

CURRICULUM VITAE

PROFESSOR ANTHONY BENDELL (“Tony”)

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Respected academic, experienced consultant and trainer, and internationally recognized expert on Business Management, Change Management, Six Sigma, Governance & Enterprise Risk Management, Organizational Excellence, Strategy, Leadership, Quality Assurance, Quality Management and Lean Operations, Tony also has an interest in public sector development and reform.

He acts as liaison officer for SKEA with the European Foundation for Quality Management (EFQM), and in this role as well as undertaking/leading development projects, he is responsible for training SKEA personnel and overseeing the Quality Assurance of their EFQM licensed training, recognition schemes and support.

Tony is a well-known invited keynote speaker at Conferences and Events worldwide and was formerly the Rolls-Royce funded Professor of Quality & Reliability Management, at the University of Leicester UK. Previously he also held the post of East Midlands Electricity Professor of Quality. Tony has had both an outstanding academic career and an extensive professional consultancy and training role at the highest level within both private sector organizations and the public sector. He has policy development experience with various branches of UK and international Government, including being Lead Consultant for the British Department of Trade and Industry on developing the accreditation framework for the development of the national system of Business Links in England and Wales to support small and medium sized manufacturing and other businesses.

He has worked as an associate consultant of Coopers & Lybrand, and subsequently trained management consultants for Deloitte. He is a leading figure in the UK and international quality and productivity improvement and excellence, and public sector transformation, movements. He has published extensively and is principle author of the best selling Financial Times book on Benchmarking for Competitive Advantage, which is available in 6 languages, as well as the FT book on Implementing Quality in the Public Sector. His new book on 'Developing Anti-Fragile Organizations; Governance, Opportunity and Risk in Turbulent Times' was published by Gower in July 2014. This examines the shortcomings of conventional risk analysis, the impact of 'black swans', and the strategic, cultural, process and people requirements for the development of operations, systems and organisations that get stronger from being stressed.

Tony has always been at the forefront of business and public sector innovation and practice. He was a major contributor to the UK National Quality Campaign, and the Managing in the 90's programmes. He chairs the MS6 Technical Committee of BSI, which has responsibility for process efficiency, effectiveness and improvement. This did the development work for the creation of the international certifiable ISO Lean Management and Six Sigma standard ISO18404, published in December 2015. He is now leading the

Sector Scheme for bringing forward this standard under Harmonised European Accreditation through the United Kingdom Accreditation Service (UKAS). He also chairs the Royal Statistical Society Quality Improvement Section. He has trained Senior Civil Servants for the Cabinet Office, and lectures to postgraduate business students on subjects including Manufacturing Management, Operations and Supply Chain Management, and Enterprise Risk Management. He has Board member experience in the private and voluntary sectors, and has advised and mentored senior managers and Board members, to the highest level.

Management & Consultancy Specialties

Customized solutions for diverse organisations in the private, voluntary and public sectors; Academic Assessment, Improvement and Award schemes; Quality Management; Policy Development & Deployment; Customer Service; Improvement Strategy; Enterprise Risk Management, Governance and Leadership; Lean Operations and inefficiency/waste identification and removal; Risk Analysis and Management; ISO9001 and Quality Management Systems; Strategy development; the EFQM Excellence Model; Benchmarking; Creativity and Teamworking; Executive Coaching, Integrated Management Systems; Corporate Social Responsibility; Process variation reduction and DMAIC Six Sigma Projects; Building Anti Fragile organizations and systems.

