

ARNOLD IS GONE

This is a short obituary of Vladimir Igorevich Arnold (12.06.1937–3.06.2010).

Vladimir Igorevich Arnold has left us... Out of the blue and so untimely...

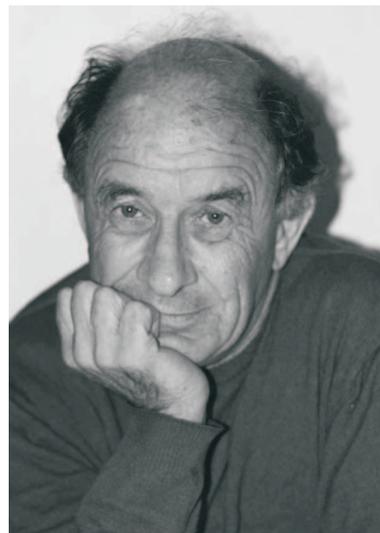
Arnold is a token figure of the demimonde of the present-day academic community of Russia since he held records in all popular citation indices. Much more important is the fact that Arnold is a real teacher of the dozens if not hundreds of thousands of modern scientists who mastered the art of solving ordinary differential equations with his textbook at hand.

Differentiation discovers trends, and integration forecasts the future from trends. Differential equations express connections between the laws we have grasped in the small. Qualitative analysis and solution of the equations underlie the scientific prognosis of future events. Invented three centuries ago as the toolkit of classical mechanics, the differential and integral calculus lays grounds for the theory of dynamical systems which incorporates celestial mechanics, astronautics, and hydrodynamics. Arnold's *Mathematical Principles of Classical Mechanics* occupies the place of Newton's *Mathematical Principles of Natural Philosophy* at the desks of all specialists in these fields.

Arnold, once a student of Kolmogorov, is the most brilliant representative of the romantic trend in the mathematics of the twentieth century, a successor of the synthetic traditions of Diophantus, Newton, Gauss, Chebychev, Lobachevsky, and Poincaré. During many decades ahead, mathematicians will recall the solution of the thirteenth Hilbert problem Arnold gave as a third-year student of Lomonosov State University, as well as his deep lectures on the history of mathematics, the sharp criticism of the notorious «Bourbakism», and the bewildering phantasmagorias in the wake of the emerald tablets.

Arnold had entered the history of the world mathematics many years ago and will reside there forever. Mathematics is a matter of a rather slight rather than paramount importance. To be a great mathematician is quite an honor and, seemingly, this is a pleasure. It is not shameful to be a mathematician but it is shameful to be only a mathematician, since specialization suppresses personality. Arnold was a man much greater than his mathematics and mechanics. It is not excluded that only a few professionals in Russia would recall the mathematical contributions of Arnold after the lapse of a century. However, the name of Arnold will never vanish from the Russian culture while our Russian language survives for Arnold made a discovery of an extraordinary brightness and talent in Pushkinistics.

All Russians know about the «uncle, man of firm convictions», from the beginning of the first chapter of *Eugene Onegin*. Fewer readers pay any attention to the dedication and the epigraph in French marked as «tire d'une lettre particuliere». In the first edition of 1825 this epigraph preceded the first chapter, whereas in 1833 Pushkin chose it to be the



common epigraph to the whole of his novel in verses. At the times of Pushkin all cultivated persons had seemed to understand the epigraph from a half-word and needed no explanations. Culture changed since then and the intrinsic meaning of the epigraph became enigmatic for about one hundred and fifty years. The common hypothesis reads that the epigraph was some mystification belonging to Pushkin's pen.

In 1998 Arnold published a short note «About the epigraph to *Eugene Onegin*» in *Proceedings of the Russian Academy of Sciences (Series in Literature and Language)*. Professor and International Grandmaster Larisa Volpert, an outstanding expert in the creative heritage of Pushkin, briefly evaluated this note as follows: «In 1998 V. I. Arnold, an amateur-pushkinist, happened to find the source of the epigraph. He suggested and in our opinion suggested quite convincingly that the epigraph is an inexact citation from *Les Liaisons Dangereuses* by Pierre Choderlos de Laclos. A serious finding, even a small discovery, since this concerns the epigraph to the whole novel. It is a pity that Arnold did not proceed further from the concise statement and did not attempt to connect his finding with the poetics of *Eugene Onegin*».

This rather unknown episode characterizes the extraordinary gifts and treasures of Arnold's personality we all enjoyed in Russia as his compatriots and contemporaries. Yesterday Arnold had moved to the pantheon of the world culture. His memories will remain exuberant and enduring.

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