

EDITORIAL

The Association's newsletter has made it to a second issue. Several "wags" have suggested that the newsletter be retitled "The Not-the-DMS-newsletter" — readers who are familiar with the *DMS newsletter* will have noticed that its blue-reverse banner is very similar to ours. Both banners are of course derivatives of the *Guardian Weekly* banner so we don't expect a lawsuit to emerge from the wrong side of the Tasman Sea.

This issue contains news from both the Auckland and Manawatu regions but no news from other areas. Two small articles (a conference report and a review of a controversial paper) are also included in this issue. We hope readers feel encouraged to send in news from their regions and also "feature articles" on any aspect of statistics.

The "Famous Missing Values and Non-responses" column is likely to die in the next issue if readers don't send in anecdotes concerning sadly missed plots and untraceable non-respondents.

Rush your contribution to John Reynolds, Newsletter Editor, AMD/DSIR, P.O. Box 1335, Wellington.

THE 1983 ASA CONFERENCE by W. Alec Neill

As part of an extended overseas trip I attended the American Statistical Association Annual Meeting in Toronto, Canada. Like most New Zealanders who have never experienced a large overseas conference before, I was amazed at the sheer magnitude of the proceedings. Close to one thousand papers were presented during the four days and the total attendance was several thousand.

Immediately preceding the main conference were a number of workshops. I attended the one on Law and Justice Statistics. This featured a variety of papers on both methodology and administrative aspects of Justice research. One major issue expressed in the workshop was the relationship between statistician and policy maker. The policy maker is concerned with the usefulness and the timeliness of research, whilst the statistician is more concerned with the methodology and accuracy of results. It will often be that the policy maker will not be able to judge upon the methods employed by the statistician who ultimately can wield a lot of power over the policy maker. This places an onus upon statisticians to present their results clearly and intelligibly to those untrained in statistics. This could be achieved through short, jargon-free reports which concentrate on the relevant facts and highlight conclusions preferably by means of graphics.

An area of increasing interest in the USA is the use of the statistician as an expert witness in court. A whole session was devoted to this issue and was led by two statisticians who specialize in giving expert witness. Many of the cases they are involved with are in the area of discrimination suits. This typically involves the use of statistical methodology to try and establish if a person has been

declined a job or promotion because of their race, sex, etc. Often both the prosecution and the defence have their own statistician as an expert witness. The court then has to decide which statistician presented the more plausible case. This situation has the potential to bring the profession into some disrepute, especially when statisticians present diametrically opposed evidence based on the same set of data. Since the expert witness appears either for the defence or for the prosecution it means that the statistician may no longer be seen as impartial and objective.

A recurring interest was shown throughout the conference in the field of graphics. A variety of papers were presented on this subject ranging from applications in logistic regression and detection of influence points through to demonstrations of available software. An exposition on statistical graphics was on display at the conference. This included stands from many of the leading producers of statistical software. Each had been given the same set of data to analyse and produce good, meaningful graphics. Several attempts had been made to produce three dimensional graphics. One bizarre attempt utilized spectacles with different coloured lenses just like those used in the old 3-D movies. A very successful method was available in the PRIM-H package which has been developed at Harvard. This method allows the user to look at a cloud of points on a VDU and to slowly rotate the cluster, giving a three-dimensional appearance. This appears to be a very useful tool especially at the exploratory stage when the basic structure of the data is being searched for.

To conclude with a short anecdote, N R Bohidar told how many experiments in analysing the effects of a drug upon humans are double blind so that neither the person taking the drug nor the person administering the drug know which is what. He went on to describe the statistical confusion that sometimes reigns and termed such experiments where the investigator does not know what is going on as "triple blind".

DEFENDING THE FAITH by John Reynolds

From time to time we all take some good-natured joshing from clients and colleagues about the usefulness/uselessness of statistics. Occasionally, clients do express serious doubts about the utility of statistical methods and twice in this writer's short career as a statistician, clients have "confronted" me with a particular critique of the classical theory of statistics. On the second occasion I was forearmed, if not forewarned.

The particular critique which my assailants attempted to bludgeon me with appeared in the *Harvard Educational Review*, Volume 48, No. 3, August 1978. It was written by Ronald P. Carver and bears the title "The Case Against Statistical Significance Testing". If you are already familiar with this paper you may skip to the next item in this newsletter. If you have not seen this paper then I hope the

following comments may be of some use.

Carver's paper begins with several quotations from what would appear to be a fairly extensive anti-hypothesis testing literature. One of these gems is: "the time has arrived for educational researchers to divest themselves of the yoke of statistical hypothesis testing". Enough said.

