

CENTREFOLD

Professor John Darwin



"I want your advice; I am thinking of joining the Department of Statistics". That is how, John Darwin, told me of his proposed move to the Statistics Department. John had been the leader of the Statistics Section of the Applied Mathematics Division of DSIR and was my immediate supervisor. He set what I saw as the style and image of AMD: friendliness, informality, not too much concern with the rules, combined with competence, innovativeness, mathematical rigour, doing his best for his clients. Perhaps the atmosphere of AMD's earlier headquarters helped this friendly informality—other AMD people will remember happenings which took place on the verandas of Courtenay Place one of which earned AMD a visit from the law.

John has numerous interests beyond mathematics: he sang with the AMD madrigal group and also with the Orpheus Choir; he very much enjoyed a friendly game of bridge, chess, tennis (he and his wife, Helen, were mixed doubles champions at the Wadestown Club) or table tennis. He was also a very competent home handyman and frequently the blackboard would be covered in engineering calculations during morning tea. For several years he was chairman of his local school committee.

He has had a distinguished academic career. He was a Junior University Scholar, a University Senior Scholar in Pure Mathematics and Cook Prizeman, graduating with an MSc with first class honours. In 1944, he joined the Radar Development Laboratory of DSIR as a physicist, later being reclassified as a Biometrician. He went to Cambridge in 1947 as a Shirtcliffe Fellow, and obtained a BA, taking a first in Part II of the Maths Tripos. He was also a Trinity College Scholar. Following his degree at Cambridge he was granted two years leave on full pay to study for a PhD at the University of Manchester where he studied under Professor Bartlett. His thesis, titled "*Population differences between species growing according to*

simple birth and death processes", looks at probability models which might explain the observed population sizes of the different species of animals or plants present in a given sampling region.

His publications represent the wide variety of work he encountered on his return to Applied Maths Division. Some of his papers reflect his studies under Professor Bartlett, such as *"Note on the comparison of several realizations of a Markoff chain"*. Then there were papers with a strong biological or ecological bias, written in conjunction with his biologist clients, for example *"Observations on the reproduction of the wild rabbit at varying latitudes and altitudes in New Zealand"* and *"Estimation of opossum populations and results of poison trials from trapping data"*. Other papers reflect the wide range of interests of AMD's clientele; papers such as *"The prediction of floods"*, *"The uses of sampling techniques in auditing"*, *"Species clustering and New Zealand quaternary climate"*, *"estimation of alcohol for non-respondents in roadside breath surveys"* and *"Dental caries prevalence in several soil areas of New Zealand"*. John always placed a strong emphasis in careful analysis. Frequently, his work required the use of statistical techniques currently under development, or the development of new ones. In this way during his time at AMD, as leader of the Statistics section, he lead and strongly encouraged research into statistical methods.

However, more and more of his work became to have a sociological bias. Some of this was published, for example, *"The changing rate of delinquency in New Zealand"* but most was confidential to the Government department that he was doing the research for. Increasingly, he became to feel that the data was not being collected in the best way to answer the questions he was being asked, that Government was placing insufficient emphasis on scientifically evaluating its policies, that the need for careful statistical analysis was still not properly appreciated by senior Government officials. The idea of starting a social science group within AMD was nibbled at from time to time but not proceeded with.

In 1978 the position of Deputy Government Statistician became vacant. John's former director at AMD, Bob Williams, then head of State Services Commission, encouraged John to apply. Of course, a position with the Statistics Department offered obvious possibilities for improving the way the Government handled its Statistics. John had considerable misgivings about how much he could accomplish in the five years before he retired and about shifting from a job in a very small DSIR division to that of a senior administrator in an influential Government Department. Nevertheless, there were precedents, former AMD staff had very successfully moved to senior Government positions. So by the time John came to see me, his mind was more or less made up. He applied and was appointed. In 1980 he was appointed Government Statistician, head of the Department of Statistics. He retired at the beginning of this year, 1984.

So what did he accomplish in the Statistics Department? It's too early to say. But there is increased emphasis on the rigorous interpretation of the data, not just its collection. He has enthusiastically continued the policy of re-examining what is collected with a strong emphasis on user requirements. Communication and understanding within the department has improved. And we hope, through their discussions with John, heads of other Government Departments, have come to appreciate rather more the problems in collection and interpretation of data.

We wish John and Helen the best for their retirement. But we hope it won't be a real retirement. There is lots of statistical work to be done and we hope some of it will find its way to Anne Street in Wadestown, Wellington.

Robert Davies

Photograph by courtesy of the Evening Post