Academic Qualifications:

- BSc (Econ), special subject Statistics, II(i) Honours, July 1971, London School of Economics and Political Science (London University)
- MSc Statistics, Distinction, July 1972, London School of Economics and Political Science (London University)
- PhD, Thesis on Reliability Modelling, August 1982, Sheffield Hallam University/CNAA in collaboration with the National Centre for Systems Reliability, UKAEA

Professional:

- Fellow of the Royal Statistical Society 1972, Chartered Statistician (Fellow of the Institute of Statisticians 1979, Member 1973)
- Fellow of the Association of Quality Management Consultants 1989
- Fellow of the Chartered Quality Institute (formally the Institute of Quality Assurance) since 1991, Senior Registered Consultant
- Fellow of the Royal Society of Arts and Manufactures 1992
- Fellow of the Safety and Reliability Society 1996 (Member 1980)
- Member of the Operational Research Society 1984
- IRCA trained Lead Assessor and Auditor Trainer for ISO 9001
- EFQM Licensed Trainer (& trainer of trainers) for the European Foundation for Quality Management Excellence Model (Journey to Excellence, Leadership for Excellence, Internal Assessor Training, Excellence Assessor Training, Validator, Master Assessor Training)
- Trained Adviser, Investors in People

CURRENT / RECENT ACADEMIC AND PROFESSIONAL ROLES.

- Associate module leadership and lecturing, BPP London City, Birmingham & Manchester on MSc & BSc Management courses, and on MBA (Legal Practice)
- Visiting Professor of Quality Management, Economics and Statistics, Middlesex University Business School

- Associate module leadership and lecturer on MBA programmes, Coventry University London Campus (CULC)
- External Examiner for Open University, postgraduate course in Quality Management,
- External Examiner for Lean Manufacturing Foundation Degree, Cornwall College (Plymouth University)
- Chair of the BSI Technical Committee MS6, on Process Improvement, Lean & Six Sigma
- Vice Chair & Chair of the Quality Improvement Section of the Royal Statistical Society (RSS)

PROFESSIONAL AND BOARD ROLES

Professor Bendell was Founding Chairman of the UK Taguchi Club, and the Quality Management Association. He was Founding Chairman, and subsequently President, of the East Midlands Quality Club, and a board member of Midlands Excellence. He served for many years as a trustee and board member for City Arts (Nottingham). He is a board member of Blue-Bella Limited and a member of the Impartiality Committee for EMB Excellence.

Tony is Managing Director of Services Limited, a quality management consultancy company he started in 1983, and also of the newly founded Anti-Fragility Academy.

PROFESIONAL EXPERIENCE

In addition to his role in education and training, Professor Bendell's improvement experience includes practical deployment of improvement with the majority of the UK private, public and voluntary sectors over many years. This includes all forms of manufacturing, utilities, banking and financial services, communication, Voluntary organisations and NGO's, Local Authorities, the Probation Service, the Police, BBC, Ministries, and Agencies. He has also worked professionally in much of Western Europe, the Gulf, Sudan, India, Hong Kong, the US etc.

As an illustration, some client projects have included: Work for the Cabinet Office on training Senior Civil Servants in process thinking; Work with Dyson on developing design practice; Work with British Telecom Retail in strategy development and reforming systems; Six Sigma & Lean implementation in diverse organisations including Tokheim, Marconi and Citibank; Work with Edexcel on process improvement and strategy, validating statistical sampling of centres, the avoidance of errors in examination papers, and the development of qualifications for approval by Ofqual; Work with the BBC and ITV Network Centre on benchmarking programming; Work with the DTI Business Link and Small Firms Division on developing and implementing the Accreditation Standard for Business Links; Acting as Director General of the Abu Dhabi International Centre for Organisational Excellence (ADICOE) on a half time basis during 2008; Work for the Manheim Group on organisational restructuring and role development; Development of National Quality Award programmes in Dubai, Abu Dhabi and Sudan; Contribution to National Quality Campaigns in the UK, India, and Hong Kong; Work for the British Geological Survey on improving Project Management; Work for the Ministry of Justice on implementing Lean Construction, and some work for the EU on improving the Greek Unemployment Service.

