Norman L. Johnson (1917–2004)

Norman Lloyd Johnson passed away in 18 November 2004. With his death we have come to the end of an era in statistics. We have lost the last link to the first half of the 20th century via the tribulations of the second half.

Johnson was born on 9 January 1917 in Ilford, Essex, England. He attended the Country High School, Ilford from 1927 to 1934, and then entered University College London. There he gained a B Sc degree in Mathematics and Statistics and a M Sc degree in Statistics during the period 1934–38. He was appointed as Assistant Lecturer in Statistics in 1938, a post to which he returned in 1945 after serving with the British Ordnance Board during World War II.

Johnson remained on the staff of the Statistics Department of University College London, becoming Lecturer in 1946 and Reader in 1956, with some breaks in 1952–53 (Visiting Associate Professor, University of North Carolina) and 1960–61 (Visiting Professor, Case Institute of Technology), until he joined the University of North Carolina in 1964. During this period he obtained his Ph D (1948) and D Sc (1962) degrees in Statistics and Fellowship of the Institute of Actuaries (1949), and wrote, jointly with H. Tetley, one of the earliest statistical textbooks in England, the two-volume *Statistics: An Intermediate Text Book* (Cambridge University Press, 1949). In collaboration with F. C. Leone, he was subsequently joint author of (again a two-volume) *Statistics and Experimental Design in Engineering and the Physical Sciences* (Wiley, 1964).

Johnson was an Associate Editor of *Annals of Mathematical Statistics* (1958–61), *Biometrika* (1962–65), and *Technometrics* (1967–71). Subsequently, in the seventies, he served as the Editor-in-Chief of the *Journal of the American Statistical Association* (*JASA*). He served as Associate Editor of *Metron* (1981–2002).

During his lengthy tenure at the University of North Carolina, Chapel Hill, interspersed with brief visits to the UK, Italy, Australia, Poland, China and other countries, Johnson published over 100 papers and co-authored, co-edited and translated over 20 books.

Among his most prominent contributions are his first publications, with B. L. Welch, in 1939 and 1940 on chi-squared and noncentral t distributions, his ground-breaking papers on translation systems (1945, 1950), currently known as Johnson's transformations, and the joint work with F. N. David (the first prominent female statistician) on various aspects of the properties of procedures when the standard ANOVA assumptions are not satisfied and problems related to order statistics. His contributions to sequential analysis and cumulative sum control charts in the early sixties were warmly welcomed. During this period he also made substantial contributions to sample censoring procedures and to problems related to finite population.

From the mid-sixties until 1972, Johnson was immersed in the compilation which became the four pioneering books on *Distributions in Statistics*, with S. Kotz, a natural continuation of the famous Elderton and Johnson volume (1969), *Systems of Frequency Curves*. This work was carried out simultaneously with his research on various types and aspects of statistical distributions.

In the next decade his books on *Urn Models and their Application*, with Kotz (1977), and on *Survival Methods and Data Analysis*, with his wife R. C. Elandt–Johnson (1980), received special attention, along with the second edition of the Johnson and Leone two-volume text on statistics.

The eighties and early nineties were marked by Johnson's most strenuous activities, jointly with Kotz and C. B. Read, related to editorship of the 13-volume *Encyclopedia of Statistical Sciences*, which is viewed as one of the most influential publications in statistics in the 20th century. Among other favourable notices, the encyclopaedia was acclaimed in the *JASA* in a detailed review jointly prepared and signed by the entire Book Review Editorial Board, under the leadership of J. Tanur. This monumental work was accompanied by the revision (and extension) of the four-volume compendium on *Statistical Distributions* which has grown to become a five-volume set. Johnson also co-edited in the late nineties, with Kotz, a three-volume collection, *Breakthroughs in Statistics*, and a volume of essays on *Leading Personalities in Statistical Sciences: From the 17th Century to the Present*.

One of his last research topics were intensive studies in quality control resulting in two books (with Kotz and X. Wu) and a comprehensive survey paper.

Among Johnson's prominent students are such luminaries as D. J. Bartholomew, B. K. Ghosh, J. R. Kettenring and L. Stokes (to mention a few).

S. KOTZ
S. NADARAJAH*

Department of Statistics,
University of Nebraska,
Lincoln, NE 68583, USA
e-mail: snadaraj@unlserve.unl.edu