



November 29, 2005

Dr Barry Hughes
Executive Director, National Strategic Review,
of Mathematical Sciences Research.

Dear Barry,

Thank you for the opportunity to contribute to the review. As Chair of Statistics at Melbourne University my submission is concerned with the Statistical Sciences rather than Mathematical Sciences in general, although the two are linked.

To my mind, the Statistical Sciences in Australia are no longer internationally competitive although in the recent past they have been: I spent most of my career at La Trobe University when its Statistics Department enjoyed a strong international reputation. In the early part of my career, the Statistics group at Monash was strong. Since then I have seen the Statistics groups at Monash and lately La Trobe Universities collapse. The group at Melbourne has not had a strong research reputation for many years and its main role has become service teaching to other disciplines. This keeps statisticians employed but does nothing for research. Melbourne has recently taken steps to rebuild its Statistics group but there seems to be neither the inclination nor the available talent to do the same at the other Universities in Melbourne.

Before coming to Melbourne I was at the Centre for Mathematics and its Applications (CMA) at the Australian National University, which provided a marvelous environment for research. However, it has proven extremely difficult to attract strong Australian statistics students to ANU. I have recently arrived at Melbourne along with four other appointments in Statistics and Probability Theory/Stochastic Processes and I am now less pessimistic about the future of the Statistical Sciences in Australia. But three of the four new appointments were recruited from overseas and these bright young academics will spend an enormous amount of their time doing service teaching. This is necessary to support the group under the current funding model but is a waste of their talents. I suspect the situation is as least as bad in other institutions.

I perceive a major weakness in Australia in the training of research statisticians, the next generation of academic statisticians and applied statisticians capable of high quality applied statistical research. Since arriving at Melbourne I have had discussions with

many of the local medical research institutions and other organisations employing applied statisticians and they are all seeking PhD quality students for joint projects. Alas none are available. Colleagues with research grants search in vain for suitable post doctoral fellows.

There are now fewer Universities that can still offer a full research oriented Statistics program. For example, in Melbourne, Melbourne University is the only major University still offering a full Honours program in Statistics without depending on students taking subjects at other Universities. This weakness will effect the ability of government, academic and business institutions to carry out research across a wide range of areas.

The only resolution that I see to this dilemma in training research and academic statisticians is to fund some CMA type groups in the Statistical Sciences in Mathematics and Statistics Departments in Universities in the major cities where it is still possible to attract mathematically strong students. These groups would be essentially graduate schools and concentrate on training students that can compete with those in the best postgraduate programs of the American Universities.

Without at least one internationally competitive research group training future generations of researchers and academics, I despair for the future of the Statistical Sciences in Australia.

I am happy to meet with the working party.

Yours sincerely,

Professor Richard Huggins
Chair of Statistics.

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