

# newsletter

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## WELLINGTON REGIONAL MEETING— CANCELLED

The executive committee has been trying to arrange a one-day seminar in Wellington for late August. The 1984 AGM asked for such a meeting to provide a forum for Wellington members in a year in which the main activity was the Pacific Statistical Congress in Auckland. With the success of the evening session on consulting arranged by Ray Littler at Auckland it was thought that a continuation on this theme giving more scope for audience participation would be popular. Regrettably there has been only a limited response to calls for contributors, both through the newsletter and by personal contact.

The August meeting has thus had to be cancelled.

Undeterred by this initial setback, which may simply reflect a temporary surfeit of good things at the PSC-85, it is proposed to try again if support is forthcoming. The object of this note is to gauge the extent of such support.

It is proposed to hold a one-day workshop session looking at consulting from both inside and outside the profession. From inside, statisticians involved in this area, and most of us are one way or another involved, would discuss in small groups specific topics, some of them taken from the Auckland session. A degree of unanimity within a group on perceived problems and possible solutions in consulting would lead to a presentation of findings to the combined workshop.

From outside, and this is more tentative, we hope to get people who work with statistical consultants to comment on the utility of such arrangements.

The timing of the workshop is not fixed yet. It could possibly be in late November but more likely in February next year. It is possible that participants may have to pay a small charge, say \$10.

To gauge interest and to aid planning would those readers who are interested please return the coupon at the end of this newsletter by 31st August 1985.

Garry E. Dickinson,  
President.

## A PUBLICATION POLICY FOR THIS ASSOCIATION

The last newsletter included a call, which was admittedly buried in a report on the AGM, for readers to respond to a Statistical Society of Australia proposal to share the editing and costs of their revised journal—such a sharing of responsibilities would possibly result in the extinction of *The New Zealand Statistician*. Not a sausage has been received. The newsletter also published a letter from Professor David Vere-Jones outlining his ideas for enlarging the scope of *The New Zealand Statistician*. This well-written letter generated no sausages either.

The time has probably come for this association to do a bit of navel-gazing with respect to a

publications policy. What sort of journal and newsletter to the membership want? Do members wish *The New Zealand Statistician* to be preserved pretty much as it is or do they wish it to go truly international and become a sort of South Pacific Journal of Applied Statistics? What sort of articles does the membership expect and want to see in the journal? As an aside, the “Notes for Authors” in the journal hasn’t been revised in seven years and we apparently still publish appraisals of calculators. Hands up all those who still use a calculator?

At present, the journal and newsletter is received by:

- 31—local Corporate Members (2 copies each)
- 2—overseas Corporate Members (2 copies each)
- 3—local Exchange Members
- 7—overseas Exchange Members
- 3—local Honorary Life Members
- 244—local Ordinary Members
- 14—overseas Ordinary Members
- 4—local Student Members
- 14—local Libraries
- 7—overseas Libraries

Any attempt to evolve into a truly international journal would probably place some financial strains on the local membership until the level of overseas subscriptions built up. And many more papers would need to be submitted to the journal.

However, three aspects of the local membership figures are disappointing. The first is the very low number of student members. Students pay half the ordinary subscription fee and get access to a journal and newsletter which seem to be carrying more and more job advertisements. Perhaps we should ask university teachers to proselytise a bit for us. Secondly, it appears that very few secondary school and technical institute teachers belong to the association. Perhaps we have not catered for these potential members, in terms of published material, apart from the casebook “Statistics at Work”, very well in the past. Yet members of this association have played high-profile roles in the establishment and revision of syllabi for these institutions. The third aspect is the low number of library subscriptions—only four of the country’s seven university libraries subscribe to our publications and only one of the country’s technical institute libraries subscribes.

The success of the casebook, “Statistics at Work”, also raises the question of other publications. Should we be sponsoring the production of other textbooks and resource books for secondary schools and technical institutes? The New Zealand Mathematical Society appears to have been very successful at this. Should we be

producing brochures for lay and media persons on, say, "Understanding and Reporting Survey Results"? Should we even be contemplating publishing handbooks for practising statisticians (e.g. a "GENSTAT Companion" full of lots of sage advice on, say, how to use pseudo-factors and avoid the dreaded "AN 1")?

The executive committee would like to hear your views and suggestions on all of these matters. You can either write privately to the committee or write a letter to the editor of the newsletter. And while you are in the writing mood you may also like to compose an item for the newsletter or an article for the journal.

