DETAILS ON BIOGRAPHY OF JERZY NEYMAN

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ABSTRACT

Details of the biography of Jerzy Neyman and a short outline of the history of the native town Tighina in Basarabia (the Republic of Moldova) of the outstanding mathematician and statistician, astronomer, meteorologist, biologist, philosopher and sociologist, founder of the mathematical theory of selection are presented.

PARENTS AND THE HISTORY OF BESSARABIA

Jerzy Neyman was born on 16 April 1894 in Bender (actually and till 1812 Tighina), a small town on the right side border of the Dniester river in Bessarabia province (located between the Dniester and Prut rivers) of Tsar Russia (actually in the Independent Republic of Moldova). His father Marian-Ceslav son of Ghermaghen Neyman was born in village of Sidorovka Kanev County near Kiev. He was a lawyer. In 1892-1897 he worked as a criminal investigator in Chilia (a small city on Chilia branch of the Danube river in the Danube delta) and Tighina. The mother of Jerzy, Kazimira, daughter of Kazimir, had the maiden name Liutoslavska. She was born also in Kiev province in the county of Cherkassk.

2. THE BIOGRAPHY AND SCIENTIFIC ACTIVITY OF JERZY NEYMAN

In 1897 Jerzy's father was moved by his job to Kharkov. Here his son finished the gymnasium no. 3. In 1912 he entered the physical and mathematical department of the Kharkov University, where he studied the courses by D.M. Sintsov, S.N. Bernstein, T. K. Russian, who finished also the gymnasium in Chisinau in 1885. During his graduation Neyman prepared for publication the lecture course by T.K.Russian on "Differential calculus" on 340 pages, which was published by the "Mathematical Student Society for mutual support".

The gold medal mentioned his license (candidate) thesis, written in 1916 under the auspices of T.K. Russian. After 1 September 1917 he was engaged as assistant professor at the Department of Mathematics of the Kharkov Technical University. Thereafter he held his magister examination.

In 1921 Neyman left Kharkov for Poland. In 1921-23 he was statistician at the Agricultural Institute in Bydgoscz. In 1923 he held his doctoral work " The argumentation and the application of the probability theory for solving of the agricultural experiment problems", which was published in Polish Agricultural Forest Journal in 1923, vol. 10. In 1923-1934 he was assistant professor at the Warsaw University and at the same time worked

at the Institute for Social problems named after "M. Nensky" and the statistical Laboratory of the Main Agricultural School. After 1924 he had a grant from the Popular culture Foundation which permitted him to travel to London each year to collaborate with E.K.Pearson, famous mathematician, biologist and philosopher. In 1926-1927 he was supported by a Rockefeller grant and traveled to London and thereafter to Paris to listen to the courses by Lebesgue and the seminars by Hadamard. After his coming back to Poland he taught at the Jagellonian University in Krakov. This time he collaborates very successfully with E.K. Pearson, which proposed him to investigate the testing of statistical hypothesis.

In 1930 Jerzy Neyman participated at the first Mathematical Congress, where he presented the paper "On the verisimilitude of hypothesis". At the session of the "Union of free-thinkers" he talked on the State costs to support the Catholic Church, after which he emigrated in England. In 1934 – 38 he was a lecturer and subsequently associate professor at the London University.

Jerzy Neyman is one of the greatest modern statisticians and the founder of the Mathematical Theory of Selection. The terms "The Neyman – Pearson Test", "The Neyman-Pearson Theory", "The procedure of Neyman – Keuls". Neyman had written widely known books on probability theory and mathematical statistics. He is the author of more than 160 works on probability theory and mathematical statistics and their applications to biology, meteorology, astronomy, philosophy and social sciences.

In august 1938 he was elected as professor of statistics with duties at the Laboratory of statistics of the California University in Berkeley. Beginning with 1945 every 5 years International symposia on Mathematical Statistics and the Probability Theory were initiated by Neyman. Neyman was the Editor-in- Chief of the Proceedings of these Symposia. He was also the Editor of the Jubilee Volume of Selected Papers dedicated to Nicolai Kopernik published by the National Academy of Sciences of the USA in 1973-74. In 1961 was designated as Professor Emeritus of California University in Berkeley.

