

NEW EDITOR!

This newsletter will shortly have a new editor. **Dr R. J. (Dick) Brook**, a Reader in the Department of Mathematics and Statistics, Massey University, will be editing the newsletter as from the next issue, No. 15. Dick is well-known to many of the association's members—he has taught at Massey University for 14 years, participated in the association's annual conferences, and is the co-author of at least two statistics books.

Submission of news items, articles, letters-to-the-editor, and, advertisements should be made to...

Dr R. J. Brook
Newsletter Editor
Dept. of Mathematics and Statistics
Massey University
Private Bag
Palmerston North

Telephone: (063) 690999

COMMENTS ON A FORUM FOR 7TH FORM TEACHERS OF MATHEMATICS WITH STATISTICS

By **Brian Dawkins**

About forty teachers, academics and statisticians participated in a one day forum for 7th form teachers involved with the Mathematics with Statistics option. This was organised jointly by the NZ Statistical Association and the Department of Continuing Education at Victoria University, and was held on the Victoria University campus. The focus was on the practical component, and in particular, the statistical aspects of that component.

Our Beloved President And Leader Of The Faithful, **Peter Thomson**, (VUW) gave a short welcoming address, and he was followed by **David Vere-Jones** (VUW) who discussed the background to, and aims of, the prescription for the practical component. He was followed by **Paul Ackerley**, an inspector with the Department of Education, who presented some of the materials available to teachers and attempted to field some sticky questions.

The remainder of the morning was given to short presentations on such things as, suitable reference texts (**Peter Thomson**), available data sets (**Mike Camden**, Wellington Polytechnic), some practical project advice (**Shirley Pledger**, VUW), surveys (**Vince Galvin**, Department of Statistics), and some teaching experiences (**Barbara Robertson**, Wellington Girls' College, and **Elizabeth Robinson**, Queen Margaret's College).

After a pleasant hot lunch at Vicky's Restaurant in the Student Union Building, the forum reconvened for a discussion of assessment. This involved each of four invited speakers **Pat Belgrave** (Marsden Collegiate),

Paul Ackerley (Department of Education), **Megan Clark** (VUW) and **Robert Davies** (AMD/DSIR).

Each gave their assessment of a project that had been submitted by a student last year. All participants had had a copy of the project since registering in the morning and had thus had a chance to browse through it. This session was well received and aroused a lot of interest.

Finally, **Gordon Knight** of Massey University, summed up proceedings, and gave us some interim thoughts on his preparation of a summary of the projects presented throughout the country in 1986.

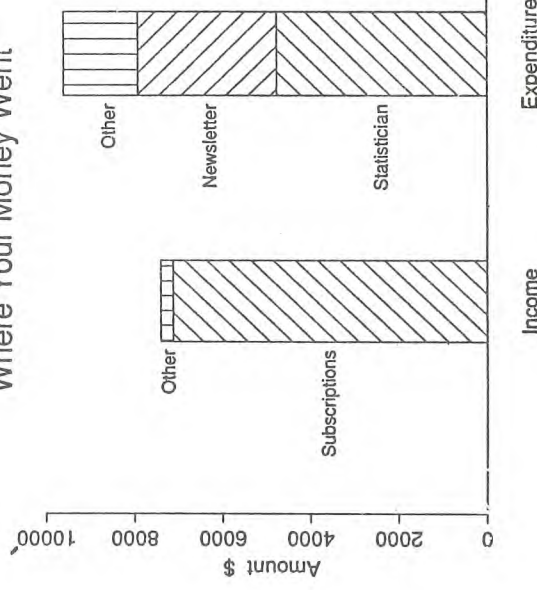
Many then enjoyed an informal afternoon tea in the Restoration Cafe, discussing aspects of the day and sharing experiences. The nett feeling seemed to be that the day had been a good morale booster: it always helps to find that you are not alone in the struggle with recalcitrant material, and intransigent conditions.

MORE THAN YOUR MONEY'S WORTH

By **Alex Neill**

What a bargain it has been to belong to the New Zealand Statistical Association! For this last year, members have been receiving more in services than they have been paying for in subscriptions. As you can see from the graph, our income did not even cover the cost of *The New Zealand Statistician* and the *newsletter*. "But how can this be?" you may ask.

