

PROFILE

Charles McMonnies

Innovative practitioner, researcher and teacher

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Charles McMonnies was misled into studying optometry. His best subjects at school were mathematics and physics and a careers adviser told him that optometry was all physics and mathematics. The reality was different. There was not a great deal of physics or mathematics in the course but chemistry, which he had not studied at school, was a core subject. Notwithstanding this less than perfect start, optometry as a career appears to have turned out well for him.

At the time, the optometry course in New South Wales was part-time and students had the opportunity to gain some experience while working for an optometrist. For Charles, two years working at Gibb & Beeman (a large group practice in the city) and then five years with Basil Chapman-Davies (a sole practitioner in the suburbs) provided great insight into the day-to-day delivery of eye care.

Charles enrolled in the optometry course at the University of New South Wales (UNSW) in 1959 along with five other students. This was the last cohort to enrol for the part-time course. The next enrolment in 1960 was for a new full-time course; a necessary and important step in the path being taken by optometry as a profession.



Charles completed his BSc degree in optometry in 1966 and at that time there were several graduate students studying for higher degrees in optometry. As optometry had been taught as a diploma course until 1953, the prospect of studying for a higher degree by research was new. These were fresh horizons for optometrists and as Charles was always one attracted by a challenge, it is not surprising that he embarked on a Masters degree.

A few months before graduating, Charles had joined Penryn Thomas in his Market Street contact lens practice. Penryn Thomas was one of the contact lens pioneers of the 1960s. In addition to practising contact lenses, he designed and manufactured contact lenses and travelled around the country teaching optometrists the then very new skills of contact lens fitting. Working with Pen was interesting and it is not surprising that Charles decided that his research should be in the field of contact lenses. Corneal shape as the basis for contact lens design was a hot topic at the time and measuring corneal curvature became Charles's challenge over the next four years. He qualified for his MSc in 1971.

A major benefit of his graduate studies was a chance to acquire computing skills. Software was not available and had to be written from scratch by each individual user. The analysis of a single set of his experimental data (a 12-hour series of curve fitting computations using an electric, not electronic, calculator) became an 18-second task for the giant IBM mainframe that had just been installed at UNSW. The thesis was completed much sooner due to this venture into the fledgling world of computers.

Charles continued an interest in contact lenses throughout his career. He took the opportunity to travel for three months during 1967 and to visit optometry schools, researchers, manufacturers and practitioners in Europe and the United

States. A visit to the ophthalmological clinic in Prague to learn something about the new Geltakt soft lenses developed by Professor Otto Wichterle and Dr Maximilian Dreifus in the 1960s was an important highlight for Charles. It put him at the forefront of a new era in contact lens practice.

Soft lenses became available for Australian practitioners in 1970 and the early '70s were a time of increasing activity in contact lens research. Prior to this period, most contact lens articles had lacked scientific rigour and a lot of contact lens practice was based on opinion. There was hardly an area of practice that did not need an objective examination or re-examination. Could soft contact lenses mask corneal astigmatism? Were diagnostic soft lenses of uncertain specifications necessary for prescribing? Could toric soft lens rotation be predicted using diagnostic lenses? Could allergic or toxic reactions to soft lens storage solutions be avoided? With so many questions needing investigation, it was a wonderful opportunity for someone who had just completed his Master's thesis. A trip to Japan and the United States with Dr Brien Holden in 1975 was a turning point and led to the decision to sit for the American Academy of Optometry Contact Lens Diplomate examinations. Preparing for those examinations was particularly useful: the prospect of being challenged on any contact lens topic called for very thorough preparation. Passing them opened new doors, leading to opportunities to provide courses at the American Academy of Optometry meetings and invitations to present papers and give lectures to other meetings started to flow.

National involvement

The first conference conducted by the Contact Lens Society of Australia in 1966 was the first opportunity for Charles to launch a lecturing career. He became very involved in the Contact Lens Society. He began organising NSW Chapter meetings and he became a member of the State Council of the Contact Lens Society, serving on that council for many years and as president of the national body in 1969. He was elected to the council of the NSW

Division of the Australian Optometrical Association (now Optometrists Association Australia) around 1967 but after 10 years it became necessary to resign. Running a practice, teaching, the Contact Lens Society, paediatric optometry and writing papers just did not leave enough time.

Charles was a foundation member of the executive boards of both the Optometric Vision Research Foundation and the Institute for Eye Research in 1985 and continues in those roles.

International involvement

Charles was an original member of the International Society of Contact Lens Research when it was founded in 1980 and has attended every meeting. There was a lot of time spent preparing lectures and away from his practice, with up to three overseas trips each year. The friends made, things learned and the many special travel experiences helped maintain the momentum.