Jerzy Neyman was elected as Doctor Honoris Causa of the Institute of Statistics in India (1956), Universities in Chicago (1960), Stockholm (1964) and Warsaw (1974). He was also Honorary Member of the Royal Society of Statistics in London and of the London Mathematical Society. In 1964 he was elected as Member of the National Academy of Sciences of the USA.

In the same year he was elected also Foreign Member of the Polish and Swedish Academies of Sciences

In 1968 was decorated by the National Medal for Science of the USA.

Neyman applied statistics to Cosmology (see f.e. "Stochastic approach to Cosmology" in Proc. of the Conference on mathematical models in Physical Sciences", N.Y., Prentice Hall, 1963). In 1975 he was elected Member of the International Astronomical Union.

In the same year he was elected Honorary President of the International Institute of Statistics.

Jerzy Neyman was married in 1920 with Olga Sodovnikova. They had son Michael John. They lived in Los Angeles: 954, Euclid Ave.,

Jerzy Neyman died on August,5 1981.

SELECTED PAPERS BY JERZY NEYMAN

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2. Justification of applications of calculus of probability to the solution of certain questions of agricultural experimentation (PHD thesis), Polish. Agricultural Forest Journal, 1923, vol. 10

3. Outline of a theory of statistical estimation based on the classical theory of probability, Phil. Trans. Roy. Soc., Ser. A, 1937, no.237, p.330

4. On the use and interpretation of certain test criteria for purposes of statistical inference (in the collaboration with E.S. Pearson), Biometrica, 1928, vol. 20-A, p. 175 and 263

5. On the problem of the most efficient tests of statistical hypotheses (in collaboration with E.S. Pearson), Phil. Trans. Roy. Soc. London (Ser. A), 1933, vol. 231, p. 289

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7. Sur la verification des hypotesses statistiques composées. Bull. Soc. Math. France, 1935, vol.63, pp. 246-266

8. Contributions to the theory of testing statistical hypotesses. 1. Unbiased critical regions of type A and A1., Stat. Res. Mem., 1936, vol. 1, 1-37

9. Lectures and Conferences on Mathematical Statistics. Graduate School., U.S. Department of Agriculture., Washington D.C., 1938

10. L'estimation statistique traitée comme une problème classique de probabilitée. Actualités scientifiques et industrielles, 1938, no. 739, p.25

11. On a new class of "contagious" distributions, applicable in entomology and bacteriology, Ann. Math. Statistics, 1939, vol 10, p.35

12. Fiducial arguments and the theory of confidence intervals, Biometrica, 1941, vol. 32

13. On a statistical problem arising in routine analyses and sampling inspection of mass distribution; Ann. Math. Stat., 1941, vol. 12, pp. 46-76

14. Basic ideas and some recent results of the theory of testing statistical hypotheses., J. Roy. Stat. Soc., 1942, vol. 105, p.292

15. First course in Probability and Statistics, The University of California, Henry Holt, N.Y., 1950

16. Indeterminism in Science and new demands on statisticians, J. Amer. Stat. Assos, 1960, vol. 55

17. Stochastic approach to Cosmology, Proc of the Conference on Mathematical Models in Physical Sciences, N.Y., Prentice Hall, 1963

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2. Alex Gaina, Mathematicians from Bessarabia (in Romanian), Foaie Matematică (Chişinău) (1996), no. 1, p. 75

3. Brighita Kovarsky, Iurii Ceslavovici Neiman, in: Academicieni din Basarabia si Transnistria (in Romanian), ed. Cetini (History Institute of the Academy of Sciences of Moldova) (1996), p. 96

4. Alex Gaina, Mathematicians from Bessarabia (in Romanian): Jerzy Neyman, Foaie Matematică (Chişinău), (1997), no 2, p.71

5. Constance Reid, Neyman – from life, N-4, Heydelberg, 1982,

6. E.L.Lehman, Testing Statistical Hypotheses, N-4, John Wiley & Sons, Inc. London-Chapman & Hall, Limited (Russian translation: Э. Леман, Проверка статистических гипотез, пер. Ю.В. Прохорова, Ь., Наука, 1984)

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