Where Your Money Went



Well, we've been living off our fat, is the answer. Healthy bank accounts generated by such things as calculator and statistical software displays have been subsidising subscriptions. A quick check through previous years accounts shows this is no new trend, but,

unfortunately our reserves can't last forever. And this is 1987, a year in which "subsides" is a dirty word.

So now the bad news. We can't maintain our bargain basement subs next year. Something has to give, either subscriptions or service. The executive committee is convinced that the range of the association's activities should grow, not shrink. So, I'm afraid, folks, that your friendly treasurer will be recommending a price hike at the next AGM. Please remember all the wonderful bargains you have been receiving over the last few years when we discuss the price increase at the AGM. We will aim to continue to be one of the best buys around.

HISTORY OF STATISTICS IN NZ By Sharleen D. Forbes

The New Zealand Statistical Association has decided to use the latest grant from Professor J. T. Campbell to provide some initial impetus to the study of the **History of Statistics in New Zealand**. This is being done in the following ways:

(1) The creation of a **Tape Archive** of the early history of statistics as remembered by early statisticians. This work is currently being undertaken by myself and David Vere-Jones with assistance from Judith Fife of the Oral Archive of the National Library. An interview with Professor Campbell has already been recorded. Both David and I currently have copies of the tapes and a copy will shortly be available from the Oral Archive. A transcript of the tapes has been completed and is available from Professor David Vere-Jones, Institute of Statistics and OR, Victoria University of Wellington, Private Bag, Wellington.

(2) The holding of a **One-day Conference** at Victoria University of Wellington on Wednesday, 1st July. This will tentatively consist of 4 sessions on the following topics: Government Statistics, The Development of Statistics Teaching, University Statistics, and, Links with the United Kingdom. Speakers will include Len Cook, Stan Roberts, Garry Tee and hopefully, Ian Dick and Geoff Jowett. The NZ Statistical Association will hold its Annual General Meeting in conjunction with this conference.

BOOK REVIEW by Stephen Haslett

"Misused Statistics: Straight Talk for Twisted Numbers", by A. J. Jaffe and H. S. Spierer. Marcel Dekker, Inc., New York, 1987. Price \$US35.50 (outside USA).

As stated in the preface, the aim of this book is to allow each of its readers "to be a critical observer of the statistical scene". The goal is to show non-statisticians "how to spot misuses in the media (including scholarly and professional journals) and in public statements", and to help "professional statisticians (including teachers) and those who must interpret and publish articles which include or are based on statistics...to avoid statistical misuse". For the authors a misuse is "using numbers in such a manner that—either by intent, or through ignorance or carelessness—the conclusions are unjustified or incorrect". They believe, I think quite correctly, that students of statistics can learn from a study of misuses as an adjunct to learning the right way to apply statistical tools, and also that for many students "as the statistical theories of the classroom fade away with time, the lessons learned from the study of misuses will become more important".

"Misused Statistics" has its origins in a series of articles (by the authors of the book) which appeared in

the *New York Statistician*. Its fifteen chapters draw on those articles, and illustrate problems of varying complexity.

The first part of the book (to the middle of chapter 7—the division is my own) is elementary in character, dealing with categories of misuse (lack of knowledge, faulty interpretation of data or results, incorrect data, inadequate analytical methodology), data quality, graphics and presentation, and basic methodology. Because I have only peripheral involvement with undergraduate teaching I find it difficult to assess this section of the book in comparison with others of its kind. I did however find that examples simplified from real life by "Dr Nowall" particularly where they involved bluntness, rather tedious; fortunately such examples were few in number, and there were a large number of "real life" illustrations. The pace was to my mind also rather slow and the explanations at times perhaps a little simplistic, but these are not a major criticism given the wide range of readership for which the book is intended.

The second part of the book, dealing with real life methodological examples, faulty interpretation, surveys and polls, Ockham's razor, affirmative action, insubstantial statistics ("ectoplasticities" is their term), and misuse by government and international agencies, I found much more a "good read" with its wealth of real life examples. It is these examples, together with a lesser number in the first section, which give this book its strength and worth. Many of these have a particularly North American slant, but there is a wide range of examples from Salvador to Ethiopia, from Incas to China, and two references to New Zealand (p.51-53, p.188).

