Thursday, 28 August 2014

Informal Retirement Comments

Thanks to Thierry [Coulhon] (Director, MSI)

I have certainly enjoyed being a member of MSI, and its various predecessors, since end of 1974. My thanks to all members over the years, staff and students.

I would like to take the opportunity to just say a few things about Maths here at the ANU, essentially personal observations, comparing what things were like here in previous years with how they are now, some of the people involved. But this is not a history, for the outlines of that see "counting Australia in" 2007, by Graeme Cohen. That book starts before 1788! and has a chapter on mathematics in the ACT. I will mostly just mention the Departments of which I was a member, so this is just one of many paths through the mathematical undergrowth at ANU.

1970's

I started in the Department of Pure Mathematics in the School of General Studies in November 1974. Two Years before that I met Malise in Buffalo New York, and my first and most important thanks go to her for tolerating all my quirks, mathematical and otherwise, over all these years.

The other Pure Maths Dept at ANU in 1974 was in the Institute for Advanced Studies. There were also two Depts of Applied maths, one in SGS and one in the Institute). The Head and Professor of Pure maths in SGS was Neil Trudinger, appointed while still in his 20's. But I was used to young bosses, my thesis advisor was Harvey Friedman, appointed as Associate Prof at Stanford at 18 and some years younger than me at the time.

The first difference between then and now was that there were relatively fewer mathematicians around, and it was not unusual to obtain a tenured position straight from a PhD. So my thanks to **Neil** for making such an unwise appointment. By way of background, because of the shortage of mathematicians, the UNSW offered very generous living allowance to do mathematics as an undergraduate, followed by a PhD, provided one accepted a tenured position on graduating. Both Neville [Smythe] and I had these scholarships, and both of us managed to convince UNSW that we should be allowed to do our PhD overseas on the grounds there were no supervisors in our fields (algebraic topology and logic respectively) at UNSW. But when I eventually returned to Australia the academic situation had tightened dramatically, and UNSW had no available positions.

In the 1970's the 2 Maths Dept here in the SGS were housed in the (previous) Hanna Neumann building, there was no Manning Clark centre, and the view was directly across a field to Sullivans Creek. Morning and afternoon tea for the Arts Faculty, and Maths, was provided by the University in a large common room. Almost everyone went regularly. Initially we were paid wages in cash every two weeks in the same room. No guards initially, but a lot of cash was certainly around.

A second difference. In the 70's there was not the same publish or perish pressure, and I had the luxury of being able to take a very wide swing from logic across to geometric measure theory, and not publish anything for a few years. I recall Neil saying that the future lay in geometric measure theory, and as a result many people in the two Pure Maths Depts participated in a weekly seminar slogging our way through Federer's book on the the subject.

By the end of the 70's the tenured members of the Dept were Neil, Neville Smythe, Martin Ward, John Cossey, Bob Bryce, Algy Howe, Rick Loy, Tom Donaldson and myself. Tom was perhaps the most eccentric mathematician I had met. He was the founder of the Australian cryonics society, and published and publicised widely on the matter.
[Cryonics involves being frozen immediately after death, for preservation until technology improves to the point where the brain and the information therein can be recovered. Tom's office was next to mine, and he had an extremely loud voice when agitated. In one conversation with customs department he was trying to organise the export of a body to the US. I could only hear one side of the conversation, but it seemed he could not get the person at the other end to understand the point. Yes, my body, he was shouting. A few of us from the Dept went to an Orientation Day lecture by Tom for incoming first year students to discuss the freezing process, complete with film and technical details. It was not very successful, I think only one student came. Tom had a successful freezing and is now in Arizona. You can look it up in Wikipedia.]

A third difference. Turf wars. The then Head of Applied maths, Archie Brown, was not happy when some of us in Pure Maths wanted to organise a seminar on general relativity. Eventually we solved the problem by calling it a seminar on Differential Geometry, but faculty in Applied Maths were not allowed to count it towards "Professional Development".

