

David Blackwell, Scholar of Probability, Dies at 91

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David Blackwell, a statistician and mathematician who wrote groundbreaking papers on probability and game theory and was the first black scholar to be admitted to the [National Academy of Sciences](#), died July 8 in Berkeley, Calif. He was 91.

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UC Berkeley David Blackwell

The death was confirmed by his son Hugo.

Mr. Blackwell, the son of a railroad worker with a fourth-grade education, taught for nearly 35 years at the [University of California, Berkeley](#), where he became the first black tenured professor.

He made his mark as a free-ranging problem solver in numerous subdisciplines. His fascination with game theory, for example, prompted him to investigate the mathematics of bluffing and to develop a theory on the optimal moment for an advancing duelist to open fire.

“He went from one area to another, and he’d write a fundamental paper in each,” Thomas Ferguson, an emeritus professor of statistics at the [University of California, Los Angeles](#), told [the Berkeley Web site](#). “He would come into a field that had been well studied and find something really new that was remarkable. That was his forte.”

David Harold Blackwell was born on April 24, 1919, in Centralia, Ill. Early on, he showed a talent for mathematics, but he entered the [University of Illinois](#) with the modest ambition of becoming an elementary school teacher. He earned a bachelor’s degree in mathematics in 1938 and, adjusting his sights, went on to earn a master’s degree in 1939 and a doctorate in 1941, when he was only 22.

After being awarded a Rosenwald Fellowship, established by the clothing magnate Julius Rosenwald to aid black scholars, he attended the Institute for Advanced Study at Princeton but left after a year when, because of his race, he was not issued the customary invitation to become an honorary faculty member. At Berkeley, where the statistician [Jerzy Neyman](#) wanted to hire him in the mathematics department, racial objections also blocked his appointment.

Instead, Mr. Blackwell sent out applications to 104 black colleges on the assumption that no other schools would hire him. After working for a year at the Office of Price Administration, he taught briefly at Southern University in Baton Rouge, La., and Clark College in Atlanta before joining the mathematics department at Howard University in Washington in 1944.

While at Howard, he attended a lecture by Meyer A. Girshick at the local chapter of the [American Statistical Association](#). He became intensely interested in statistics and developed a lifelong friendship with Girshick, with whom he wrote "[Theory of Games and Statistical Decisions](#)" (1954).

As a consultant to the [RAND Corporation](#) from 1948 to 1950, he applied game theory to military situations. It was there that he turned his attention to what might be called the duelist's dilemma, a problem with application to the battlefield, where the question of when to open fire looms large.

His "Basic Statistics" (1969) was one of the first textbooks on Bayesian statistics, which assess the uncertainty of future outcomes by incorporating new evidence as it arises, rather than relying on historical data. He also wrote numerous papers on multistage decision-making.

"He had this great talent for making things appear simple," [Peter Bickel](#), a statistics professor at Berkeley, told the university's Web site. "He liked elegance and simplicity. That is the ultimate best thing in mathematics, if you have an insight that something seemingly complicated is really simple, but simple after the fact."

Mr. Blackwell was hired by Berkeley in 1954 and became a full professor in the statistics department when it split off from the mathematics department in 1955. He was chairman of the department from 1957 to 1961 and assistant dean of the College of Letters and Science from 1964 to 1968. He retired in 1988.

In 1965 he was elected to the [National Academy of Sciences](#).

In addition to his son Hugo, of Berkeley, he is survived by three of his eight children, Ann Blackwell and Vera Gleason, both of Oakland, and Sarah Hunt Dahlquist of Houston; a sister, Elizabeth Cowan of Clayton, N.C.; and 14 grandchildren.

Mr. Blackwell described himself as a "dilettante" in a 1983 interview for "Mathematical People," a collection of profiles and interviews. "Basically, I'm not interested in doing research and I never have been," he said. "I'm interested in *understanding*, which is quite a different thing. And often to understand something you have to work it out yourself because no one else has done it."