. Alexandrov opened his soul and heart to Siberia, but was infected with tick-borne encephalitis which undermined his health seriously.

During Stagnation

Alexandrov was welcome and acclaimed at the beginning of his stay at Novosibirsk. Crowds of people visited his public lectures mostly on the general issues of life and science. But soon the bosses and their “dish-leasers” became envious of his public influence. He encountered ribaldry, mockery, and even abuse, but revealed stoicism of a warrior and overcame all attacks with dignity and honor.

The epoch of stagnation in the USSR was marked with a rather grim atmosphere of the intellectual life of the country. The then country was an instance of the realm of mediocrity. Chaps of no merits used their party connections to control practically all sides of academic life. The group of geometers together with a few allies from the other mathematical departments was a small detail besieged by adversaries. Only the broad back of Alexandrov helped us stay in relative security.

Return to St. Petersburg

From April of 1986 up to his death on July 27, 1999, Alexandrov was on the staff of the St. Petersburg Department of the Steklov Mathematical Institute.

Alexandrov's Ethics

Alexandrov hated all crooks, “marxism-borne” popes and inquisitors who used science for mean and greedy ends. There is a precipice of repulsion between science and power. Power confronts freedom which is the essence of mathematics. Alexandrov viewed science as the tool that liberates humans from material burdens and untether them intellectually.

Geometry taught Alexandrov universal humanism. He liked the words of Paul the Apostle and repeated that “there is neither Greek, nor Jew” in geometry. Humanism, responsibility, and scientific stance are the ingredients of the perfect morality by Alexandrov. Human is the source and aim of everything. That is the essence of universal humanism. Human is responsible for

everything. That is the meaning of responsibility. The scientific stance as human's statement free of subjectivism is that which makes the foundation of morality.

All his life up to his terminal day Alexandrov stood at the viewpoint of Communism. If asked whether he believed in Communism, he always answered that for him it had been a matter of science rather than a matter of belief. Also he perfectly understood the rotten nature of the political system of the USSR and never concealed his negative attitude to the regime.

Homage

Alexandrov went through a long and exuberant life. He was a great citizen of his great country.

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