The second section of Carver's article, entitled "Facts about Statistical Significance" is a non-technical exposition of a paradigm (in this case the t-test) of classical Neyman-Pearson theory and Carver stresses the reliance of the theory on the notion of repeated random samples. However, no mention is made of type I and II errors and the concept of "power".

In the third section, entitled "Fantasies about Statistical Significance", Carver presents three misconceptions (which we hope are not too common) about classical hypothesis testing theory. The three misconceptions are:

- (i) interpreting p-values as probabilities, conditioned on the data, that a hypothesis is true
- (ii) one minus a p-value is an index of the reliability of a result
- (iii) one minus a p-value is the probability that the alternative hypothesis is true.

We agree with Carver that these interpretations of hypothesis tests are incorrect and reflect badly on the social science statistical methods textbooks (which Carver cites) from which they are culled. This, however, is no reason to throw out the Neyman-Pearson baby with the educational research bathwater!

The real meat (or is it textured vegetable protein?) of Carver's article is in the fourth section entitled "Statistical Significance Testing: The Moderate and Conservative Positions". Carver raises several points that require clarification and/or rebuttal. Briefly,

(i) Carver states that "the more subjects the researcher uses, the more likely the researcher will be to get statistically significant results". He doesn't like this. Most statisticians would respond that the property that the size of a sample determines whether a fixed value of a test statistic is significant or not is a very desirable feature as we feel that large samples should give more partial information about a population than small samples.

(ii) Carver trots out that tired old Bucephalus about statistically significant results not necessarily being scientifically significant. He has been scooped on this. Ingelfinger (1968) in a slightly humorous article "Significance of Significant" exhorts technical writers who wish to use significant in its lay sense to substitute such "vague words" as "appreciable", "considerable", "marked", "definite" or "egregious".

(iii) Carver makes repeated reference to "the scientific method" and refers to researchers who "corrupt the scientific method". We simply reply that there is no such thing as "the scientific method". The rituals of science are arbitrary and subjective. Leach (1968) writes "the detached objectivity of science is largely make-believe... the ideals of objectivity and detachment provide an excuse for steering clear of politics". However, what does distinguish scientific methods from the non-scientific is testability. Scientific hypotheses must be susceptible of being disproved. A statistical test is a tool of refutation. Readers will no doubt recognize these Popperian notions and it is surprising that Carver does not cite and may not have been aware of the works of Popper, Hacking, Jeffreys, Reichenbach and others.

(iv) Carver refers to "the probability that a research hypothesis is true". Most statisticians are unwilling to assign probabilities to hypotheses. An hypothesis is either true or false. I expect a ton of Bayesian bricks to fall on my head.

(v) One instance of "corrupt scientific method" — the acceptance of a null hypothesis as a true statement about nature after several failures to reject it — may well be cor-

rupt. But instead of Carver's discussion I prefer the following passage from Edwards (1972, p.179):

In actual practice the various methods usually give quite sensible and compatible results, at least when applied to problems in the natural sciences. But unfortunately any method which invites the contemplation of a 'null' hypothesis is open to grave misuse, or even abuse, and this seems particularly so in the social sciences, where high standards of objectivity are especially difficult to attain, and data often of dubious quality. The argument runs as follows: 'I am interested in the effect of *A* on *B* (for example the influence of hereditary factors in the determination of human intelligence, or the effect of increased family allowances on population growth) and I propose to use approved statistical techniques so that no one can question my methodology. These require me to state a null hypothesis, namely, that *A* has no effect on *B*. I now test this null hypothesis against my data. Unfortunately my data are not very extensive, but I have done the Angler-Plumfather two-headed test and found $0.20 \ll P \ll 0.10$. I therefore accept the null hypothesis.' Further sets of data — none of them very extensive — continue to 'miss the coconut', and after a time the null hypothesis joins that corpus of hypotheses referred to as 'knowledge', on no positive grounds whatever.

The dangers are obvious. In the first place, the problem is usually one of estimation (to use the conventional word) rather than hypothesis-testing; in the second place, the chosen null hypothesis is often such that no rational man could seriously entertain it: who doubts that hereditary factors have *some* influence on human intelligence, or that increased family allowances have *some* influence on population growth? And in the third place, not only is each test itself devoid of justification, but sequential rather than concentrated assaults on the null hypothesis are practically powerless in difficult cases: it is like trying to sink a battleship by firing lead shot at it for a long time. What used to be called judgement is now called prejudice, and what used to be called prejudice is now called a null hypothesis. In the social sciences, particularly, it is dangerous nonsense (dressed up as 'scientific method'), and will cause much trouble before it is widely appreciated as such.