ACADEMIC RESEARCH ACTIVITY

Externally funded academic research projects have included the Business Case for Excellence in Europe funded by European Foundation for Quality Management and British

Quality Foundation, Evaluation of the case for accreditation versus regulation funded by the United Kingdom Accreditation Service, the Impact of ISO 9001 on SME's funded by Lloyds Register Quality Assurance and SGS Yarsley, Technology Transfer & Research Contribution of University Technology Centres funded by Rolls-Royce, plus projects funded by RHP Bearings Ltd., East Midlands Electricity, DRA, UKAEA, etc.

I have successfully supervised some 14 PhD's in Quality Management, Lean Operations, Japanese Quality approaches, Decision Making, Reliability and Replacement Modelling, Project Planning Risk, Legal Aspects of Benchmarking (jointly with the Nottingham Law School), Optimisation of SPC Systems, Statistical Testing of Software Quality, etc.

I also successfully been a member of the supervision team for two MPhil's including one for the University of Loughborough. In addition, I also supervised a PostDoc funded by Rolls-Royce working on evaluating the strategic research contribution of University Technology Centres and developing a Risk Portfolio Model for research and technology transfer and a PostDoc working on Japanese Quality approaches.

I have examined research degrees for a number of institutions including the Universities of St Andrews, Coventry, Strathclyde, Paisley, Lulea (Sweden) and Wales.

Publications

More than 10 books, including the FT book on Benchmarking for Competitive Advantage published in 6 languages & 2 editions, FT book on Implementing Quality in the Public Sector, the Sunday Times book on Quality Measuring & Monitoring, books on Software Reliability, Taguchi Methods & Reliability Data Banks, and the DTI booklet on the Quality gurus. My new book on 'Building Anti-Fragile Organizations; Governance, Opportunity and Risk in Turbulent Times' was published by Gower in July 2014.

Over 70 refereed research papers, 40 professional articles, and 10 management videos.

Typically circa 5 to 10 major External Lectures & International Conference Chairs a year.

MOST RECENT FULL TIME ACADEMIC/ACADEMIC MANAGEMENT ROLE

Director of the Centre of Quality Excellence and Professor of Quality and Reliability Management, University of Leicester, UK (1998-2006)

I was until summer 2006 Director of the Centre of Quality Excellence (CQE) at the University of Leicester. I initially joined the University in October 1998 to a post created specifically for me but appointed according to the University's normal appointment procedures and standards. The post was permanent and was funded at full cost (with overheads and secretarial support) by Rolls-Royce for the first five years, and subsequently by the University. Initially, I was appointed jointly to the Management Centre and Department of Engineering, but in 2002 helped create the Centre of Quality Excellence, of which I became Director.

As Director of the Centre of Quality Excellence (CQE), my primary responsibilities were the development, management and publicising of the Centre, in terms of course provision, student numbers, research profile and reputation, fund raising and all administrative, technology and personnel matters. The CQE was a 'typical' Leicester University postgraduate centre offering supported distance-learning MSc courses worldwide. The CQE itself was established to reflect the growth of research and teaching activity in Quality Excellence and Customer Service within the University and the desire to develop this area further.

The new CQE took responsibility for delivery of the MSc in the Management of Quality Excellence that I had initially developed to meet the specific needs of Rolls-Royce, but had expanded across industry and the public sector. The first cohort of 20 Rolls-Royce students had commenced the course in January 2000. By 2006, the MSc in the Management of Quality Excellence, together with the newer and linked MSc in Customer Service Management, had a total of approximately 200 students enrolled at any one time and had been continuing to grow student numbers according to the aggressive business plan. Enrolment included groups of students in the UK, US, the West Indies, Greece, Cyprus, Malta, Singapore, Malaysia, Hong Kong and China. Individual and small numbers of students were also registered in a number of other countries including small groups in Dubai, Abu Dhabi and Africa. Students were supported by paper-based and web-based provision, as well as local Associate Tutors and Faculty Visits.

