Awards and sparkling wine

Editor's report

The annual general meeting and awards ceremony took a new format this year. With the Society's new charter now in place, our business year will coincide with the calendar year and so the new president, honorary officers and members of Council will not take up their duties until 1 January. So instead of the year ending with the AGM and presidential lecture (or an ordinary meeting), it was decided that the AGM and awards ceremony would become an event in itself, to be followed by a summer reception, to which Society staff and non-member helpers and dignitaries would be invited.

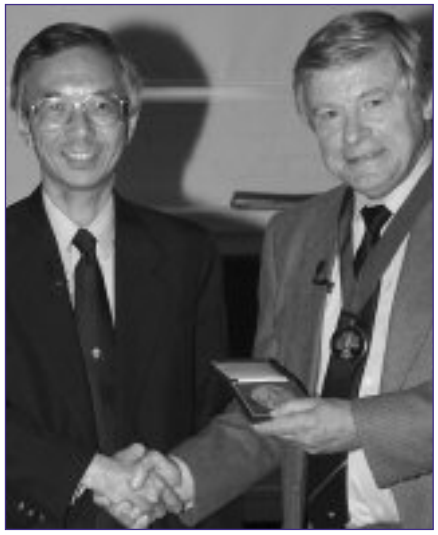
It is planned that a further annual event will take place in December to mark the end of the business year. This will be a major event in the Society's calendar and will feature the presidential lecture, or a specially invited lecture, and a social gathering. Look out for details in *RSS NEWS*.

A year of achievement

As the invited non-fellows would probably not wish to sit through the formal business of the AGM, the event was split into two. Proceedings commenced at 5pm with the AGM and this was followed by tea/coffee in the Council Chamber. Fellows and guests then assembled in the Lecture Theatre for the awards ceremony.

The president, Tim Holt, started the meeting with a brief review of some of the Society's achievements during the last year, making the point that one of the principal objectives of the Society is to ensure that statistics and statistical analyses are used for the betterment of society in general. He illustrated this with reference to the 'first-in-man' working party which had been set up following the recent experience with a drug trial having gone badly wrong. The recommendations of the working party had been welcomed by the pharmaceutical profession and had attracted interest world-wide.

Tim also reviewed the role of the Society in monitoring the progress of the Statistics Bill through Parliament. It had been influential in making changes which would have the effect of improving public trust in government statistics.



Howell Tong receives his award from the president

The health of statistics, statistical practice and the Society had never been better. We had made an active contribution to the move to produce more graduates in maths/stats, we had instituted a professional development centre and our membership had hit record levels.

The president then moved to the business of presenting awards, first mentioning the names of those who had obtained their Graduate Diplomas, and then referring to the prize for student project work which had been initiated by the Manchester local group and which he had had the pleasure of personally presenting the previous week (see report and picture on page 9).

50 years overdue

The first award to be presented was the Greenfield industrial medal and this went to **Jim Morrison** 'for his dedicated commitment to the promotion of statistical methods in education and practice in engineering and manufacturing, and for his fundamental contribution to quality improvement through his seminal work on minimising variation transmission'.

Jim's was a remarkable story. His new book, *Introduction to Statistical Engineering* (Discovered Authors, 2006), grew out of an article published 50 years ago. He had tried for many years to get it published but without success. Finally, he entered it into a competition as an undiscovered author and he won! In telling the story, the president remarked that if it had achieved publication when originally conceived, it is possible that the western world may not have fallen so far behind the Japanese in industrial production.

Now at the age of 90, Jim didn't feel able to make the journey to London but the Society was delighted to welcome his daughter, Liz Tayler, who accepted the medal on his behalf.

The legacy of Bradford Hill

The next award to be presented was the Bradford Hill medal. This went to **Scott Zeger** 'for his outstanding contributions to the development and application of statistical methods in the public health sciences, including the development, with his colleague Kung-Yee Liang, of the highly influential method of generalised estimating equations for analysing longitudinal data, and the application, with his colleagues John Samet and Francesca Dominici, of state-of-the-art statistical methods to the investigation of the links between air pollution and human health'.

Unfortunately, due to his flight being cancelled, Scott was unable to be present, but the president read out his acceptance speech. In this he paid tribute to Sir Austin Bradford Hill in whose honour the medal was awarded, describing him as one of the most important biostatisticians of all time. Scott was especially pleased to receive the award because he owed much of his own education and perspective to British statistics. His advisor had been Peter Bloomfield, a student of David Cox, and he had spent as much of his sabbatical time as possible in England at Imperial College, the MRC in Cambridge and Lancaster University where Peter Diggle had been a close collaborator and generous friend. If some of Sir Austin Bradford Hill's legacy had rubbed off along the way, he was forever grateful. Peter Diggle accepted the medal on Scott's behalf.