The discussion in the text however is on occasion incomplete without details of the references, and my regret concerning the examples is that it will be difficult to obtain a number of the references in New Zealand, appearing as they do in back copies of US newspapers.

I have only two clear disagreements with the text, and both of these are minor. On p.147 a coin tossing experiment is suggested with probability of heads being given as 0.5; no reference is made to a "fair coin". Figure 6.3 is meant to be an exponential curve illustrating 7% growth per year but has the appearance of a freehand straight line with slight bends at each end, and is thus confusing given the discussion of its non-linearity in the text.

In summary, I believe, as do the authors, that information on misuse of statistics, as contained in the book, would be a useful adjunct both to mainstream and service courses in statistics, and that "Misused Statistics" contains a wealth of relevant practical examples. Perhaps the major bar to its use in undergraduate courses will be its price (\$US35.50) but given sufficient demand this may be addressed, given time, by a paperback edition.

1987 AUSTRALASIAN MEETING OF THE ECONOMETRIC SOCIETY

To be held at the University of Canterbury, Christchurch, from Wednesday, 26 August to Friday, 28 August, 1987. Abstracts should be submitted by 30 April, and complete papers by 1 June, 1987. There will be three concurrent sessions of contributed papers, in the areas of econometric theory (including time-series analysis), applied econometrics and economic theory/mathematical economics. Invited addresses will be given by Professors Peter Phillips (Yale), Ken Wallis

(Warwick), Frank Fisher (M.I.T.) and John Riley (U.C.L.A.).

For further information, contact:

Professor David Giles
Department of Economics and O.R.
University of Canterbury
Private Bag
CHRISTCHURCH
(Tel: (03) 482-009; Telex NZ 4144)

Information about the Diploma in Applied Statistics can be obtained from,

Professor B. I. Hayman
Dept. of Mathematics and Statistics
Massey University
Private Bag
Palmerston North

A recent arrival to the Statistics Section of the Massey Department of Mathematics and Statistics is **Charles Lawoko**. Charles has a BSc and an MA in Applied Statistics from Dar-Es-Salaam, an MSc and a DIC from Imperial College, London, and has recently completed his PhD from the University of Queensland. Charles' research interests include Pattern Recognition, Multivariate Analysis and Applications of Operations Research. He is already involved in Massey's extramural teaching as well as lecturing part of our new first-year statistics paper.

NEWS FROM CANTERBURY

Professor John Deely will be attending the Third Valencia International Meeting on Bayesian Statistics from June 1-6. He is an invited discussant and will also be presenting a joint paper with Professor William J. Zimmer from the University of New Mexico.

NEWS FROM OTAGO—Estimation and Analysis of Insect Populations

The United States-New Zealand Cooperative Science Program is sponsoring **Bryan Manly**, University of Otago, in the presentation of a symposium-workshop January 25-29, 1988, on the topic of "Estimation and analysis of insect populations" to be held at the University of Wyoming, Laramie. The purposes of the symposium-workshop are (1) to provide a synthesis and evaluation of currently available methods for estimating the parameters of insect populations and modelling the dynamics of insect populations over several or many generations; and (2) to stimulate research into new methods.

The program will be equally attractive to both quantitative biologists and biometricians. Time will be divided between lectures-workshops presented by Bryan Manly and by participants. Workshops will involve hands-on analysis of real data. Abstracts for contributed papers are due September 1, 1987.

The number of participants is limited. For further information, contact Bryan Manly, Department of Mathematics and Statistics, University of Otago, P.O. Box 56, Dunedin (Telephone: (024) 771-640).

NEWS FROM MASSEY—NEW DIPLOMA IN STATISTICS

A postgraduate diploma with the title of Diploma in Applied Statistics has been approved at Massey University. It has a number of features which will be attractive to users of statistics, namely,

- (1) The teaching is on an extramural basis.
- (2) Graduates from different disciplines may apply. For those with little background in mathematics and statistics a few prerequisite papers may be necessary.
- (3) Students may choose their course of study from a number of topics (although all will not be available each year) including:
 - fitting linear models; generalized linear models; experimental design and analysis; sampling methods; economic time series; multivariate analysis; quality control; decision theory; statistical theory.
- (4) Some project work is compulsory but students may decide whether to choose a wide spread of topics or to study fewer topics in some depth.

