

## DOCUMENTS OF THE GENERAL FACULTY

**REPORT OF THE MEMORIAL RESOLUTION COMMITTEE FOR  
PETER W. M. JOHN**

The special committee of the General Faculty to prepare a memorial resolution for Peter W. M. John, professor emeritus, mathematics, has filed with the secretary of the General Faculty the following report.



Hillary Hart, Secretary  
General Faculty and Faculty Council

**IN MEMORIAM  
PETER W. M. JOHN**

Peter W. M. John was a well-rounded statistician: he developed new statistical techniques, contributed to specific applications in a variety of areas, and taught enthusiastically and effectively. His many colleagues, collaborators, and students remember him fondly.

Peter was born in Wales and was always proud of his Welsh heritage. He enrolled in Jesus College, Oxford in 1941 on a scholarship. In 1943, he enlisted in the Royal Air Force as a university student, combining his studies in math and physics with work on technical problems in support of the war effort. When he finished his degree, jobs were hard to find, so he used his veterans benefit to obtain a post-graduate diploma in statistics. United Kingdom jobs were still scarce when he finished, so he adventurously accepted a one-year offer at the University of Oklahoma teaching calculus to veterans. He then decided to enter the Ph.D. program at Oklahoma. While there, he met his wife, Elizabeth. They married in 1954, Peter finished his Ph.D. in 1955, and Elizabeth finished her Ph.D. in American History in 1957.

Before coming to UT Austin, Peter taught statistics at the University of New Mexico, worked as a research scientist at the Chevron Research Corporation in the San Francisco Bay area (also teaching in the statistics department at the University of California at Berkeley), and then accepted a tenured position at the University of California at Davis. The Chevron position gave him experience working on statistical problems with chemists and engineers, while the Davis position gave him experience working on statistical problems with agronomists, geneticists, and food scientists. Peter's challenge (and fascination) was to devise experimental designs that produced the most information using the fewest observations, but always within the constraints of the particular research question and facilities.

Peter accepted an appointment as professor of mathematics at UT Austin in 1967. Part of the University's attraction was that it has some of the world's finest archives in Elizabeth's specialty of American Indian and Spanish history in the American Southwest. Here, Peter's career was rich and varied. Until his retirement at the age of eighty-one, he taught statistics courses that were attended by students in a variety of fields. One student commented,

What a wonderful professor and man. I had the honor [of] taking two classes from Dr. John and he taught me a lot about Sampling and ANOVA. However, I will never forget his humor in the classroom and just a great guy all around ... thank you for making a nervous graduate student feel comfort in your classes.

Peter was also a great resource to faculty members and their graduate students in various areas. One (now retired) professor in Civil Engineering recalls:

Peter was a great, practical statistician .... When I came to UT as a Prof of Civil Engineering, I wanted all my students to take a good Stat course that they could use in practical Civil Engineering research projects. We tried several in engineering and mathematics, all failures for us. But our problems were solved and our program greatly enhanced when Peter arrived on the scene. I had probably twenty to

thirty students take his courses over the years and he served on at least twelve to fifteen Ph.D. committees for our students. Peter unfailingly saw the practical, statistically sound way to get the most out of any of our graduate experimentation and research and communicated that to us and more importantly to our Graduate students. He was a great asset to us!! And a good great person and friend.

A biologist echoes this impression:

When I arrived at the University of Texas in 1979 to be an assistant professor of botany, fresh from a postdoc, Peter John was already on the faculty here. Dr. John was an outstanding statistics advisor for someone like me, that is, someone who was relatively sophisticated and knowledgeable in statistics (for a biologist!) but no theoretician or mathematician. Dr. John was impressively knowledgeable, always friendly and helpful, willing to take the time to understand the critical details of an experimental or sampling design and resulting data set, and - perhaps most important - able to see statistics as it is applied to real-world data - warts, complexities, imperfections, and all. I learned a lot from him. As I developed a research program, I also sent a number of my students to him, and they also found him very helpful. There was a long period of time when Dr. John was essentially the only statistician at UT for us to consult. I don't know how he managed the load, but he continued to be available for appointments as well as teaching statistics courses. It was a critical role.