Research was also a core activity of the CQE. The CQE received research funding from a range of organisations including Rolls-Royce, The European Foundation for Quality Management (EFQM), the British Quality Foundation (BQF), the UK Department of Trade and Industry (DTI), Lloyds Register Quality Assurance, SGS Yarsley, The Patent Office, the United Kingdom Accreditation Service and the East Midlands Development Agency (EMDA).

I led research and PhD programmes in a number of areas including Quality Management and Service Excellence, Benchmarking, Six Sigma and Statistical Quality Improvement, Reliability Analysis and Optimisation, ISO 9001:2000 and Small Businesses, Innovation and the Modelling and Assessment of Academic/Industry Technology Transfer, and the impact of the effective implementation of organisational excellence on key results. Whilst at the University, I also personally brought in research-related income approaching one and a half million pounds.

Funded research projects were undertaken for UKAS on the benefits of Accreditation, and for the European Foundation for Quality Management and British Quality Foundation on the Business Case for Excellence.

At Leicester I supervised three research students and one Research Associate on projects related to Six Sigma and Lean Applications in Health Care, the Impact of ISO 9001:2000 on Safety in the Petrochemical Industry in the Gulf Region, the Market for Aeroengines in China, and the Business Case for Excellence.

The CQE was also the base for a number of networking activities, including the East Midlands Quality Club with some 100 public and private sector member organisations.

In addition to my CQE teaching roles, I was also involved in a small amount of specialist undergraduate teaching and MSc project supervision as a Professor in the Engineering Department in the areas of Design, Risk, Project and Quality Management. I also taught Quality Management, Benchmarking etc on the MBA in the Management Centre

PREVIOUS ACADEMIC POSTS

**(i) Head of Department of Mathematics, Statistics and Operational Research
The Nottingham Trent University
(1985-1998)**

I was recruited specifically to develop an underdeveloped Department of the University with no courses of its own (the work previously being all service teaching) and no external research or contract income/recognition. The Department was a large one and my responsibilities included running a split-site Department of some 35 full-time lecturing staff, 15 research and contract staff, plus administrative and technician support, part-time and fractional lecturers.

My first priority on joining the Department was to develop courses and Departmental income, commencing with the development of the BSc Mathematical Methods for IT and the University-wide Foundation course based in the Department. Other courses in Statistics, Mathematics and Quality Management followed.

In terms of external research and related income, I personally brought in circa £3 million, mainly for my own work in Quality Management. Under my leadership, the Department developed a unique Quality Management section, which since became part of the Nottingham Business School following my departure to Leicester. I was also actively involved in the Statistics and Operational Research section.

Within the Quality Management section we developed an undergraduate BA (Hons) in Business and Quality Management with circa 150 students. We also developed and ran full and part-time modular postgraduate certificates, diplomas and MA/MSc's in Quality Management in Nottingham and around the UK in groups in Nottingham, London, Birmingham, Bristol and Liverpool. Prior to leaving Nottingham Trent University, I negotiated an agreement with FT/Pitman Publishing that these courses, plus new MSc/MA courses in Customer Service Management, would be offered by distance learning internationally on a large scale from late 1998.

The Quality Unit also hosted the East Midlands Quality Club (circa 100 companies) of which I, at the time, was Chairman. The Club moved with me to the University of Leicester (where I subsequently became the Club's President). Like the CQE at Leicester, the Quality Unit was recognised as a Centre of Excellence by the Institute of Quality Assurance (now the Chartered Quality Institute) and worked with the Engineering Quality Forum focused on the needs of Quality Education for engineers. Other projects with the major accredited ISO 9001 certification bodies and with regional Training and Enterprise Councils focused on the relationship between the international quality management system standard ISO 9001 and the Investors in People standard, customer perception of certification bodies, and the statistical content of ISO 9001.

(ii) Senior Lecturer A (January 1979-1984)/Reader in Quality and Reliability (1984-1985)

Dundee College of Technology (now Dundee Abertay University)

At Dundee my initial responsibilities included leading the Statistics and Operational Research group within the Department of Mathematics and Computer Studies and acting as course leader for the BSc Applicable Mathematics, for which I developed the Honours year course.