NEWS FROM DSIR/AMD

DSIR Applied Mathematics Division are establishing a network of UNIX machines (AT&T 3B2's) to complement and compete with the network of VMS-running VAX 11/780's maintained by DSIR Division of Information Technology. The Division of Information Technology are now charging other DSIR divisions for the use of "their" machines. The Applied Mathematics Division are not yet charging other DSIR divisions for the use of their brains.

The Director of DSIR Applied Mathematics Division, **Dr Robert Davies** will be presenting an invited lecture entitled "Statistics, Stochastics and Asymptotics" at the Australian Mathematics "Colloquium" next month.

EDUCATION SUBCOMMITTEE NEWS — THE FRESH DATA PROJECT

The NZSA Education Subcommittee wants your help. We intend to publish a collection of datasets for use by learners and teachers of statistics. We are asking you to sort out one or more datasets and to make these available to us. With the data we'll need a brief statement classifying the data according to the appropriate subset of these features:

- the nature of the population
- the sampling method
- the experimental procedure
- definitions of each variable
- the aims of the study
- hints on what to look for in the data
- hints on exploration and analysis methods
- dates

persons and organizations by whom and for whom the data were collected

ownership and copyright of the data

permission for us to publish

With your cooperation we'll have a collection of fresh, raw, locally-grown (and high-fibre) produce which will fill the existing void and greatly enhance the health of NZ students of statistics. The contact person is,

Mike Camden
Wellington Polytechnic
Private Bag
Wellington

The Education Committee is still seeking your suggestions for clear, well-written statistics books for the

7th form course. The contact person for this is Peter Thomson, Institute of Statistics and Operations Research, Victoria University of Wellington, Private Bag, Wellington. A similar request in the last newsletter had a non-response rate of 99%.

HUNGRY LAMBS; JANET, JOHN AND WIREMU; AND STATISTICIANS?

How do young people find out what statisticians do? They read about them and then talk about what they've read. This would be facilitated if they had access to some stories or information about statisticians. How can you help?

We would like to find some statisticians who might have interesting small work-related incidents that might be suitable for inclusion in the School Journal. We need to know who you are and what the incident is about. We would assume that the journal editors may not use all the ideas and would rewrite the article to suit the reading age of the children. If you can help, please send ideas to:

Andy Begg
Department of Education
Private Bag
Wellington.

PRESIDENT'S COLUMN

I am pleased to report that we now have an editor elect for the *NZSA Newsletter*. Dick Brook of Massey University has kindly consented to take over from John Reynolds in the latter half of this year. We welcome both Dick and also Jocelyn Dale in their respective roles as editors of the *Newsletter* and the *Statistician*, and wish them every success. The fact that we now have two editors in place of one, is indicative of the work that our current editor John Reynolds is doing and has done for the Association over the period of his editorship. He has done the Association a considerable service, in particular through the well-written Newsletter. This has brought the NZSA membership together in a way that no other Association initiative has done over recent years.

Since the last *Newsletter* there has been a forum on the 7th form Mathematics with Statistics project which was held in Wellington and is reported elsewhere in the *Newsletter*. Our thanks to Brian Dawkins for organising what turned out to be a thoroughly successful exercise. The forum was different in nature from a similar initiative held in Auckland late last year, in that it addressed the broader aspects of the syllabus, the support and maintenance of the project, and assessment. The contributions from all were excellent; those from Barbara Robertson (Wellington Girls), Elizabeth Robinson (Queen Margaret College) and Gordon Knight (Massey University) were a highlight. It is hoped that this will lead to follow-up meetings, possibly with the Wellington Mathematics Association. I understand that similar activities may well be occurring in other centres.

A project proposed by Sharleen Forbes and David Vere-Jones on the History of Statistics in New Zealand is now under way. This has been seeded by a grant from Professor Campbell. They have begun the task by building up an oral archive of the thoughts and reminiscences of New Zealand's key emeritus

statisticians. Professor Campbell has been interviewed, very appropriately, an exercise which according to the participants proved to be very interesting and enlightening. We thank Sharleen and David for this timely and important initiative.