In addition to his formal teaching and generous consulting with students and faculty members in other departments, Peter supervised a dozen Ph.D. students and over fifty master's students. One of his Ph.D. students, introducing him years later as an honored speaker, said

He is a very nice person... I had two requirements for my dissertation advisor: the topic had to be reasonably interesting, and my advisor just had to be a decent person. In Peter I found both...Every single statistician I have met who knows him remembers him fondly. Peter has a fantastic memory for details about people: their names, where they work and worked, their interests.

Indeed, his people skills allowed him on at least one occasion to serve as match-maker: He introduced a young woman statistician and young man mathematician to each other in his office; they have been happily married for many years. Peter also served on innumerable Ph.D. and Master's Committees in a variety of other departments. For many years, he was in charge of the Master's in Statistics program within the mathematics department.

Particularly in his later years, Peter's lectures were interspersed with comments about the development of the subject and the people (whom he knew) involved in that development. Indeed, Peter himself was heavily involved in the development of statistics. His specialty was experimental design, a crucial aspect of being able to obtain meaningful results from statistical analysis. While at UT Austin, he continued his work in this area and published two books in the field. *Statistical Design and Analysis of Experiments* was one of the first books in the subject to use matrix methods and notation. First published in 1971, it was republished in 1998 in the Society of Industrial and Applied Mathematics' series 'Classics in applied mathematics'. His *Incomplete Block Designs* appeared in 1980. He also published *Statistical Methods in Engineering and Quality Assurance*, in 1990. All three books had substantial portions based on his own contributions to the field.

Peter also was involved in two ongoing collaborations in addition to his interactions with his students and University colleagues. The first collaboration was the Gordon Research Conferences. These were initiated in the late 1920s/early 1930s by (and later named after) chemist Neil E. Gordon, then of Johns Hopkins. They continue to this day. Their aim is to foster discussion and development of new ideas in specific research areas. As a result of a 1955 Gordon Research Conference on Statistics in Chemistry and Chemical Engineering, Chevron hired statistician Henry Scheffé as a consultant. His contributions prompted Chevron to hire a full-time statistician, and that was why Chevron hired Peter. A large part of Peter's motivation to take the job was, of course, to learn from the master Scheffé. The involvement with Chevron and Scheffé led to Peter's involvement with the Gordon Conferences - first as an attendee who learned a lot, and later as presenter, moderator, chair, or discussant. His participation continued at least through 1994.

The second collaboration was with Sematech, a research consortium of semiconductor manufacturers that

located in Austin in 1988. In 1992, Peter was asked to be a statistical consultant. His skills at designing experiments to get the soundest and best results were as valuable for semiconductor testing as for the areas in which he had worked before. This collaboration lasted until about 1997.

Over the years, Peter received many honors, including Fellow of the American Statistical Association (1976), Fellow of the Institute of Mathematical Statistics (1977), elected senior member of the American Society for Quality Control (1987), the 1991 Shewell Prize from the American Society for Quality Control, the 1995 Don Owen Award from the San Antonio Chapter of the American Statistical Association, the 1999 UT Outstanding Graduate Teaching Award, and honoree and keynote speaker at the 1997 and 2003 Quality and Productivity Research Conferences.

Peter retired from teaching in 2004 at age eighty-one. He was honored by a reception, preceded by a talk on his experiences as a statistician. He filled his retirement years with enjoyable activities, ably using modern technology, enjoying opera and British drama series via DVD; following cricket and Oxford rowing online; researching his father's World War I regiment (the Royal Welsh Fusiliers); relearning Welsh; and playing Sudoku online.

He is survived by his wife Elizabeth, two children, and two grandchildren.

This memorial resolution was prepared by a special committee consisting of Professors Martha K. Smith (chair), Thomas W. Sager, and Stephen C. Walker.

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