The advantage of attending meetings as a speaker became apparent. Speakers are likely to be the greatest beneficiaries of their own lectures, given the time they spend researching their topics. In addition, at every meeting there was always the opportunity to hear a dozen or more other lecturers who, like Charles, had spent several months preparing their presentations. Much knowledge was gained, often well ahead of publication in journals. For a field like contact lens practice, with a constant innovation and change, keeping up-to-date in this way is a self-sustaining challenge. Time away from the practice was a problem but was eased by the practice location, which was upstairs in a city building. No patients dropped in unexpectedly and all patients made appointments, making it possible to catch up after time away.

Patient education and publications

Charles developed a strong interest in patient education, with particular emphasis on developing information sheets, based on the distillation of many years of experience. For example, due to its relevance to contact lens performance, he

developed an interest in the tear film. He was an original member of the International Society for Dakryology in 1985 and later a member of the International Advisory Panel of the Tear Film, Ocular Surface and Dry Eye Society. His most recent paper on this topic was concerned with the association between blink inefficiency, dry contact lenses and dry eyes and he developed a take-home patient education kit to make the task of teaching patients how to blink properly easier and more successful. Another major interest has been the aetiology and management of keratoconus. Abnormal eye rubbing is a causal or aggravating factor for many keratoconus patients and helping them overcome abnormal rubbing habits is a challenge. Charles developed a leaflet to guide modification of patients' eye rubbing behaviour.

Charles's interests in contact lens maintenance, allergy, patient education, contact lens verification, dry eye, learning difficulties, vascular responses to contact lenses, visual acuity chart design and keratoconus have resulted in more than 90 publications since 1967.

University involvement

Charles was involved in lecturing, tutoring, clinical supervision and course development at UNSW for many years. When the full-time optometry degree course commenced, the first year of study was limited to basic science subjects. Eventually, Optometry I was moved forward to the second half of the first year to provide an earlier introduction to optometry. Charles was asked to prepare a course that introduced the principles of binocular vision and its relevance in day-to-day activities. A version of that course is still presented to first-year students.

Charles also joined the School of Optometry Visiting Committee, which over many years tried to convince the university of the need to provide more space for the School of Optometry. He conducted a global survey of optometry schools, which showed that on a per student basis, the facilities at UNSW were the poorest on many criteria. Eventually, the school was rehoused in the new

Rupert Myers Building but by this time and after 30 or more years of part-time teaching, Charles decided to abandon undergraduate teaching to concentrate on research. About 15 years ago, he was offered a part-time position as Visiting Professor at UNSW. When he stopped teaching, he was appointed to an honorary position as an Adjunct Professor.

When UNSW celebrated its first 50 years in 1999, Charles was the recipient of a Jubilee Medal in recognition of his contributions to university affairs.

Paediatric optometry

With Jim Bates, a psychologist, and Ross Begbie, a teacher, Charles helped establish in 1972 a clinic for children with learning disabilities. It was called Threshold. All children attending required vision examinations, which Charles provided in his Market Street practice. As a result, the practice's contact lens activities were expanded to a family eye-care practice.

Dealing with learning difficulties in an interdisciplinary remedial clinic was a refreshing change from contact lenses and corneas. One area of remediation that was assigned to optometric care at Threshold involved visuo-spatial problems (reversing letters and words), which were common presenting problems for poor readers. In the absence of other formal programs for this type of difficulty, Charles developed a collection of methods into a remedial book to be used with individual children. Then followed a book of classroom techniques for teachers and a picture-book, illustrated by Paul Gearsides, for preschoolers and children in kindergarten.

There were also opportunities to contribute lectures to the undergraduate paediatric optometry course at UNSW and to supervise students in providing visual skill therapy at Threshold. When the Optometric Vision Research Foundation was established in 1975, Charles made red plate phoria tests (for preschoolers), which were sold to practitioners around Australia to raise money for a paediatric fund. The proceeds from the phoria test and Charles's book sales were matched by the Australasian College of Behavioural

Optometrists and used to establish a scholarship that supports paediatric research.

Recognition

Charles has been recognised both for his learning and his contributions to optometry. In 1999, he was admitted to the Body of Fellows of The Contact Lens Society of Australia for having attained the highest level of theoretical and clinical knowledge in the field of contact lenses. The New South Wales Division of Optometrist's Association Australia awarded him the Joseph Lederer Award in 2002, for excellence in clinical practice and his contributions through teaching and research. In 2003, the Australasian College of Behavioural Optometrists awarded him the Keith Woodland Memorial Award in recognition of exceptional service and leadership to behavioural optometry in Australia; he received the Award for Distinguished Corneal and Contact Lens Research at the Contemporary Vision Symposium held at the University of Houston College of Optometry in 2005, while in 2006, he was awarded the British Contact Lens Association Medal for contributions to contact lens related research. The Cornea and Contact Lens Society of New Zealand offered Charles honorary life membership in 2007.

Retirement

After selling his practice to Dr Gavin Boneham in 2003, Charles reduced his time seeing patients to just one day a week. After 44 years of patient care, the end of 2007 marked the end of this phase of his optometric career. He continues with his research, and with several papers and lectures in preparation, transition to full retirement looks like being a gradual process.