In the fifth section of Carver's critique "The Reasons Why Statistical Significance Testing Flourishes" several odd reasons are given as to why classical hypothesis testing persists. The reasons he gives are, not surprisingly, closely tied to the fantasies he outlines in a previous section of the paper. He neglects to mention the main reason why people continue to use hypothesis tests. A statistical significance test is a standardized ritual carried out by scientists as a means of protecting themselves from their own prejudices. That the ritual may give an "illusion of objectivity" is unfortunate (but certainly most scientists are aware of this illusion) and that the protection afforded may be meagre in some circumstances is also unfortunate but again most scientists are conscious of this. The important point is that the standardized ritual facilitates communication between scientists.

In the sixth section "Recommendations" Carver makes the following proposals:

- (i) Abandon statistical significance testing.
- (ii) Ignore considerations of power and testability when designing studies.
- (iii) Abandon publication standards which require results to be significant at a certain significance level.
- (iv) Publish standard errors and confidence intervals.
- (v) Replicate.
- (vi) Instead of applying a two-valued logic to hypotheses viz "accept" or "reject" apply a five-valued logic viz

“strong support”, “support”, “weak support”, “no support” or “disconfirming evidence”.

We agree with (i) but only to the extent, and in the manner, of the previous extract from Edwards (1972). But we disagree with (ii) particularly when the conditions for estimability and for testability are generally the same. We agree with (iii) and hope such scandalous censorship is no longer practised. We also agree with (iv) — doesn't everybody do it? But we note that Carver seems to be confused about confidence interval construction. The criticisms he gives of classical testing theory apply equally as well or illogically to classical confidence interval construction (perhaps Carver really means us to calculate “m-support limits”). We agree partially with (v) but note, in the spirit of the extract from Edwards that one large study may be more useful than several small studies. Carver's last proposal leaves us stranded as he has not provided us with a calculus for his five-valued logic.

In the last section of the paper “The Future of Statistical Significance Testing” Carver calls for the abandonment of classical Neyman-Pearson testing theory. We are less dogmatic and simply say that in some circumstances hypothesis tests may not be appropriate. It is puzzling that Carver has consciously or unconsciously chosen to ignore the more restrained and more scholarly critiques of hypothesis testing theory that abound in the statistics literature. The *Harvard Educational Review* would have done a greater service to its readers if it had reprinted, say, Chapter 5 of Barnett (1973).

What should our attitude be to this paper? There is certainly no need for us to develop a “siege mentality” and I think business can proceed as usual. The article may have some pedagogical value. It may be fun to give copies to third or fourth year statistics students — failure to detect the bloopers in the paper could result in refusal to grant terms, or, a hasty convening of a departmental curriculum subcommittee.

References

- Barnett, V. (1973) *Comparative Statistical Inference*. John Wiley and Sons, London.
- Carver, R.P. (1978) The Case Against Statistical Significance Testing. *Harvard Educational Review*, 48, 378-399.
- Edwards, A.W.F. (1972) *Likelihood*. Cambridge University Press, Cambridge.
- Ingelfinger, F. (1968) Significance of significant. *New England Journal of Medicine*, 278, 1232-1233.
- Leach, E. (1968) *A Runaway World? The Reith Lectures 1967*. Oxford University Press, London.

NEWS FROM RECENT EXECUTIVE COMMITTEE MEETINGS

At the March 21st, 1984 meeting, several matters which need to be raised at this year's Annual General Meeting were discussed informally. The executive committee will recommend to the membership that the 1984 subscription remain at the 1983 level of \$15, but that the \$2 discount for early payment be scrapped. The discount for early payment appears, from an accounting point of view, to be more trouble than it is worth. The extra money gained by not offering the discount will pay for about one issue of the newsletter. The annual subscription is, of course, fixed by the majority vote of the ordinary members present at the Annual General Meeting.

There is a possibility that a large statistical conference will be held in Auckland in May, 1985 (See the news item headed “Pacific Statistical Congress — 85”). If such a confer-

ence is held, and if the New Zealand Statistical Association decides to support the conference, then one suggestion is to hold the association's annual conference in Auckland as part of the larger conference and also to hold the 1985 Annual General Meeting in Auckland at the same time. This may be a “one-off” proposal to shift the AGM or it may be the first in a series of “rotating” AGM's. The membership will no doubt wish to discuss this at this year's AGM.

The Prince and Princess of Wales Award Scheme, administered by our “godfather” organization, the Royal Society of New Zealand, requires another annual injection of funds. The membership will be asked at the AGM if they will continue to support the scheme. Rather than levy its members at the suggested rate of \$2 per head (of a “non-overlapping member”), this association paid, in 1983, a lump sum of \$300 to the Society.