Paul Fearnhead was the recipient of the Guy medal in bronze (see March *RSS NEWS* for the citation) but was unable to be present to receive the award.

The threshold approach

The Guy medal in silver was awarded to **Howell Tong** 'for his many important contributions to time series analysis over a distinguished career' and in particular

for his fundamental and highly influential paper 'Threshold autoregression, limit cycles and cyclical data', read to the Society in 1980, which paved the way for a major body of work in non-linear time series modelling.

Howell gave some of the background to the work for which he had received the award. It was in response to the challenge posed in *JRSS Series A* in 1977 that he had introduced the threshold models in the paper cited.

Ushering in the new era of non-linear time series analysis, his threshold approach is based on a very simple idea that is not unlike Deng Xiao Ping's famous 'one-country-two-systems' solution for the 1997 issue for Hong Kong. Essentially the threshold approach divides the state space into several smaller parts, the dynamics of each of which is approximated by a simple linear system. The seemingly simple idea forges a strong link between non-linear time series analysis and deterministic nonlinearly dynamical systems, resulting in rich structures such as limit cycles, chaos, multi-modality, time irreversibility and many others. Thus, threshold models are practically relevant and theoretically tractable.

Being one of the oldest non-linear time series models, the threshold model has survived and has been widely used in diverse applications, including ecology (eg is the observed population cycle of a species due to density dependence or phase dependence?), economics (eg forecasting important indicators such as the sentiment indicator of the EU and the US economies on a monthly basis), finance (eg the impact of monetary policies by central banks on foreign exchange rates), public health, dynamical systems, and many others. Current research in threshold unit-root test, threshold co-integration and many other areas attests to the vitality of the threshold approach.

Howell thanked UMIST for giving him the right environment in which to think, his many younger collaborators for putting up with him, his late father, Kwan-Tak Tong, for using the bulk of his life's savings for Howell's university education, and his wife, Mary, for her continuous encouragement and wisdom.

Comparing USA with UK

The president then moved to the presentation of the awards for statistical excellence in journalism. The third prize went to **Paul Wallace** for his piece 'Transatlantic rivals', which sought explanations for America's per-person spending on health being 2.5 times that of Britain after purchasing-power parities had been taken into account.

In the article he first considered life expectancies, a crude and indirect measure of health, then specific middle-age disease prevalences such as diabetes, cancers and heart disease, and finally risk factors such as smoking, obesity and heavy drinking. Crucially, he explained that America's ill-health may reflect obesity in the past as well as today since in 1980 15 per cent of Americans were already obese compared with 7 per cent of Britons, so that England might simply be lagging behind America in the medical impact of prolonged obesity.

The article was a fine exposition of the logic and methods of epidemiology whereby if Americans are sicker then more should be spent on treating them, and the judges felt that Paul had tackled an important area of international comparison in a succinct and well-crafted piece with good statistical themes.

Matthew Parris

Standby wastage

Second prize went to **Matthew Parris**. In 'Tale of power and poppycock', he was chasing the source of the reported claim that consumer goods left on standby waste about 10 per cent of the electricity supply. His investigations revealed that the figure was based on a survey undertaken in 22 countries of which just 32 homes were in Britain. Parris ultimately found a DEFRA source (Report BNXS 36 on 'Estimated UK standby electricity consumption in 2004'), from which he was able to deduce that the 9.2 terawatt-hours wasted per annum equated to 8 per cent of *domestic* electricity consumption, at an average per-household cost of £27.50. However, Parris pointed out, the numerator was not exclusive to households.

In explaining his investigations, the judges believed that Matthew had written a witty and clear piece, which tackled a real example of how misreported statistical data could readily become an accepted 'fact'.

Ben Goldacre

Bad statistics

The first prize winner was **Ben Goldacre**, writer of the *Guardian's* 'bad science' column. He challenged a headline in *The Times* that 'cocaine floods the playgrounds' and in so doing revealed the source. 9,000 11 to 15-year-old children were surveyed in 305 schools. In 2004, 1.4 per cent of respondents reported cocaine use in the past year and 1.9 per cent in 2005. As these were rounded to one per cent and two per cent, respectively, *The Times* had reported that children's cocaine use had doubled.

The article went on to explain how to interpret a *p*-value of 0.05, why there needed to be correction for children being clustered in 305 schools, and a further correction for multiple comparisons (other drugs and periods of use).

The view of the judges was that Ben had made good points combating bad reporting and grabbing the attention of the reader. Not only had he dug deeper to get the facts behind the story, but he had also managed to explain a number of statistical techniques all in one succinct and newsworthy piece.

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All then retired to the Council Chamber for the first 'summer reception' featuring sparkling wine and canapés. ■