

newsletter

HIGHLIGHTS OF NZSA CONFERENCE August 14 - 17, 1988. Massey University, Palmerston North

Invited Speakers: (Biographical details are given elsewhere in this newsletter)

Hon. Margaret Shields, Minister of Statistics.
Dr Alan L Tyree, Associate Professor of Law, University of Sydney.
Dr Craig F Anesly, NZI Professor of Banking and Insurance, University of Auckland.

PANEL DISCUSSION (Monday, 15)

The Statistician as expert witness.

Starring:

Lawyers:

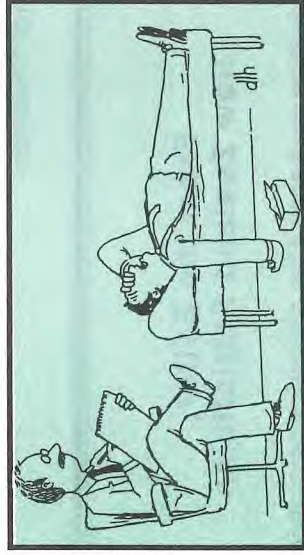
Alan Tyree
Chris Goodsell

Statisticians:

Neil Cox
David Rhoades
Craig Anesly



"It is customary, sir, that the jury's decision is given verbally, even if you are a statistician."



"I never expected statisticians to adopt this role, even under user-pays."

PANEL DISCUSSION (Tuesday, 16)

Statistical consulting under user-pays.

Starring:

Ray Littler
John Maindonald
Alan Tyree
+ others

WORKSHOPS ON COMPUTER SOFTWARE (Wednesday, 17)

Some details on these are given on the last page of this newsletter.

In this issue

Peter T. bows out gracefully
Report on ABNMS Congress
Conference Registration form

President's Column



This column will be my last as President of the Association and, perhaps, my shortest! The main reason for the latter is that this Newsletter follows hard on the heels of an action-packed April issue. As for the former, I have enjoyed my stint as President, but feel that it is time for me to stand down. Two years is an ideal presidential term; long enough to remain enthusiastic and enjoy the job, but not so long for it to become a burden.

What has happened since the last Newsletter? Richard Penny has circulated posters and membership brochures to key people for distribution. This has already led to a number of new members. If you know of people who might benefit from membership of the Association, please give them a photocopy of the introductory offer for first time members printed in the April Newsletter. The Association's publications and, in particular, the new booklet 'Understanding Surveys', that were advertised in the last Newsletter are all selling well. Note that supplies of the John Bibby books are limited - so be in while stocks last.

The Association responded to a request from the Royal Society of New Zealand for assistance for the Science and Technology Advisory Committee. They required details of case studies and success stories where Science and Technology have had substantial beneficial effects for social and economic development in New Zealand and an indication of areas which, in our view, are of high national strategic importance for Research and Development. As you are aware, the membership was surveyed and the results incorporated into a formal response that was organised and coordinated by Jean Thompson. This response is printed elsewhere in the Newsletter.

An ICOTS Local Organising Committee meeting was held at Otago University on 28 May. This was a well attended and successful meeting. The major items covered were the programme, including the final firming up of the dates of the Conference, and ways of funding overseas and local speakers. Any suggestions you might have to make concerning the latter will be gratefully received. We especially need to consider ways of raising local finance to assist school teachers. The costs of registration, together with fares and accommodation, make ICOTS 3 a

relatively expensive exercise. It is anticipated that the Association's 1990 Annual Conference will be held in conjunction with ICOTS 3. *For your diaries the dates of ICOTS 3 are 19-24 August 1990 - don't forget.*

A project entitled 'Ethnic and gender differences in performance in mathematics' submitted by EIME (Equity in Mathematics Education), a group of statisticians and mathematics educationalists, has become our first official project directed towards ICOTS 3. Thanks are due to Judith Archibald who acted as independent assessor for this project. As was the case with the Statistical Society of Australia's biennial projects, we look forward to the results from this project both in the period leading up to ICOTS 3 and at ICOTS 3 itself. Any suggestions for other projects?

We would appreciate learning of people who might wish to serve on one or other of the Association's committees. If you are keen to play a role then please advise us. The Association's health and vitality continues to depend on a good supply of hardworking enthusiasts.

For my part, I would like to take this opportunity of thanking you all, especially the Association's committee members, for your continued support. It is much appreciated. I look forward to seeing many of you at the forthcoming Annual NZSA Conference which promises to be both stimulating and enjoyable.

Peter Thomson

From the Editor, New Zealand Statistician

I would be very happy if the organising committee of the August conference of the August conference recommended the invited and contributing speakers to submit a written version of their papers to the New Zealand Statistician. Note the blurb under Guide to Authors (back inside cover) requesting articles to be non-technical, entertaining and succinct; 10 manuscript pages. I intend to publish all the abstracts in the December issue: if you can get them into Macwrite or Word 3 (Mac-disketteable) the first time around, I'd be delighted!

Jocelyn Dale

New Zealand Statistical Association (Inc.)

Annual General Meeting

Tuesday, 16 August 1988, 11:30 a.m.
Whararata, Massey University

Agenda

1. Apologies
2. Confirmation of minutes of the 1987 AGM
3. Matters arising from the minutes
4. President's report
5. Matters arising from the President's report
6. Treasurer's report
7. Subscriptions for 1988-89
8. Election of Officers: President, Secretary, Treasurer, Corporate Members' Representative and five committee members
9. Election of SAPQC committee members
10. Election of Auditor
11. Annual Conference 1989
12. General

NOTICE

Nominations for the 1988/89 Executive Committee

Members are invited to submit written nominations for the positions of President, Secretary, Treasurer, five Committee members and one Corporate Members' Representative. Nominations should be submitted to the Secretary of the Association by 13 August 1988 and should include the signatures of the nominator, seconder and the consent of the nominee. Nominations will also be received from the floor at the AGM.