I was also involved in virtually all course developments in the College.

(iii) Lecturer II (1973-1976)/Senior Lecturer (1976-1978)

Sheffield City Polytechnic (now Sheffield Hallam University)

Duties included acting as first year tutor and admissions tutor for the BSc (Hons) Applied Statistics within the Department of Mathematics and Statistics.

**(iv) Lecturer II in Statistics, Department of Business Studies (1972-1973)
Polytechnic of North London (now the University of North London)**

Research Contracts and Grants

2004-2007	Research grant for study of the Business Case for Excellence in Europe in collaboration with Georgia Tech (US) and Linköping University of Technology. Funded by the European Foundation for Quality Management and the British Quality Foundation Circa £85,000
2005-2007	Research grant for evaluation of the case for accreditation versus regulation, UKAS £10,000
1998-2003	Sponsored Professorial Chair by Rolls-Royce Circa £400,000
2000-2002	Financial support for the study of the impact of ISO 9001:2000 on SME's, Lloyds Register Quality Assurance and SGS Yarsley Total circa £10,000
2000-2002	Extension of Rolls-Royce Technology Transfer Research contract Circa £200,000
1997-2000	Rolls-Royce project on Benchmarking research contribution of University Technology Centres and development of Risk Portfolio Model £110,000
1996-1998	Teaching Company Scheme on Supply Chain and Production Improvement with RHP Bearings Ltd. £195,000
1992-1994	Teaching Company Scheme with East Midlands Electricity Circa £50,000
1991-1995	Other research support including sponsored Professional Chair by East Midlands Electricity, and DTI funding of Supply Chain Network Circa £190,000
1991-1994	DRA grant for work on developing an SPC-based version of BS9000/CECC 90,000 £160,000
1989-1998	Pickup and related grants for developing Quality Methods and Management Circa £200,000
1987-1990	Project Planning Risk, National Advisory Board Circa £75,000

- 1986-1990 Alvey grant on Software Reliability standardisation, evaluation and modelling (with GEC, STC, Logica, British Aerospace, UKAEA, City University, Newcastle University, etc.)
Value of my grant portion circa £250,000
- 1985-1992 Four DRA/MOD contracts on Standardising and Managing Field Failures of Electronic Components (Team Projects with Professor David Campbell, Loughborough University, and Professor Jorgen Moltoft, Danish Engineering Academy, STC, Plessey, GEC, etc.)
Total value of my grants circa £500,000
- 1985-1988 Hardware and Software Reliability Modelling, National Advisory Board
Circa £30,000
- 1985-1986 Two research contracts with the National Centre of Systems Reliability, UKAEA, on the investigation of robustness of data combination methods, and on reliability prediction at the design stage in new technologies

In addition to the above research contracts, travel, subsistence and conference grants and support have been provided for research by numerous organisations including the Bertelsmann Foundation, The European Organisation for Quality, GEC Research, the Swedish Board of Technical Development, Saab-Scania, the University of Linköping, the Technical University of Denmark, NATO, the University of Lulea, the Dutch Academic OR Group, Shell Research, DTI, SAS and the Beijing Institute of Technology.

Publications

(i) Books

Building Anti-Fragile Organisations; Risk, Opportunity and Governance in a Turbulent World

A Bendell, Gower 2014

Benchmarking for Competitive Advantage, 2nd Edition

A Bendell, L Boulter and P Goodstadt, Financial Times/Pitman, 1998

The Benchmarking Workout

A Bendell, L Boulter and K Gatford, Financial Times/Pitman, 1997 (reprinted 2006)

Benchmarking for Competitive Advantage (Indonesian edition 1995, Portuguese edition 1997)

A Bendell, L Boulter and J Kelly, Financial Times and Others

Implementing Quality in the Public Sector

A Bendell, L Boulter and J Kelly, Financial Times/Pitman, 1994

Benchmarking for Competitive Advantage (Italian, Swedish and Spanish editions)