The History of New Zealand Statistics will form the theme of a NZSA day to be held with the **Annual General Meeting** in Wellington on Wednesday, 1 July. (In the previous *Newsletter* I mentioned that we had to hold the AGM within the first 3 months of the financial year. In fact I stand corrected; the AGM must be held within the first 4 months of the financial year). You should all be thinking about nominations for the Association's Executive Committee and its office holders (**including** the president). Please don't be backward about coming forward if you wish to play a part in the Association's activities.

At present we are in the throes of beginning to compile a leaflet outlining our principles as an organisation and our activities. The hope is that this will not only explain what our role is in the community, but will also help in terms of increasing our membership and penetration into the affairs of the community at large. If you have any ideas or better still examples from other Associations of such a leaflet then I would be very pleased to receive them. Our membership could do with increasing; in particular it would be good to see more secondary school teachers joining our ranks and making an impact on the Association.

At the AGM on 1 July a number of constitutional amendments will need to be discussed relating to the timing of the AGM, the various NZSA committees, and new local groups such as the one recently formed in Otago. Any other centres wishing to set up local groups and wishing to be affiliated to the NZSA should get their act together fairly soon and should perhaps, in the first instance, write to me or to Garry Dickinson. We would welcome any suggestions with regard to the structure of the Association and ways in which it might be improved, in particular with regard to the fact that it is a national organisation rather than one dominated by Wellington.

Some of you will have already learnt from the newspapers that two of our members, David Vere-Jones and Megan Clark, have been in the news with their findings on Mathematics and Science Education. I am pleased that their worthy efforts have come to the attention of the community at large. It would be nice to think that their efforts, together with other important reports such as the Beattie Report, will lead to constructive change in our society.

Peter J. Thomson

FROM OUR MARK-TWAIN-EVERY-BODY-COMPLAINS-ABOUT-THE-WEATHER DEPT.

The following was sent to us by a former SAC convenor. It appeared in a *Sunday Times* article by Michael Williams entitled, "Fifty years of surveys, and they're still polls apart".

"As for accuracy, it [the poll industry] can rest secure in the knowledge that the performance of pollsters since the war has been at least 10% more reliable than the weathermen."

GENSTAT RULES, OK?

Yes, it's official. A recent DSIR Vax network news item contains the following...

"Cost of 5 linear regression analyses, each with 100 points:

Minitab 13.3 CPU secs. = 0.67 PUCs = \$0.51

Genstat 12.4 CPU secs. = 0.62 PUCs = \$0.47"

ASPERSION-OF-THE-MONTH AWARD

To David Knowles, who in a letter to the editor of *The Economist*, Volume 301, Number 7472, 1986, wrote...

"...a cursory look at countries and organisations shows no lack of people able to count, deduct, extrapolate, and produce spanking new models, theories and technologies.

The major shortfall of the twentieth century is a universal inability on the part of individuals and organisations to cope and work productively with other individuals and organisations.

Future generations will look back askance at...our ineptitude at addressing the need for education to handle human and organisation issues.

A prime target for such education would perhaps be those who count, but cannot see."

Aside: Those who see but cannot count are encouraged to join the Deming Institute, while those who can't see and can't count should take a taxi home.

DEADLINE FOR NEXT ISSUE

The deadline for submitted material for the July, 1987 issue of this newsletter is July 6.

Please send all notices of seminars, news items, letters-to-the-editor, etc. to...

Dick Brook

Newsletter Editor

Dept of Mathematics and Statistics

Massey University

Private Bag

Palmerston North

The deadline for "News and Announcements" for the May, 1987 issue of *The New Zealand Statistician* is May 7.

INTERNATIONAL CONFERENCES

Recent Developments in Statistics and their Applications

To be held in Seoul, Korea, August 27-29, 1987. Sessions include: Multivariate Methods and Data Analysis, Reliability and Survival Analysis, Linear Models and Design of Experiments, Estimation and Testing Hypotheses, Statistical Computing and

Graphics, Statistical Education and Consulting.

Invited and Contributed Papers are called for. Titles and abstracts up to 3 pages should be sent to the organizer before June 30, 1987 at the following address:

J. C. Lee

Institute of Statistics

Korea University

5-1 Anam-dong, Sungbuk-ku

Seoul, KOREA

Sixth Southeast Asian Statistics Seminar

Organised by the Thai Statistical Association in collaboration with the Singapore Institute of Statistics and the Institut Statistik Malaysia and to be held at the Imperial Hotel in Bangkok, Thailand, 18-20 September 1987. Papers on any aspect of Statistics and related disciplines are welcome. Participants wishing to present papers should inform The Secretary before 31 May 1987.