FROM THE EDITOR

THRESHING THOSE OLD STATISTICS

Alis extendum, to be threshed by others, was the motto of the Royal Statistical Society when it was founded in 1834. The potted history which appeared in the 1984 journal of the Society revealed that the explanation of this curious phrase lay in the determination of the founders to deal only in facts and not opinions. By 1857 the motto was quietly dropped for it became obvious that someone will always try to interpret data so that it would be strange to deny statisticians this right.

Anyone who glances at the timetable for this year's NZSA Conference will realise that statisticians have moved far from the restriction of not threshing the data collected by others. Indeed, the modern statistician must not only thresh the data but grind the grain into palatable flour that can be digested by others.

package the flour in an attractive way and, in the current climate of user-pays, market and sell the product. A bewildering array of skills are now required.

The first panel discussions at the conference will consider such questions as whether the statistical and legal professions can communicate, how should statistical evidence be packaged and presented and how could statisticians stand above the confrontation of the courtroom process. The second session will consider other aspects of presenting data and the effects of user-pays on the type and amount of consulting. The three invited speakers, the Hon. Margaret Shields, Dr Alan Tyree and Professor Craig Anesly, come from very varied backgrounds. All in all, it sounds as if it will be a most absorbing conference. See you in August.

Dick Brook

Response to a request from the Royal Society of NZ for Assistance for the Science & Technology Advisory Committee

The New Zealand Statistical Association consider that the science of statistics should be accorded greater support in New Zealand since it can be applied to advantage in practically every endeavour.

Japan recognized the crucial importance of statistical methods applied to industrial processes and technological research almost 40 years ago. This policy was championed by the Japanese Union of Scientists and Engineers (JUSE) and widely accepted by industry. The application of statistics is internationally recognized as one of the key factors in the amazing growth of Japanese industrial success and its subsequent economic position in the world today.

Despite the high calibre of New Zealand's statisticians we have yet to make such a contribution in New Zealand to date.

We know we can contribute, we are willing to help and we have the skills to be effective. Indeed we are very effective in the areas where we are invited to apply our skills. However, we are frustrated by the lack of perception, even amongst scientists, of the needs for our skills. Part of the problem is that there are too few of us and so the work we do is not widely seen.

We consider therefore that it is of high National strategic importance that we have in New Zealand:

- Research into quantitative methods with applications to commerce, agriculture, social sciences and industry
- More fully trained statisticians
- A raising of numeracy in the general population and the teaching of effective elementary statistical skills at all levels of education
- Publicity about the potential value of using our skills of the kind given by JUSE in Japan (maybe given by RSNZ).

To achieve these aims there needs to be a great increase in the resources provided by government to educational institutions and government departments involved in the training of practical, experienced statisticians.

We have canvassed our members and enclose a selection of case studies or success stories demonstrating the wide variety of areas where statistical methods are at present being used to improve efficiency.

C J Thompson
Secretary, NZSA

[The above was accompanied by a listing of 34 case studies and success stories obtained from NZSA members.]

PROMOTING CAREERS IN STATISTICS

The third Careers Day in Mathematical Sciences for interested women students went well. About 300 young women from the 6th and 7th form converged on the University of Auckland. There were various activities, from extended presentations by those with careers in mathematics to visits to 4 University departments where the students could meet role models.

The statisticians would have met about 2/3 of the students. We introduced ourselves, giving a quick run-through of our career paths, then we each spoke about a project we had done in our jobs. Lynne Gilmore and Joanna Stewart described the Dunedin Longitudinal Study on childhood development and has personal computers ready to interview the students about their alcohol consumption and attitudes. Jocelyn Dale showed slides on a horticultural experiment she had collaborated in, for improving harvest-time fruit quality. To get the correct premiums for contents insurance, Linda Nicholls outlined the steps she went through, working with management, doing statistical analyses and communicating the findings.

We also handed out a brochure on careers in statistics. Don't forget to ask those young women you interview about jobs in statistics *where* they first heard about them! This careers day may prove to be one of our best marketing opportunities!

Jocelyn Dale, Lynne Gilmore, Linda Nicholls, Joanna Stewart

STATISTICAL METHODS IN DISCRIMINATION LITIGATION

When expert witnesses testify as to what quantitative data show about the relationships among variables, they draw on a rich tradition of statistical thought unknown to most other participants in litigation. Confronted with such evidence, the courts have remarked that "statistics are not irrefutable", that they "come in infinite variety" and that to be relied upon, "statistical evidence ... must be meaningful".

Nevertheless, statisticians and other experts appearing in discrimination litigation have a professional responsibility to use methods that are well adapted to the problems to which they are applied, and to choose from the "infinite variety" of statistics those that are most "meaningful".

The literature on statistical methods in discrimination litigation is filled with articles and books in which lawyers explain to each other what statisticians are saying, and to a lesser extent with articles in which statisticians explain to each other what lawyers are saying.

Science, social science, and medicine do not operate under the adversarial model, although one might be forgiven for drawing the opposite conclusion from the literature. Consequently, the use of statistics in these fields does not reflect the roles played by the participants (including the statistician), which are a prominent feature of legal disputes.

Like oil and water, law and statistics do not naturally mix. We could use some more soap.

D H Kay and M Aickin (Eds)