

Tony Greenfield Receives ASQ Statistics Division's Hunter Award



The 2004 William G. Hunter Award was presented to Tony Greenfield at the 48th Annual Fall Technical Conference in Roanoke, Virginia this past October. The Statistics Division of the American Society for Quality established the Hunter Award in 1987 in memory of the Division's founding chair to promote, encourage and acknowledge outstanding accomplishments during a career in the broad field of applied statistics. The attributes that characterize Bill Hunter's career—consultant, educator for practitioners, communicator, and integrator of statistical thinking into other disciplines—are shared by Tony as well.

Here are some excerpts from the award presentation:

Tony Greenfield was a journalist, specializing in technical and scientific reporting and feature writing, until he was 34. The managing director of a large stainless steel company asked him to join the OR section of the production control department. The reason was: "The OR section is full of very clever people who write reports that we don't understand. I want you to write interpretations for us."

In the course of this work he came across several statistical problems that he tackled himself. Praise from management for his solutions of these problems encouraged him to earn a degree in statistics from London University.

Thus began Tony's work as a consultant, one the talents for which Bill Hunter was known. Tony, like Bill, was also an innovator. In the early seventies he persuaded the directors to support the introduction of on-line computing. This was in the days before small computers were available for direct connection to machines. He nevertheless installed an IBM 1800 computer and linked it through a network of cables to research plant across an area of three acres.

Like Bill, Tony was also an educator for practitioners. He saw the need for training of medical staff in research methods and established a two-week course that he presented each year for five years. Tony also presented short courses over

a long period in general statistics, data analysis, design of experiments, and on-line data capture for researchers in the steel industry.

He was concerned that control of industrial processes was being addressed from two approaches: 1. statistical process control with designed experiments and data analysis; 2. control engineering. There seemed to be little, if any, communication between the two disciplines. Through the Royal Statistical Society, where he was chairman of the quality forum, he established a conference to bring the two disciplines together. This conference ran for several years in different parts of England.

Tony, like Bill, was also a wonderful communicator. In 1963, as editor of The Hub and on behalf of Sheffield Junior chamber of Commerce, he won the Junior Chamber International prize for the best JC magazine in the world. He proposed to the RSS that they should have a monthly newspaper which he was then authorized to start and he continued to edit it for nearly 20 years. It is still flourishing.

Ron Kenett, who nominated Tony, wrote the following:

I spent two years in Madison Wisconsin, as a lecturer in the department of Statistics, and was fortunate to have an office next door to Bill Hunter's. This allowed for many conversations around coffee cups and simple breaks.

Having worked with Tony Greenfield in the last few years I know that he and Bill would have had lots to share. As a matter of fact they did talk several times and Bill has referenced some of Tony's works, although they never actually met.

Nominating Tony for the Hunter award seems to me like closing the circle and I was very happy that he agreed to be nominated.

Tony made the following remarks when he accepted the award:

I believe I am the first person to receive this honour who never met Bill Hunter. But I knew him. I knew him first through his work with George Box. And I had known George for a long time through the Royal Statistical Society, of which I have been a fellow since the mid sixties, and through ICI: Imperial Chemical Industries, a large group of companies based in England.

Then I knew Bill because he telephoned me: from Madison to a small rural village in England. The voice said: "Tony, this is Bill Hunter. We haven't met but I have been reading some of your work and it seems we share some ideas." He telephoned me several times after that for a chat

and then the calls stopped. I hadn't known he was ill and dying. I wish I had met him.

While his published work, especially the books that he co-authored were technical and without emotion, his conversation over the telephone was passionate, human and enthusiastic. He didn't preach. He really wanted to share his thoughts with me and my thoughts with him. We talked about the need to help people through making their work easier and more productive; we talked about the compassionate nature of statistical methods. I wish I had met him.

Some years later, in a university library, I glanced at a paper by Bill in which he referred to an experimental design problem and wrote: "This has been solved by Greenfield". I felt a great glow. But I was researching something else at the time so didn't make a note and couldn't find the paper later.

Never mind. The glow has returned with the honour you have given me today. I am overwhelmed by this honour and by your recognition of my work that I see as minute compared with the works of former recipients. I am amazed too that this society, of which I am not a member, should reach across the ocean to honour me and to invite me to your conference in such a beautiful part of the United States. I am grateful too for this opportunity to meet you, so many friendly and welcoming people, and to put faces to names that so far have just been in print.

One of these names is Ron Snee, some of whose writing I had read over many years. He wrote to me a few years ago, just after my paper on communicating statistics had been published in the Royal Statistical Society's journal. His words in that letter were similar to those of Bill Hunter in his first phone call to me: "It seems we share some ideas." I have never met Ron and I am disappointed he is not here to continue with the sharing.

There is another Ron, whom I first knew only four years ago and who has become one of my closest friends. This is Ron Kenett. Ron is a joiner. He joins, without hesitation, any organisation, any society, that interests him. But he is more than that: he is an active joiner. He takes the view, as I do, that as soon as you join an organisation you have a responsibility to be active in that organisation, to work for the benefit of the members, to keep it thriving and, if you can see a way, to make it better. I feel this responsibility so strongly myself that it has prevented me from joining the ASQ and the ASA: for many years I have had such a full plate, too many commitments the other side of the water that I couldn't add to them on this side.

Ron has no such limitations. He is to be seen and heard in many cities across Europe from Tel Aviv, through Turin, Budapest, Ljubljana, Copenhagen, Brussels and London and similarly across the United States. He is well known to many, if not all, of you. As well as a friend, he is a man whom I admire greatly so the pleasure I feel today in receiving this honour is all the greater because it was Ron Kenett who nominated me to receive it. Thank you Ron.