The Association is approaching the 1983 sponsors (MAF, AMD/DSIR and the Department of Statistics) to see if they will sponsor statistics prizes at the 1984 Secondary School Science fairs. The association will also be calling on its members to act as judges at these fairs. The executive committee is anxious to raise the standard of statistical practice evidenced in the contestants' projects. Very few contestants repeat measurements, and replication (especially when it results in different answers) is viewed as a nuisance. The committee is hoping to establish some form of contact with science teachers with a view to communicating to them some of the fundamental concepts of experimental design. If any members can suggest vehicles for achieving this (teacher organizations, local branches of the Royal Society etc.) please write to the Secretary of this Association immediately.

NEWS FROM THE PROVINCES: MASSEY UNIVERSITY MATHS/STATS DEPT.

Dick Brook writes that the Department of Mathematics and Statistics has acquired an IBM-PC and is in the process of buying a copy of MICROTAB (which is based on OMNITAB/MINITAB). He wonders whether other statistical groups can recommend reasonably cheap software and statistics packages for this micro. We wonder if this development will result in some sartorial changes in the Department with gumboots and elbow-patched tweed jackets being exchanged for more Chaplinesque attire.

On the subject of computing software, in particular software for PRIMES, Dick asks if any other group knows of a text-editor which handles mathematical symbols in a reasonable way?

Dick also reports that this year's Introductory Statistics course has more than 800 internal students and more than 500 extramural students. Apart from this or as a consequence of this “all is quiet on the northern front”.

35th ANNUAL CONFERENCE OF THE NEW ZEALAND STATISTICAL ASSOCIATION

The 35th annual conference of the New Zealand Statistical Association has been scheduled for Tuesday and Wednesday, June 26-27, 1984. The conference will be held at Victoria University of Wellington in the Hugh MacKenzie Building.

The conference will include papers on Statistical Computing, Economic and Social Statistics, and, Biometrics. The conference programme and abstracts will be published in the May issue of The New Zealand Statistician.

TIME SERIES AND MULTIVARIATE ANALYSIS MEETING

In conjunction with the 19th New Zealand Mathematics Colloquium, to be held at Victoria University of Wellington, the New Zealand Statistical Association is organizing a meeting on Time Series and Multivariate Analysis. The meeting will be held on Thursday, May 10, 1984 in lecture theatre 5 of the Hugh Mackenzie Building. The tentative programme for the meeting is as follows:

- 9.00 a.m. – 10.00 a.m. Professor E.J. Hannan (ANU, Canberra, Australia)
Autoregressive approximation.
Morning Tea
- 10.00 a.m. – 10.30 a.m. R. Joyeux (University of Otago)
Principal component analysis as an exploratory data analysis tool for economic time series.
- 10.30 a.m. – 11.00 a.m. A. Gray (Department of Statistics)
Adjusting for Easter: Some Practical Problems.
- 11.30 a.m. – Noon R.M. Renner (Institute of Statistics and OR, VUW)
The analysis of compositional data with application to marine sediments.
Lunch
- Noon – 1.30 p.m. H.P. Edwards (Massey University) and M.S. Mendis (Dept. of Trade and Industry)
Ordering countries according to their trade potential: a multivariate ranking problem.
- 2.00 p.m. – 2.30 p.m. L. Bacica (Department of Statistics)
Path Analysis with employment data.
- 2.30 p.m. – 3.00 p.m. F. Musmeci (ENEA, Italy)
Entropy method for estimating the order of a finite Markov Chain.
- 3.00 p.m. – 3.30 p.m. Afternoon Tea
- 3.30 p.m. – 4.00 p.m. R.L. Tweedie (SIROMATH, Australia)
Conditions for stationary autoregressive processes to have finite moments.
- 4.00 p.m. – 4.30 p.m. Professor D. Vere-Jones and P.J. Thomson (Institute of Statistics and OR, VUW)
Time series and point process models for wave propagation.

For further details of this meeting and the colloquium, contact Dr Brian Dawkins, Mathematics Department, Victoria University of Wellington, Private Bag, Wellington. (Tel: (04) 721-000).

STATISTICAL COMPUTING DISPLAY

A statistical computing display will be held during the Association's annual conference. The emphasis will be on statistical software for mainframe, mini-, and micro-computers. The display will be held in the New Kirk Building which is adjacent to the conference venue. Several leading software firms will be displaying their wares. Any firm or individual interested in renting space at the display should contact Peter Thomson, Institute of Statistics and Operations Research, Victoria University of Wellington, Private Bag, Wellington.

