

Anderson, Oskar Johann Viktor I

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(b. Minsk, Russia, 2 August 1887; d. Munich, German Federal Republic, 12 February 1960)

mathematics.

After studying for one term at the mathematical faculty of Kazan University, Anderson entered the economics faculty of the Petersburg Polytechnical Institute in 1907. He graduated in 1912 as a candidate in economics. His dissertation, in which he developed the variance-difference method for analyzing time series, was published in *Biometrika* (1914) almost simultaneously with similar work by W. S. Gosset.

Anderson was a pupil and an assistant of A. A. Tschuprow and always, even during the general excessive enthusiasm aroused by [Karl Pearson](#)'s methods, considered himself a representative of the "Continental direction" of mathematical statistics exemplified by Lexis, Bortkiewicz, and Tschuprow. From 1912 until he left Russia in 1920, Anderson taught in commercial colleges at [St. Petersburg](#) and Kiev, and engaged in research. He participated in a study of the agriculture of Turkestan in 1915 using sampling methods—he was a pioneer in this field—and worked at the Demographical Institute of the Kiev Academy of Sciences in 1918.

After he left Russia, Anderson spent four years in Hungary, continuing his pedagogic and scientific activities. From 1924 to 1942 he lived in Bulgaria, where he was extraordinary professor of statistics and economic geography at the Varna Commercial College until 1929 and full professor from then on; a member of the Supreme Scientific Council of the Central Board of Statistics; and from 1935 director of the Statistical Institute of Economic Researches of Sofia University. Anderson was engaged mainly in the application of statistics to economics, and published a review of the general status of Bulgarian economics (1938). Subsequent economical-statistical investigations in Bulgaria were always conducted in the spirit of Andersonian traditions, and in this sense he founded a school in that country. Anderson also became internationally known: he published a primer (1935), delivered lectures at the London School of Economics in 1936, and was an adviser to the [League of Nations](#) and a charter member of the Econometric Society. He was also an honorary member of the Royal and West German Statistical Societies, the International Statistical Institute, and the American Statistical Association.

In 1942 Anderson accepted a professorship at the University of Kiel; from 1947 until his death he held the chair of statistics at the economics faculty of the University of Munich and was the recognized leader of West German statisticians. His pedagogic activities resulted in higher standards of statistical education for student economists in West Germany.

Besides developing the variance-difference method, Anderson did research in the quantity theory of money and in the [index-number theory](#) from the statistical viewpoint. Seeing no significant advantage in the application of classical mathematics to economics, he advocated the application of mathematical statistics. Anderson believed that the application of statistics distinguished modern economics from economics based on Robinson Crusoe theories and the *homo oeconomicus*. He especially believed that statistics, based on the law of large numbers and the sorting out of random deviations, is the only substitute for experimentation, which is impossible in economics. Sensibly estimating the difficulties inherent in economics as a science, Anderson was opposed to the use of "refined" statistical methods and to accepting preconditions regarding laws of distribution. This led him to nonparametric methods and to the necessity of causal analysis in economics.

BIBLIOGRAPHY

I. Original Works. Anderson published some eighty books, papers, reports to national and international bodies, reviews, and obituaries, mainly in German and Bulgarian. He published three papers in Russian.

His books are *Einführung in die mathematische Statistik* (Vienna, 1935); *Struktur und Konjunktur der bulgarischen Volkswirtschaft* (Jena, 1938); and *Probleme der statistischen Methodenlehre in den Sozialwissenschaften*, 4th ed. (Würzburg, 1962). These books provide a sufficient overall notion of Anderson's work. Intended for a broad circle of readers with a preuniversity mathematical background, they are less known outside the German-speaking countries than they deserve to be.

Aside from the books, Anderson's main writings are in his selected works: *Ausgewählte Schriften*, 2 vols. (Tübingen, 1963). Forty-six works by Anderson are reprinted there, with translations into German if the originals are in Bulgarian. Vol. II contains a list of his other works (thirty-two items). This list is not complete, however, for Anderson published at least two more works.

II. Secondary Literature. General information about Anderson can be found in Capelli, ed., *Bibliografie con brevi cenni biografici*, *Biblioteca di statistica*, II. pt. 1 (1959); and *Körschners deutscher Gelehrten-Kalender* (Berlin, 1961). About fifteen obituaries of Anderson are listed with a biography in Vol. I of the *Ausgewählte Schriften*. Among the obituaries are E. M. Fels, in *Econometrica*, **29**, no.1 (1961), 74–80; G. Tintner, in *American Statistical Association, Quarterly Publication*, **56**, no. 294 (1961), 273–280; and H. Wold, in *Annals of Mathematical Statistics*, **32**, no. 3 (1961), 651–660.

The most recent biography of Anderson is E. M. Fels, in the *International Encyclopedia of the Social Sciences* ([New York](#), 1968).

O. B. Sheynin