

CENTREFOLD



Derrick Breach

Derrick Breach, a senior lecturer in the Department of Mathematics and Statistics, University of Canterbury, died of a sudden and unexpected heart attack on the 27th April of this year, at the age of 62.

Derrick was born in Eketahuna, and brought up on a large Hawkes Bay sheep station managed by his father. After boarding school in Hastings, he went to Victoria University College in Wellington, where he took bachelor's and masters' degrees in science. He then went to Melbourne University, where he completed an MA by thesis under the supervision of the celebrated analyst and applied mathematician T.M. Cherry, which led to his first publication. He was awarded first-class honours for this work; in fact, his thesis would have earned a doctorate in many universities. From Melbourne he went to the University of Sheffield, where he spent a year as an assistant lecturer; and from there to the University of Toronto, where he did indeed obtain a doctorate. He remained at Toronto as an assistant professor until 1970, when he came to Canterbury.

Derrick was a mathematician of wide and formidable ability. He began his career as an applied mathematician, working in fluid mechanics; two of the papers he wrote in this phase of his career were widely cited, one being regarded as a classic. He never lost the mastery of classical analysis and the tenacity and skill in manipulation of special functions that he had deployed so effectively in this early work, and he was often consulted by colleagues still in this field when they were faced with difficulties. In the early seventies he turned to research in combinatorics, and it is in this field that the bulk of his published work lies. As his work in combinatorics built up, it gained him a considerable reputation. As befits the generalist he was, he was a Fellow of the Institute of Mathematics and its Applications. On the specialist side, he was a Council Member of the Institute of Combinatorics and its Applications, a member of the Editorial Board of the Australasian Journal of Combinatorics, and a member of the Combinatorial Mathematics Society of Australasia. His department benefitted from his standing in the field, and his capacity to collaborate and make friends, through the frequent visits paid him by other mathematicians working in combinatorics, in particular Anne Street, from Queensland, and Curt Lindner, from Auburn.

Beyond research, Derrick served his department and subject well. He could, and did, teach a wide range of courses well at any level, and because of his seniority, breadth of knowledge and Olympian impartiality, he was almost inevitably coopted onto departmental committees concerned with appointments and promotions. He was an active member of the New Zealand Mathematical Society, and served on its committee as Secretary from 1986 to 1988.

Outside mathematics, Derrick's breadth of interests was legendary. He was passionately interested in language and words. While on the one hand, his minutes for the NZMS, and more particularly the minutes he took (voluntarily) for departmental meetings, were plain, accurate and succinct (although lightened by occasional waspish touches worth of Jane Austen), he had a love of the outlandish and obscure. He was proud owner of a first edition of the OED, all eleven volumes, and this possession he used to good effect in setting, under the pseudonym "Matt Varnish", the cryptic crosswords which appeared in every issue of the NZMS Newsletter from August 1980. Success in solving these demanded not just a well-stocked onomastichon, however; the solver also needed what the setter

possessed; a broad and miscellaneous knowledge of mathematics and mathematicians, literature, and of general and curious facts. Derrick routinely solved the Press cryptic crossword in the tea-room every morning; this might take him as long as five minutes, during which he did not encourage conversation.

Derrick's love of and involvement in art are perhaps more widely known. He had, when he returned to New Zealand, a number of paintings and prints bought in Canada, and once settled in Christchurch, he set about adding to this, the works of New Zealand artists, to such effect that at his death, his collection was a major one. It was natural that he should have been elected to the University's Art Purchases Committee, and it is certain that of all the offices he held, that must have given him the greatest pleasure. He was also a keen amateur painter, turning out works ranging from the abstract (these could be described as geometrical/combinatorial) to topographical watercolours.

But if he left a masterpiece for posterity, it was neither strictly art, nor strictly original. Over a number of years, he constructed, from coloured cartridge paper, a complete set of the uniform polyhedra and many other polyhedra besides; these are the geometric models which, in glass cases, adorn the corridors of the Mathematics Department. They have excited admiration and envy from every knowledgeable visitor; indeed, when Roger Penrose, a recent Forder Lecturer, gave his public lecture at the university, he borrowed, with acknowledgement, a number of the models to help to illustrate the concept of symmetry.

The University Staff Club played a very large part in Derrick's life, and he repaid it by many services. He was a member of its committee for a term in the 70s, and again in the late 80s; he was president in 1990. but most of all, he was there; almost invariably for lunch, and very often in the evenings as well. It was appropriate that his funeral was held at the club. In his eulogy at that funeral, Robin Bond has recalled a little of the flavour of his presence there, where he seemed most at home; his conversation genial, relaxed, covering a remarkable range; laced with wit, and a little gossip, for he took as much pleasure as the next man, or perhaps a little more, in seeing pomposity punctured, dignity with dog-turn on its shoes. It is appropriate too that his bust, by the late Tom Taylor, should now look benignly at the club and its members, from a corner of the bar, a little further back than the subject himself used to stand.

This has not been an easy obituary to write. The normal conventions, that he was a valued and effective member of his department and university, and that he will be sorely missed by his colleagues and friends, are more than conventionally true; but they fail to capture the sense of loss that many of us feel. This sense of loss is intensified by the realisation, which I have found widely expressed by his friends, that there was a great deal about Derrick that we did not know, for, entertaining and sympathetic companion although he was, there was about him a formidable reticence, a well-defended private space. He seldom featured as the subject of his own conversation - perhaps that was part of the charm many of us found in it - and inquiries of a personal nature were not welcomed by him. Again echoing Robin Bond's words, he has left us while we still wished to know him better.

Emeritus Professor Brian Woods