19th NEW ZEALAND MATHEMATICS COLLOQUIUM

The colloquium is to be held at Victoria University of Wellington, May 7-9, 1984. A full and varied programme has been promised by the organizers. For the statistical audience the principal invited speaker is Professor John Aitchison (University of Hong Kong). His theme will be the analysis of data which is in the form of proportions. Another invited speaker of interest to probabilists and statisticians is likely to be Dr R. Adler (IBM Research Centre, Yorktown Heights). Dr Adler has interests in ergodic theory, information theory, dynamical systems and coding devices.

For further information contact Dr Brian Dawkins, Mathematics Department, Victoria University of Wellington, Private Bag, Wellington.

EXPERIMENTAL DESIGN DAY: MT ALBERT AUCKLAND

- A one-day conference/workshop on Experimental Design is to be held in Auckland on Friday, May 11. The meeting, jointly sponsored by the Association and the Applied Maths Div., DSIR, will be held in the Conference Room, Mt Albert Research Centre, DSIR, 120 Mt Albert Road, Auckland. The programme for the meeting is as follows:
- 10.00 a.m. Morning Tea
- 10.30 a.m. – 11.30 a.m. Professor J. Aitchison (University of Hong Kong)
Analysis of proportions – problems with compositional data
- 11.30 a.m. – 12.30 p.m. Elizabeth Stevenson and Chris Triggs (Applied Mathematics Division, Lincoln and Mt Albert)
Analysis of field experiments using Nearest Neighbour Designs – experiences using the NN programmes of G.N. Wilkinson.
- 12.30 p.m. – 2.00 p.m. Lunch (1.10 p.m. – 1.55 p.m. tour of Mt Albert Research Centre)
- 2.00 p.m. – 3.15 p.m. The interface between scientists and statisticians. What statisticians can or should expect from statisticians and vice-versa. A panel discussion with initial contributions from:
Margaret Hogg (Division of Horticulture & Processing, DSIR)
Brian Hawthorne (Plant Diseases Division, DSIR)
Neil Cox (Biometrics Section, MAF, Ruakura)
- For further information write or call Dr Chris Triggs, Applied Mathematics Division, DSIR, Mt Albert Research Centre, Private Bag, Mt Albert, Auckland. (Tel: (09) 893-660, Ext. 641).

SOCIAL SCIENCE RESEARCH FUND COMMITTEE (SSRFC) 1984 SEMINAR SERIES

A series of seminars with the theme "Change and Diversity in New Zealand" has been organized by the Social Sciences Research Fund Committee and sponsored by the Justice Department and the Social Sciences committee of the National Research Advisory Council.

The next four seminars will be held in the Conference Room, 14th floor, Charles Fergusson Building, Bowen Street, Wellington. Dates and tentative topics for these seminars are as follows:

- (1) Friday, 25 May, 11 a.m. – 1 p.m.
The Changing Labour Market: A Challenge for Research and Policy?

- (2) Friday, 29 June, 11 a.m. – 1 p.m.
The Researcher and the Researched: Who should research whom?
- (3) Wednesday and Thursday, 25-26 July
The Social Sciences Research Fund Committee, Review and Prospect.
- (4) Friday, 14 September, 11 a.m. – 1 p.m.
Medical and Social Research: Different Perspectives on Health and Lifestyle?

For further information contact The Executive Officer, Social Sciences Research Fund Committee, P.O. Box 1092, Wellington, (Telephone (04) 737-666, ext. 772).

OVERSEAS CONFERENCES

The Institute of Statisticians International Conference – STATISTICS IN HEALTH

To be held at the University of Kent, UK, July 11-14, 1984.
For further information write to The Administrative Convener, The Institute of Statisticians, 36 Churchgate Street, Bury St Edmunds, Suffolk IP33 1RD, UK.

American Statistical Association/Biometrics Society

Annual joint meeting to be held in Philadelphia, PA, August 13-16, 1984. For further information write to ASA, 806 15th Street N.W., Washington D.C., 20005, USA.

7th Australian Statistical Conference

This conference, sponsored by the Statistical Society of Australia, will be held at the University of Queensland, in Brisbane, August 27-31, 1984. As well as contributed paper sessions on a variety of statistical topics there will be four main sessions involving invited speakers:

- (1) Discrete Multivariate Analysis – S.J. Haberman, University of Chicago and Hebrew University of Jerusalem.
- (2) Statistical Inference – Bradley Efron, Stanford University.
- (3) Multivariate Analysis – T.W. Anderson, Stanford University.
- (4) The Role of Official Statistics in Public Policy – Leslie Kish, University of Michigan.