1980's In 1982 the Depts of Pure and Applied Maths in SGS, by then the Faculties, were (re)amalgamated. Archie Brown retired and Michael Barber became head of the combined Department.

The CMA, Centre for Mathematical Analysis, began operations. Neil was the founder and Director, and the CMA has had an enduring effect to this day. Peter Price played a major role in drawing all the proposal information together. Bob Anderssen and Frank de Hoog at CSIRO, Richard Brent, and Alan McIntosh then at Macquarie, were strongly associated.

Leon Simon, at the ANU from 1981—1990, then Stanford, was a driving force, from organising the famous Friday afternoon seminars to organising sporting events (cricket, volleyball), — he was very competitive! Gerhard Huisken and Alan Carey were two of many post docs here then. (Alan I also want to acknowledge for many coffee conversations, much more recently!) Andrew Hassell, Ben Andrews and John Urbas were participants in some of the seminars at the time.

The CMA office catered for a much smaller group of people then than are around now —- Marilyn Gray as administrator had a constant supply of brewed coffee for the regular stream of faculty and students in and out.

Friday evening, most people in maths in the Faculties and the Institute, with spouses would adjourn for drinks at the staff club, dinner afterwards, BBQ's on the Island, swimming out and back, it was highly and drinkably sociable.

The School of Mathematical Sciences SMS began in 1989, comprising the Dept of Maths in the Faculties, the CMA, and both the Maths Dept and the Stats Dept from the Institute. This was the first major integration of Faculty and Institute components at the ANU

1990's Late 80's & 90's, email and personal computers were becoming available. This was making a big change in ease of accessing information!

(When I was an undergraduate, even photocopying was initially unavailable in any useful form. In our Statistics labs we had mechanical machines in first year, electric ones in second year, and a special square root machine down the back of the room.)

Tensions within the the SMS were as much along personality lines as discipline lines. Someone had the interesting idea of providing an appropriate cover to the Board papers in 1990.

In 1991 the CMA external funding finished and the CMA morphed into the Centre for Mathematics and its Applications, still CMA. It obtained other external but more piece-meal funding, broadened its activities and sponsored a wide range of workshops and other activities.

ARC large grant funding started to become much more of a pressure. As always now, making an argument about applications of one's work was important. At Michael Barber's urging, from 1989—1992, Steve Roberts, Gerhard Husiken and I, together with assistance from Neville and Martin, applied for and received ARC and Faculties Research Funds grants, for computer modelling of evolving surfaces. This was very early days for ARC large grants in mathematics. I was a bit of a laughing stock, I could not find the relevant keys fast enough at login time to avoid being logged out. (I later test trialled a friends new typing course book, and am a bit faster now.)

Yi Fang first came to the ANU on one of our ARC grants in the 90's

There was tension within the Faculties Maths Department over what directions it should take and should it again split into pure and applied.

Library Collection financial problems, due largely to low Australian dollar. [To help in the library committee, and to help as Head of the Maths Department] I studied some management books "Dealing with Difficult people", "Getting past No" and "Getting to Yes". All recommended by Malise, and quite helpful.

2000's

Being Head 2001—2004. A time of great structural change in the ANU. Things have not changed in this respect. Thanks to Kelly [Wicks]. I think some members of the Dept thought I would be too "dog at a bone" and divisive to be Head. Steve, John and Lilia have subsequently taken on this position.

There were problems with the large first year classes, and Linda and I designed and implemented changes which still exist.

Michael & Louisa Barnsley arrived in this period. The popularity and reach of my 1981 fractals paper was due in large part to the work Michael did, theoretical, applications, and entrepreneurial.

In 2002 the SMS was renamed as the MSI, Mathematical Sciences Institute

One important development has been the ANU secondary college, Neil (now teaching in the MSI) and Lisa [Walker] being key teachers, also Claire and Simon, Chris and Griff, Janelle and Janine

In more recent years there have been quite a few excellent new appointments. I just wish there could be more.

Finally I want to say that teaching and doing research here, even doing administration and particularly working with many very supportive people, admin and faculty, and really interesting students at the MSI, has been its own reward.