I met Ron Kenett at the first meeting of ENBIS in Amsterdam: the foundation meeting of the European Network for Business and Industrial Statistics. Ron and I and many others have devoted much of our time to this new organisation, that we call a network rather than a society, so I shall tell you something about it.

Industrialists and businessmen across Europe know that international competition is getting tougher, product-development cycles shorter, and manufacturing processes more complex. Their customers expect higher quality in their products.

Statisticians across Europe know that statistical methods have improved business and industrial performance and can continue do so in the future too. But many companies remain ignorant of how they can benefit from the application of statistical techniques. Witness the reply of one company director, when I asked: "What do you do about uncertainty and variation?" His response was: "They are not allowed."

ENBIS was founded to stimulate the application of statistical methods to economic and technical development and to business and industry across the whole of Europe. ENBIS is intended as a forum for the exchange of ideas and to provide a networking mechanism for statistical practitioners. We aim to stimulate the application of statistical methods to enhance economic and technical development and to improve competitiveness of business and industry across the whole of Europe.

Business and industrial statisticians from national societies, such as the Royal Statistical Society in the UK, have been working within companies, or as consultants, to help businesses cut costs and improve quality. Now the availability of the Internet and easy travel within Europe has provided the opportunity to create a new society, ENBIS.

The need for networking arose from the realisation that many applied statisticians and statistical practitioners work in environments where they are isolated from interactions with, and stimulation by, likeminded professionals.

ENBIS was created by a small band of enthusiasts and had its official launch at the University of Amsterdam, with more than 80 attending. The

provisional executive committee had 14 members drawn from eight European countries. This first meeting had six interest groups: Design of experiments; General statistical modelling; Data mining and data warehousing; Process modelling and control; Reliability and safety; Quality improvement. Since then, two more interest groups have been formed: Statistical consultancy; and Measurement uncertainty.

The first meeting was followed by a three-day course, for local industry as well as members, on design of experiments. This is a pattern that has been followed at the annual conferences, the first of which was in Oslo and was followed by a three day introductory course on Six Sigma. Courses presented before and after subsequent conferences, in Rimini, Barcelona and Copenhagen, covered Evaluating the Effectiveness of Advertising, consultancy skills and Six Sigma.

Since that first meeting, solid foundations have been built: membership has grown to about 1,000 from nearly 40 countries (most members are European but a few are American); a constitution has been written; financial management has been created; a secretariat established; and, most visibly, a website has been developed. It carries reports of the interest groups; information about future meetings and other activities; a report of the first conference; membership details and how to join; and a list of members of the executive committee.

The website has a 'members only' section. This includes a discussion page, enabling members to post messages and reply to others. There is also a network page, which displays all ENBIS members with their affiliations and email addresses. Members can also show further information about themselves, such as their special interests and areas of expertise. Each interest group has its own discussion page to exchange ideas; all members can join in.

Membership of ENBIS, and hence of its interest groups, is open to engineers, scientists and managers working in business and industry who use statistical methods in their work. The discussions and information exchanges through the interest group pages are valuable resources for these 'statistical practitioners' as well as for the professional statisticians who are also eligible for membership.

Businesses and industries of Europe do need ENBIS. Some of them know this; many do not. Our task is to reach out and show how statistics can help them succeed in their own enterprises. We shall succeed because, among our members we have visionaries and we have enthusiasts, all sharing the aim of ENBIS:

To promote the widespread use of sound science-driven, applied statistical methods in European business and industry.

A major force for achieving our aim during the last three years has been Pro-ENBIS. This is a thematic network contracted for three years by the European Commission to implement the aim of ENBIS. As part of the contract, deliverables were quantified. So we have a record of works visits such as to:

- an Italian company making transmission belts ;
- a Swedish company developing components for three major truck companies;
- another Swedish company, this time making heavy-duty diesel engines;
- an English company making steering units;
- an Italian bank;
- a Spanish electrical power and transmission company;
- an American medical devices company based in England;
- a Portuguese hardwood pulp producer;
- a Norwegian electrical heating company.

We have provided many workshops on design of experiments, quality control, six sigma, data mining, and statistical methods for business and industry. From these have sprung requests for more workshops, for courses, and for consultancy. Ron Kenett and I have jointly presented workshops in Tel Aviv and in Budapest.

Sadly, our Pro-ENBIS contract will end this year and ENBIS will face the challenge to continue these activities without financial support from EC. So where will our driving force come from? From our visionaries, our enthusiasts and those members who work behind the scenes to plan and organise our conference and other meetings, maintain and extend our website and care for our finances.

While the European Commission recognises the value of our work, their financial support has ended. So how do we fund our continuing promotion? Most of the larger companies already acknowledge the advantages of statistical methods and are implementing six sigma programs. I believe that it is to the advantage of these large companies if the small and medium companies learn about how statistical methods can help them. I hope therefore to establish a perpetual fund among the larger companies with this in view. But that is just a seed of an idea so far. Watch this space!

The blossoming of ENBIS has been so rapid that it has surprised many of us. How did this happen? It happened because we were led by a small handful of active visionaries of whom the most notable, in my view, was Søren Bisgaard: a member of the ASQ and a winner, two years ago, of the Hunter award. I know that you all know Søren. I too have known him for several years and am proud to count him among my friends. He too has had a roving career with many experiences that have contributed to his

stature in the field of industrial statistics and to his conviction that statistical methods are essential for the success of business and industry and hence for the continuing improvement of living standards throughout the world.

So thank you Søren for all your hard work, leadership, creativity, teaching and friendship.

And my thanks again to the Statistics Division of the ASQ for this great honour you have given me, for inviting me to join the conference in Roanoke, a great experience in itself, and for your hospitality and friendship. I hope you all enjoy the conference as much as I am sure I shall.