There will be other invited speakers and other sessions include Geophysical Signal Processing, Medical Statistics, Modelling of Biological Systems, Analysis of Survey Data and Design and Analysis of Experiments. Those who wish to contribute a paper (the deadline for abstracts is May 31, 1984) and those who wish to receive the second circular regarding this conference should write to The Conference Secretary, Department of Mathematics, University of Queensland, St Lucia, Q. 4067.

ASA-IASC-SIAM Conference – Frontiers in Computational Statistics

This interdisciplinary conference is jointly sponsored by the American Statistical Association, the International Association for Statistical Computing, and the Society for Industrial and Applied Mathematics. It is to be held in Boston, MA, USA, October 22-24, 1984. The programme will consist of invited presentations, "organized" informal discussion groups, contributed paper and poster sessions. Invited presentations include:

- (1) Impact of Computer Architecture on Statistical Computing – G.W. Stewart, University of Maryland, and M.H. Kalos, New York University.
- (2) Graphical Methods in Data Analysis and Computational Statistics – R. Gnanadesikan, Bell Operating Companies, and J.H. Friedman, Stanford University.
- (3) Algorithms for Numerical Optimization in Statistical Computing – J.E. Dennis, Jr., Rice University, and T.J. Mitchell, Union Carbide Corporation.

Contributed papers and posters are solicited. The deadline for abstracts for contributed papers and posters is June 1, 1984. For further information concerning contributed papers and/or registration write to the

Conference Manager, SIAM,
117 South 17th Street,
Philadelphia, PA 19103, USA.

The XIIth International Biometric Conference

To be held in Tokyo, Japan, September 2-8, 1984. The fourteen invited paper sessions include:

- (1) Nearest neighbour analyses in field and variety trials.
- (2) Design and analysis of intercropping experiments.
- (3) Morphometrics – Statistical methods for analyzing size and shape.
- (4) Analysis of DNA sequence data.
- (5) Confounding and other problems in epidemiological research.
- (6) Statistical problems in air pollution.
- (7) Use of historical control data in laboratory and clinical studies.
- (8) Recent developments in the theory of proportional hazards models.
- (9) Analysis of spatial point processes.
- (10) Estimation for moving populations.
- (11) Applications of cluster analysis and multi-dimensional scaling to biometric problems.
- (12) Model selection and validation.
- (13) Analysis of residuals.
- (14) Use of personal computers in Biometric studies.

For further information write to:

XII IBC SECRETARIAT,
c/o Prof. T. Okuno,
Dept. of Management Science,
Faculty of Engineering,
Science University of Tokyo,
1-3, Kagurazaka
Shinjuku-ku, Tokyo
162 JAPAN.

Workshop on "Time Series and its Applications"

To be held at the National University of Singapore, October 24-26, 1984. The workshop is jointly organized by the Department of Mathematics, National University of Singapore and the Singapore Mathematical Society with the support and recognition of the Southeast Asian Mathematical Society, the Bernoulli Society and UNESCO.

The emphasis in the workshop will be on methods and applications, such as modelling and forecasting. As well as contributed paper sessions, several lectures by invited speakers from North America and Britain are planned.

Those wishing to attend the workshop, or to receive the second circular, should write to:

Dr K.S. Lim,
Organizing Secretary,
Time Series Workshop,
Mathematics Department,
National University of Singapore,
Kent Ridge,
SINGAPORE 0511.

International Statistical Institute – 45th Biennial Session

This conference, which marks the centenary of ISI, is to be held in Amsterdam, Netherlands, August 12-22, 1985.

The conference will also include meetings of the Bernoulli Society and the International Associations of Statistical Computing and Survey Statisticians. Invited paper topics and their organizers include:

What can experts in sampling and experimental design teach one another? – J. Sedransk (USA)

Model based inference for sample surveys — D. Holt (UK)
 New equipment and fields of application of statistical computing — J.A. Nelder (UK)
 Non-programming interfaces to statistical systems — J.A. Chambers (USA)
 Statistics in criminology and victimization — D.R. Cox (UK)

For further information write to ISI, 428 Prinses Beatrixlaan, P.O. Box 950, 2270 AZ Voorburg, Netherlands.

International Time Series Meeting (ITSM) 1985

For preliminary information (including the date and venue) about this 1985 meeting, prospective participants should write to:

O.D. Anderson,
 9 Ingham Grove,
 Lenton Gardens,
 Nottingham NG7 2LQ,
 England.

DEADLINE FOR NEXT ISSUE

The deadline for submitted material for the July issue of this newsletter is July 2. Please send all notices of seminars, news items, letters-to-the-editor, etc. to . . .