### SOME ASPECTS OF STATISTICAL CONSULTING—DIVISION OF RESPONSIBILITIES, TRAINING AND THE UTILITY OF CURRENT STATISTICAL RESEARCH

by John Reynolds

The recent Pacific Statistical Congress (PSC) included an evening panel discussion, organised by Ray Littler (Biometrics Section, MAF, Ruakura) on Statistical Consulting and a planned Wellington Regional Meeting of our association is likely to be devoted to this topic also. This article presents some opinions on aspects of statistical consulting with government scientist clientele and partly summarises some of the points raised at the PSC forum. It is to be hoped that readers will contribute some of their own

thoughts on consulting either to the newsletter or at the planned workshop.

#### Division of Labour between Consultant and Client

The division of responsibilities between statistician and client varies, of course, from client to client. A few clients can do almost everything themselves and merely need to check out the finer points of their analyses with their statistics (e.g. The statistician is asked to check that the client has got the appropriate 'BLOCKS' statement in his or her GENSTAT ANOVA program). Such clients have generally taken a course based on the almost-classical textbooks by Snedecor and Cochran or Steel and Torrie.

If a statistician is privileged enough to be involved in the design stage of a project he or she should supply the randomisation plans and offer assistance during the execution of the study. The client should arrange for the inputting and checking of the data and the statistician completes the analysis. Numerate clients should be encouraged to do the analyses themselves using MINITAB or GENSTAT if the study is a straight-forward one (e.g. a CRD or RCB design). There is however a body of opinion that clients should be allowed to remain a statistically-naive "native tribe" (Tukey, 1982).

An idealised division of client and consultant responsibilities is displayed in Table 1. Readers are requested to send the newsletter editor any omissions or amendments. The list of consultant responsibilities is purloined from Marquardt (1979) and the list of client responsibilities is plundered from various sources.

Table 1. Ideal Statistician and Scientist-Client Responsibilities

Statistician Responsibilities	Client Responsibilities
<ul style="list-style-type: none"> <li>* Meet clients on their home ground</li> <li>* Learn the client's subject matter and jargon</li> <li>* Understand the problem from the client's point of view</li> <li>* Devise a statistically sound plan of action (The plan includes a protocol for data gathering and recording and randomisation plans)</li> <li>* Obtain agreement on the plan from all those involved (who is to do what and when)</li> <li>* Monitor and expedite the execution of the plan (Visit the scene of the experiment, assist in the briefing of enumerators etc)</li> <li>* Analyse the data as simply as possible</li> <li>* Write a clear report and be timely</li> <li>* Follow up to see the report is interpreted correctly</li> </ul>	<ul style="list-style-type: none"> <li>* Establish basic goals for a project before consulting the statistician</li> <li>* Give the statistician some idea of the importance of the project (crucial versus incidental) and the level of resources available</li> <li>* If possible have some idea of measurement variation and what constitutes a real, or actionable treatment difference (This helps sample size determination)</li> <li>* Follow the agreed plan and contact the statistician before any changes have to be made</li> <li>* Data authenticity and accuracy</li> <li>* Creation of computer readable data files</li> <li>* Pester statistician if results are slow</li> <li>* Clear up any misunderstandings or ambiguities in the statistician's report</li> <li>* Allow the statistician to check any report before it is circulated or submitted for publication</li> </ul>

Some of the client responsibilities in Table 1 deserve some extra comment. We have probably all been in situations where we have pulled the stops out to complete a fairly sophisticated analysis on what we thought was a vitally important problem in the client's substantive field only to find that the project was of minor importance or the client's view of the problem according to his or her peers or superiors was unsound. Consultants should be able to expect an honest assessment from clients of the importance and urgency of a project. In the absence of this, the level of pestering is a good measure of importance. Embarrassing situations can occur when clients complete extra analyses without the consultant's knowledge and include them in published reports along with an

acknowledgement of the consultant's valuable help. Clients do need to be told the rules of the game. Once we have agreed on the definitive version of Table 1 we may wish to hang it up in our waiting rooms, just above the shelf containing the *Time* magazines and *Woman's Weeklies*.

#### Training

A fourth year of statistics courses (i.e. a non-thesis masters or a post-graduate diploma) is probably a minimal qualification for a statistical consultant. Several lists of core fourth-year courses abound (see, for example, Marquardt (1979) and the selection of papers on Graduate Programs in Statistics in Rustagi and Wolfe (1982)).