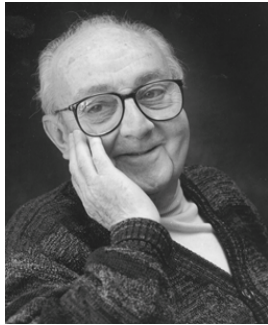


George Edward Pelham (G.E.P.) Box — 1919-2013

“George”, or “Pel” for those very close to him, passed away on Thursday, March 28, 2013, at home at the age of 93. He was one of the greatest statistical minds of our generation. He shared his wisdom with everyone. He will be missed by many.



George was born in Gravesend, Kent, England, in 1919. His upbringing in a modest environment did not prevent his genius from emerging at an early age. In addition to academics, he was interested in writing poems, participating in plays, and inventing devices for entertainment. After completing school at 16, he started as an assistant to a chemist who managed a sewage treatment plant and wrote his first paper at the age of 19 about the activated sludge process for producing a clean effluent, beginning of a profound scientific life. His plans for further studies were interrupted by World War II and he joined the Army. While in the Army, he was sent to the Experimental Station at Porton Down in the south of England to study the potential impact of poison gases. There he was running experiments as well as writing skits and putting on shows with his friends. George soon realized that statistical knowledge is required to get reliable results from experiments and so he taught himself Statistics. In his memoirs called, *An Accidental Statistician: The Life and Memories of G.E.P. Box*, published recently by Wiley, he wrote “One day in the Lab, I was having a particular statistical problem, and a senior medical scientist there suggested I write to R.A. Fisher about it. I thought that Fisher would be much too busy to talk to me but he replied.... the first real statistician I ever met was R.A. Fisher. He invited me, an unknown and ignorant army staff sergeant, to his house and with great patience and kindness spent the whole day with me.... After this I had no doubt that I wanted to be a statistician”. A legendary career was born.

After the war, George finished a Ph.D. in Mathematical Statistics from University College, University of London, and then worked at Imperial Chemical Industries (ICI) for several years, designing experiments and industrial processes. His pioneering paper with K.B. Wilson in 1951 was truly inspirational, dawn of a new era in process optimization. In 1953, at the invitation of the Institute of Statistics, Raleigh, North Carolina (NC), he spent some time at NC State University, but went back to continue his work at ICI. In 1956, he left ICI to join Princeton University to direct the Statistical Techniques Research Group. During his first visit to NC State and subsequently at Princeton, he met some of the pre-eminent statisticians of the day. George came to Madison in 1959, established the University of Wisconsin's Department of Statistics in 1960 and retired as an emeritus professor in 1992. He had continued his research and writing until his passing. His outstanding contributions to the discipline of Statistics include multiple books, papers and statistical tools that are widely known and cited in such diverse areas of practice and research such as response surface methodology, evolutionary operation, experimental design, Box-Cox transformations, time series analysis, Bayesian analysis, robust methods, and quality improvement. Many innovative ideas were introduced and words such as “robustness” were brought into the statistical vocabulary. However, perhaps his greatest contribution to the discipline has been his philosophical perspective of Statistics as an integral component of scientific inquiry -- the tangible essence of an iterative learning process. To George Box, statistical tools and methods provide the logic and the language of the modern scientific method. He once commented "The quality movement can be seen as the analysis, institutionalization and democratization of Scientific Method, a tool for efficiently generating new knowledge." He has greatly influenced consecutive generations of researchers and practitioners, not only in his own field of Statistics but also in Engineering, industry and other application areas. One former associate commented “among the giants in the development, dissemination, and application of original statistical thinking George Box clearly belongs in the top echelon” and his close friend and former student, Stuart “Stu” Hunter, noted “it is not possible to briefly describe the statistical contributions of George Box. They are, like views of the Grand Canyon, simply too numerous and impressive”.

Together with Stuart Hunter and Cuthbert Daniel, George helped found *Technometrics*, the premier journal in industrial statistics, in 1959. George co-founded the University of Wisconsin (UW) Center for Quality and Productivity Improvement with the late William "Bill" Hunter in 1985. He had also worked with officials from the City of Madison and its police department to improve certain processes. George received many honors, including

being elected Vilas Research Professor of Statistics at the UW Madison in 1980, and a Fellow of the Royal Society in 1985.

George mentored generations of students who have extended his message and influence to the far corners of the world. One former graduate student noted "as a former graduate student of George's ... association with this remarkable man has been a genuinely life-altering experience..." He loved his students and was proud of their contributions. Many of his students remember George for his long-running "Monday Night Beer and Statistics sessions", held initially in his basement and open to all campus researchers and students. It usually started with somebody talking about a problem or a data set. He encouraged students to participate, and provided suggestions as well as beer and chips; many students learned more from these sessions than from any classroom.

As we remember him, we remember not only his brilliance, but also his wit, skits, and storytelling. He used to dress up at departmental parties, participate in skits, and make up humorous songs about Statistics, Bayesians, etc.: "There is no theorem like Bayes' theorem, Like no theorem we know...." From his memoirs "I believed that if you can write a first class skit, you can write a first class thesis. Originality and skit are very close". Many remember George's famous statement "all models are wrong, but some are useful".

As we remember him, we remember his passion for the practice of Statistics, his humour, his writings, his words and his wisdom.

Thank you George!

Bovas Abraham

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