John Reynolds
 Newsletter Editor
 AMD/DSIR
 P.O. Box 1335
 Wellington.

The deadline for "News and Announcements" for the May issue of *The New Zealand Statistician* is April 30.

ROYAL SOCIETY NEWS

Applications for Prince and Princess of Wales Science Awards may be made to the Royal Society of New Zealand. It is envisaged that most awards will be made to New Zealanders to enable them to travel overseas to carry out short-term studies relevant to New Zealand science, but applications for Awards which will permit foreign scientists to travel to this country to share their expertise are apparently welcome (workshop and conference planners take note). For further information contact The Convener, Prince and Princess of Wales Science Awards Scheme, Royal Society of New Zealand, Private Bag, Wellington.

FAMOUS MISSING VALUES AND NON-RESPONSES, No.2

"If a vehicle runs off the road and ploughs into the experiment, the damaged plot may fairly be excluded, but what if animals break through the fence and start eating? Their preference may well depend on the treatment. Perhaps the best procedure is to exclude the plot on the grounds that invading animals are outside the scope of the experiment. But are they? If fields are ordinarily unfenced and marauding animals are an accepted hazard, it can fairly be held against a treatment that it attracts damage. (No one questions such an approach if the marauders are insects, but elephants for some reason are considered different.) The author recalls a fine series of maize fertilizer trials spread over the islands of the West Indies. Several came to grief, notably three of them that suffered from parasites of various kinds. In the first, goats got in and ate a corner plot. Later the herd divided, one group working along each side but doing ever less damage as they went. In the second, monkeys settled on a

plot in the middle and played riotous games as well as eating cobs. The third adjoined a cricket field and suffered damage from spectators who jumped over the fence and helped themselves along the side. (In the last experiment, fortunately, recorders had notes of the number of cobs awaiting harvest). The writer has no perfect solution for such mishaps; he merely comments that missing plot technique as generally understood is expected to cope with a rather wide range of contingencies."

Pearce, S.C. (1983) *The Agricultural Field Experiment. A Statistical Examination of Theory and Practice*. John Wiley and Sons, Chichester. p.193.

HANDY HINTS FOR CONFERENCE SPEAKERS

With both the NZ Maths Colloquium and the NZ Statistical Association Annual Conference coming up we thought the following excerpt from Robert A. Day's excellent book "How to Write and Publish a Scientific Paper" (ISI Press, Philadelphia) might be useful to intending speakers.

The Ten Commandments of Good Speaking

Having had many opportunities to bore audiences myself, and having myself been bored by countless other speakers, I believe that I can now state the fundamental commandments of effective speaking.

1. Be relaxed. Show that you are relaxed by pacing back and forth across the stage.
2. Be informal. Comb your hair or clean your ears from time to time, to maintain a proper air of informality.
3. Be casual. Start by dressing casually. (Loud sports shirts are nice; tank tops are better). Continue with a casual opening. ("Well, girls and boys, sit back and relax while I lay on some new info fresh from old Mama Nature").
4. Be memorable. Your audience will be sure to remember you if you successfully develop a memorable characteristic. A pronounced tic would be useful. Make faces. Stare at the ceiling. Close your eyes for extended periods (which will also improve your concentration).
5. Use hand gestures to attract attention. It helps to pretend that you are trying to flag down local aircraft.
6. Use distinctive language. Just as professional athletes discovered the powerful effectiveness of a "you know" added to almost all sentences, scientists too can be remembered for their linguistic abilities. I recall one scientist who became known for his elegant language by the simple device of inserting the word "elegant" into every second sentence.

7. Speak softly. If you rudely awaken the sleepers, they may retaliate by asking nasty questions during the question period.

8. Mumble. Only when your results are absolutely incontrovertible should you speak clearly; otherwise, mumble.

9. Use slides that each illustrate many points. A slide with only one salient point is an insult to the intelligence of the audience.

10. If you have been asked to give a 10-minute presentation, talk for 30 minutes. Only thus will the audience, and especially your colleagues on the panel, be impressed with the vast extent of your knowledge.

PACIFIC STATISTICAL CONGRESS — 85

An international statistical conference, to be held in Auckland in May 1985, is in the early stages of planning. A conference committee consisting of Professor Ivor S.

Francis (University of Otago), Professor George A.F. Seber (University of Auckland) and Dr Robert B. Davies (Applied Mathematics Division, DSIR) is seeking support from various professional associations and commercial enterprises. Associations which will probably be participating in the five-

day conference include the Australasian Region of the Biometrics Society, the New Zealand Statistical Association, Department of Statistics, the Bernoulli Society and the ISI associations for Statistical Computing and Survey Statisticians.