All enquiries should be addressed to:

Dr Suchada Kiranandana

Secretary, Thai Statistical Association

Department of Statistics

Faculty of Commerce and Accountancy

Chulalongkorn University

Bangkok 10500, THAILAND

Ninth Australian Statistical Conference

To be held, in conjunction with the National Mathematical Science Congress, in Canberra, May 1988. For further information contact Professor Chris Heyde, Department of Statistics, Institute of Advanced Studies, GPO Box 4, Canberra 2601.

International Conference on Biomathematics

To be held in Xi'an, China, 25-30 June 1988. For information contact:

Professor Lansun Chen

Mathematical Institute

Chinese Academy of Sciences

Beijing

The People's Republic of China

XIVth International Biometric Conference

To be held in Namur, Belgium, 18-23 July, 1988.

For information contact, Biometric Society, Suite 621, 806 15th Street N.W., Washington DC 20005-1188, USA.

Tenth Australian Statistical Conference

To be held in Sydney during July, 1990.

ICOTS III

To be held in Dunedin, New Zealand during August 1990.

MOVING?

Members are requested to notify the Treasurer, NZSA, P.O. Box 1731, Wellington of any change of address in order that newsletters and journals (and subscription reminders) can continue to be despatched to them.

New Zealand Statistical Association 38th Annual Conference

Announcement and Call for Papers

The 38th Annual Conference of the New Zealand Statistical Association will be held at the University of Canterbury, Christchurch, New Zealand from ...

Monday, 24th August to Wednesday 26th August 1987.

The Conference will dovetail with the Australasian Meeting of the Econometric Society which is to be held at the same location from August 26th to August 28th 1987.

In addition to papers of general interest, it is proposed that the Conference include the following sessions ...

- Monday - The Census
- Tuesday - Statistical Education, Time Series
- Wednesday - Medical Statistics

Abstracts of all presented papers will be published in the New Zealand Statistical Association *newsletter*. Speakers are also encouraged to submit written versions of their papers to *The New Zealand Statistician*.

A Special General Meeting of the association will be held during the Conference and a public lecture is planned for the Tuesday night prior to the Conference Dinner. Hostel accommodation will be available; the current cost for bed and breakfast is NZ\$25.30 per day.

Conference Fees:

| | Full Fee | One Day Only |
|-----------------------------|----------|--------------|
| NZSA Member | \$30 | \$15 |
| Non NZSA Member | \$40 | \$20 |
| Full-time Student | \$10 | \$5 |

A registration form is included in this issue of the newsletter. Complete and return with payment to ...

Conference Chairman
NZ Statistical Association
PO Box 1731
Wellington
New Zealand

Further information and extra registration forms can be obtained from the same address.

Registration Form

38th Annual Conference of the New Zealand Statistical Association

Last Name:
First Name: Title:
Affiliation:
Address:
.....

Conference Information: (or as appropriate.)

- I wish to present a paper. Abstract to follow. Abstract enclosed.
- I wish to attend the NZSA Conference on: Mon Tues Wed
- I would like information on the Australasian Meeting of the Econometric Society.

Accommodation:

To reserve hostel accommodation on campus, please complete and return the following with payment before the 10th July 1987.

Number of rooms required:

From the night of: Up to and including the night of:

I have enclosed the following:

| | Cost | Amount |
|-------------------------------|-----------------------------------|----------|
| Full Fee: | | |
| NZSA Member | \$30 | |
| Non NZSA Member | \$40 | |
| Full-time Student | \$10 | |
| One Day Fee: | | |
| NZSA Member | \$15 | |
| Non NZSA Member | \$20 | |
| Full-time Student | \$ 5 | |
| Conference Dinner | \$20 | |
| Accommodation | nights at \$25.30 per night | |
| Total Payment Enclosed | | \$ _____ |

Cancellation Policy:

Cancelled registrations prior to the 10th July 1987 will be refunded in full. After the 10th July 1987 a \$10 cancellation fee will be retained, if necessary, to cover cancellation charges for hostel accommodation.