REMINISCENCES OF S. A. YANOVSKAYA

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I met Sof'ya Aleksandrovna Yanovskaya (1896 – 1966) when I was a student of the Mechanico-Mathematical College (Mech.-Mat.) of Moscow University in 1937. She taught the special course on Mathematical Logic, which was very interesting for me. Later I also heard her course on History of Mathematics. She directed the Department [*kafedra*] of History of Mathematics, and led the Seminar in History of Mathematics — before World War II jointly with Mark Yakovlevich Vygodsky (1898 – 1965), and after World War II jointly with Adolf Pavlovich Yushkevich (1906 – 1993). I often talked with Sof'ya Aleksandrovna about philosophical and historical problems, and these talks exerted a strong influence on me.

Sof'ya Aleksandrovna was a convinced Marxist and I often asked her to explain problems of dialectics that were incomprehensible to me. She usually told me that the best model of dialectics is an electric bell consisting of a coil with an iron core closing the electrical circuit: when an electrical current flows through this circuit, the coil attains the properties of a magnet; it attracts the core and breaks the circuit, then the coil loses the properties of a magnet and the core returns to its initial position, closes the circuit, and a new current begins to flow. We often discussed the problems of stability of phenomena and questions about the structure of feudal society and of the duality between feudal and capitalist societies.

In 1951, when I was professor of the Department of Geometry of Azerbaijan University in Baku and I began to teach the course on

History of Mathematics, I learned that the famous thirteenth-century mathematician Nasir al-Din al-Tusi worked at Maragha in southern Azerbaijan, and I began research on his mathematical works. I gave a lecture on these works at the seminar on history of mathematics headed by Yanovskaya and Yushkevich and began to participate regularly in meetings of this seminar.

Sof'ya Aleksandrovna told me that she was born in Odessa (now in the Ukraine), became a revolutionary before the Russian Revolution of 1917, and that during the Russian Civil War that followed (1918-1920) she was an active participant in the war on the side of the Reds. Once she was even shot by the Whites. She was saved by the fact that she was of very small stature and wore a very tall hat. The shots were fired on a bridge, the bullets hit the hat, and Sof'ya Aleksandrovna fell into the river and stayed hidden in the rushes until dark.

The Russian writer I. I. Babel' (1894 – 1941), in his story "The End of the Old Folks' Home" (*"Konets bogadel'ni"*), has described the funeral of a Bolshevik commander, Hersch Lugovnoi. In one of the speeches given during this funeral, the following words were spoken: "Comrade Hersch suffered repressive measures together with Sonya Yanovskaya, Ivan Sokolov, and Monoszon in 1913 in the town of Nikolayev" (I. Babel', *Izbrannoye*, Moscow, 1989, p. 218).[*] When I asked Sof'ya Aleksandrovna whether this story was about her, she answered: "Isaak Babel' was my friend".

In 1932, together with Dmitri Raikov (Moscow) and Nakhimovskaya (Minsk), Sof'ya Aleksandrovna researched the mathematical manuscripts of Karl Marx and published some of the more important thoughts of Marx relating to mathematics: Marx's interpretation of the process of differentiation as a "dialectical process and his periodization of the history of calculus. This periodization contains three periods: (1) the "mystical", of Newton and Leibniz; (2) the "rational", of Euler and D'Alembert; and (3) the "algebraic", of Lagrange.

The personal life of Sof'ya Aleksandrovna was not happy. Once when I was in her home she acquainted me with her former husband Kaufman. Their son Fima (Yefim) was mentally ill and could not obtain

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[*]For the convenience of those who do not read Russian who may wish to read this story on their own, the editor has substituted for the author's translation the translation appearing (on p. 353) in *The Collected Stories of Isaac Babel* (edited and translated by Walter Morison, with an Introduction by Lionel Trilling), New York/Cleveland, Meridian Books, World Publishing Co., 1960).

an education. When he became an adult, he typed his mother's papers. Shortly after Sof'ya Aleksandrovna died, Fima threw himself from a window of their home.

During World War II Sof'ya Aleksandrovna was evacuated to Molotov (Perm') and gave lectures at Molotov University. There she cared for the most gifted students and transferred them to Moscow University. Some of these students became outstanding mathematicians, among them Eugene Borisovich Dynkin, now a professor at Cornell University and a member of the National Academy of Sciences of the USA; Ol'ga Aleksandrovna Olyenik, now professor at Moscow University and a member of the Russian Academy of Sciences; and Mikhail Mikhailovich Postnikov, now also a professor at Moscow University and a Lenin Prize laureate. Sof'ya Aleksandrovna even adopted Eugene Dynkin along with his mother into her own family, and Dynkin's mother kept house for Sof'ya Aleksandrovna. Later, after the death of Dynkin's mother and Dynkin's marriage, these household duties were passed on to Dynkin's wife Irina Genrikhovna Pakshver. When I visited Sof'ya Aleksandrovna for the last time, I participated in the dinner of this family and remembered Irina's brother Sergei, who was my schoolmate, a POW during World War II, and after the war was shot in the *Gulag*.

One of Sof'ya Aleksandrovna's students was Konstantin Alekse-evich Rybnikov, who before the was her *aspirant* [graduate or post-graduate student] and with her help became a candidate (*kandidat* = American Ph.D.) of physico-mathematical sciences. After the war he worked in one of the institutions of the Central Committee of the Communist Party of the Soviet Union (CC-CPSU) and had access to photocopies of the mathematical manuscripts of Marx that were held in the Marx-Engels-Lenin Institute; thus he decided to obtain the degree of Doctor of Science (Sc.D.) by means of these manuscripts. Sof'ya Aleksandrovna visited him regularly in the Marx-Engels-Lenin Institute and translated Marx's manuscripts for him. Although the most important of Marx's thoughts in these manuscripts had already been studied by Yanovskaya, Raikov, and Nakhimovskaya in 1932, Rybnikov defended his doctoral thesis in 1954 and became Dr.Sc. As a Dr.Sc. he obtained a position as professor on the Mech.-Mat. faculty and began to teach courses on history and methodology of mathematics and on combi-natorial analysis, which he had learned while working at the CC-CPSU. As a former employee of the CC-CPSU he became a member of the Party Committee of the University and so achieved great influence at Mech.-Mat. Then he convinced the leadership of Mech.-Mat. to abolish

the Department of History of Mathematics and to organize the Section for History of Mathematics and Mechanics. Rybnikov became chief of this Section and one of the leaders of the Seminar for History of Mathematics, which was transformed into the Seminar for History of Mathematics and Mechanics. In these conditions, Sof'ya Aleksandrovna transferred to the Department of Mathematical Logic.