Suggestions and enquiries concerning the programme (invited speakers, topics etc.) should be addressed to Professor Francis. Offers of assistance with the local organization of the conference should be directed to Professor Seber and ideas for soliciting funds for the conference, and offers of funds from corporate members of this Association, should be sent to Dr Davies.



THE DEMING VISIT by M.E. (Tim) Ball

Dr W. Edwards Deming will be in New Zealand for two weeks from Monday, April 30th to Friday, May 11th. Most of the second week of his visit will be taken up with a 4-day seminar to top management advising them what they need to do to ensure the long term survival of their companies under increasingly competitive trading conditions. Most association members will have already seen the brochure or press advertising for this event.

For the first week of his visit, Dr Deming will travel through the country – visiting Auckland, Wellington, Christchurch and Dunedin. – talking to business leaders and government. He will also address a number of business luncheons arranged by local chambers of commerce.

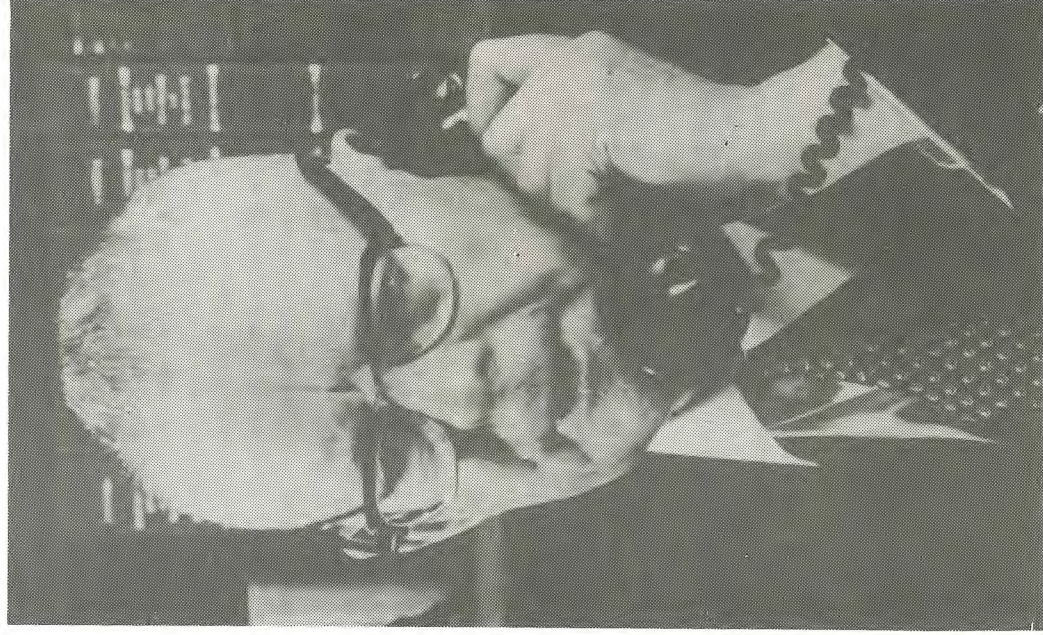
While in Wellington, Dr Deming will be accorded Visiting Fellow status at Victoria University's Institute of Statistics and Operations Research. While visiting the institute, Dr Deming will present a technical lecture aimed at statisticians, engineers, operations researchers etc, outlining how they can more effectively play their part in the improvement strategies that he proposes. Details of the lecture, which is open to all, are as follows:

**“Technical Implementation of Quality Improvement:
The Role of the Engineer and Statistician”**
by **Dr W. Edwards Deming**
Venue: **Victoria University of Wellington,
Easterfield Building, Lecture Theatre E006.**
Time: **Wednesday, May 2nd, 9.30 a.m.**

“STATISTICIANS NEED NOT APPLY”

Some readers may have missed the advertisement for an “Imaginative Mathematician” which appeared in the national dailies recently. For those who did we reprint an excerpt. . .

“Success in this area is not easy and it presents a stimulating challenge because classical statistical techniques are impotent, except as minor tools, due to variations in period and amplitude of the patterns which exist. The researcher has to develop his/her own techniques. Of very particular interest to us would be a person with a real interest in and knowledge of physics, from cosmology to atomic structure, as we also have some extraordinary hypotheses which we are intending to test, and for which we will require a talented mathematician to evolve the mathematical descriptions so that the experimental predictions may be quantified . . . thinking processes should tend to be lateral as easily as vertical.”



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