Obituary: Peter William Meredith John, 1923 – 2015

Peter William Meredith John passed away on January 22, 2015 at the age of 91. He will be remembered for his many contributions to Design of Experiments, with applications in a variety of fields.

Peter John was born on August 20, 1923 in Porthcawl, Wales. He attended local schools through middle school, then in 1937 won a scholarship to Hereford Cathedral School. Because the local Welsh schools did not offer Greek, he was not qualified for the classical curriculum at Hereford, and so entered the science curriculum. The Hereford mathematics master was outstanding, and in 1941 John won a scholarship in mathematics to Jesus College, Oxford. After two years at Oxford reading for a wartime degree, he enlisted in the Royal Air Force in1943 as a university student. In light of his mathematical background, he was assigned to spend several more months at Oxford intensively learning advanced physics, then used that knowledge to work on technical problems in support of the war effort. He completed his BA in 1944 and began fulltime military service.

After ending military service in 1946, he continued at Oxford utilizing his veteran's benefits, receiving his MA in Mathematics in 1948. The only jobs available for mathematicians in the U.K. in 1948 were as school masters, which did not interest him at the time. So he used his remaining year of veteran's benefits at Oxford to pursue a new post-graduate diploma program (now called the M. Sc.) in statistics.

Unfortunately, the UK job market was still no better in 1949 than in 1948, so as an adventure he took a temporary job as instructor in the USA at the University of Oklahoma, teaching calculus to veterans. After a year as an instructor, he decided to stay at Oklahoma for further graduate study in mathematics, specializing in probability. Because of his statistics background, he was offered a position one summer interviewing for a door-to-door survey. One door was opened by a bright, attractive history graduate student, Elizabeth Ann Harper. A courtship ensued, and the couple married in 1954. Peter John received his Ph.D. in 1955, writing a dissertation on birth and death processes. Elizabeth finished her Ph.D. in 1957 and became a well-respected scholar of American Indian and Spanish history in the American Southwest as well as Peter John's wife and companion of more than sixty years.

After receiving his Ph.D., Peter John accepted a position as Assistant Professor at the University of New Mexico, teaching statistics, but left after two years to accept a position as Research Statistician at the Chevron Research Corporation in the San Francisco Bay area. One attraction was that Henry Scheffé was consultant there. In effect, John had four years of post-doctoral study in statistics with Scheffé, supplemented by the summer Gordon Conferences. In the last three of his years at Chevron, John was also a visiting Assistant Professor of Statistics at the University of California at Berkeley. Those were exciting times, including programming the then-new computers to do regression, expanding the methodology of Analysis of Variance and Experimental Design, and learning about Response Surfaces.

Next followed a six-year tenured position in the mathematics department at the University of California Davis, a campus prominent in agricultural research. Just as he had worked closely with chemists and engineers at Chevron, John worked closely with agronomists, geneticists, and food scientists at Davis. Their problems required entirely different experimental designs than were needed in the oil industry – and the challenge of translating statistics methodology from one applied field to another, seemingly unrelated field, fascinated him.

In 1967, John accepted a professorship in the mathematics department at the University of Texas at Austin, where some of the world's finest research archives for Elizabeth's academic specialty were located. His book *Statistical Design and Analysis of Experiments* was first published by Macmillan in 1971. It was one of the first in the field to use matrix methods and notation, and was republished in 1998 in the Society of Industrial and Applied Mathematics' series Classics in Applied Mathematics. He continued working with the Gordon Conferences and pursued research in incomplete block designs, publishing a book on that topic in 1980.

In the eighties, his talents with experimental design led to work with the semiconductor industry and the quality assurance movement, resulting in another book, *Statistical Methods in Engineering and Quality Assurance*, in 1990, as well as a fruitful and engaging collaboration with the Sematech research consortium, which had located in Austin. He continued to publish through 2003 (his Erdos number is 2), and served as Associate Editor of several statistical journals.

Peter John was well recognized for his contributions to statistics, being elected a Fellow of the American Statistical Association (1976) and of the Institute of Mathematical Statistics (1977). In 1991, he was awarded the Shewell Prize of the American Society for Quality Control. In 1995, he received the Don Owen Award from the San Antonio Chapter of the American Statistical Association. In 2003, he was the honoree and keynote speaker at the Quality and Productivity Research Conference.

While at the University of Texas, he developed a reputation as an excellent teacher. His courses were sprinkled with fascinating anecdotes about the development of the topics he taught (as well as their developers). He supervised eleven Ph.D. students at Texas (as well as one at the University of California at Davis) and more than 40 MA students. In 1999, he received the University of Texas' Award for Outstanding Teaching in the Graduate School.

After their children were grown, Peter and Elizabeth visited Spain for a month or more each spring for nearly 25 years, both so that she could work in Spanish archives, and so they could together enjoy slowly traveling throughout the country they grew increasingly fond of.

In April 2004, shortly before he taught his last class at the University of Texas, friends, colleagues and former students honored him with a reception, for which he was required to pay an entrance fee: a talk on his life as a statistician.

After retirement at age 81, he took good advantage of modern technology to follow cricket and Oxford rowing online, solve Sudoku (just a special type of Latin square, after all), research the history of the Royal Welch Fusiliers (his father's regiment

in World War I), and re-learn Welsh. With Elizabeth, he continued to share his passion for opera, symphony, politics, and the burgeoning Austin restaurant scene.

He is survived by his wife of 61 years, a daughter and a son, and two grandchildren.