A Bendell, L Boulter and J Kelly, Financial Times and Others, 1994

Benchmarking for Competitive Advantage

A Bendell, L Boulter and J Kelly, Financial Times/Pitman Business Series, 1993

Quality: Measuring and Monitoring

A Bendell, J Kelly, T Merry and F Sims, Sunday Times/Century Business, 1993

Reliability Data Banks

A Bendell and A G Cannon, Elsevier Applied Science, 1991

Taguchi Methods Within Total Quality

A Bendell, G Wilson and R Millar, IFS and Coopers and Lybrand, 1990

The Quality Gurus - What Can They Do For Your Company? (booklet)

A Bendell, DTI/The Enterprise Initiative, 1989, 1991

Taguchi Methods: Applications in World Industry

A Bendell, J Disney, and W A Pridmore (Eds), IFS/Springer Verlag, 1989

Taguchi Methods: Proceedings of the 1988 European Conference

A Bendell (Ed), Elsevier Applied Science, 1989

Software Reliability: State-of-the-Art Report

A Bendell and P Mellor, Pergamon-Infotech, 1986

(ii) Refereed Research Publications

Contribution to 'Exploring the Practice of Antifragility (eBook), Sinan Alhir & E Gould (Eds), Amazon 2015

Developing Anti-Fragile Healthcare Systems, Langa A and Bendell T, **Proc IARMM 3rd World Congress of Clinical Safety**, Madrid September 2014

Total Quality Beyond North America: A Comparative Analysis of the Performance of European Excellence Award Winners, Bendell A, Boulter L, and Dahlgaard J, **International Journal of Operations and Production Management**, Emerald, **Vol. 33, No 2**, pp.197 – 215, 2013

Getting it Right: Mitigating Risk by the Development of Anti-Fragility, Bendell A, **Journal of Medical Safety**, **Vol 1**, September 2012

The effect of adopting the European Foundation for Quality Management (EFQM) Excellence Model on Financial Performance in Europe. A Bendell and L Boulter, **Journal of Management & World Business Research**, **Vol. 4**, pp1-10 (ISSN 1449 3179), 2007

A Review and Comparison of Six Sigma and the Lean Organisation
A Bendell, **The TQM Magazine**, **18, No. 3**, 2006, pp 255-262

Restructuring Business Process Improvement Methodologies

A Bendell, **Total Quality Management and Business Excellence**, **16**, Oct-Nov 2005, pp 969-978

Six Sigma in the New Era of Quality Management

A Bendell, in Quality Management: A New Era, J Chan, R Kwan and E Wong (Eds), **World Scientific**, 2005, pp 3-15

ISO 9001:2000 - A Survey of Certified Firms

A Bendell and L Boulter, **International Small Business Journal**, June 2004

How can ISO 9000:2000 help companies achieve excellence? What the companies think

A Bendell and L Boulter, **Measuring Business Excellence, Vol 6, No. 2**, 2002, pp 37-41

An optimal statistical testing policy for software reliability demonstration of safety-critical systems

O Tal, A Bendell and C McCollin, **European Journal of Operational Research, 137**, 2002, pp 544-557

Reliability Demonstration for Safety-Critical Systems

O Tal, A Bendell and C McCollin, **IEEE Transactions on Reliability, Vol 50, No. 2**, June 2001, pp 194-203

Designs for Accumulation Analysis and Related Methods

A Bendell et al, **Behaviormetrika** (Tokyo), 2000

A Comparison of Methods for Calculating the Duration of Software Reliability Demonstration Testing, particularly for safety-critical systems

O Tal, A Bendell and C McCollin, **Quality and Reliability Engineering International, 16 No. 1**, 2000, pp 59-62

Competition Risks in Benchmarking

L Boulter and A Bendell, **European Competition Law Review, 20, Issue 8**, 1999, pp 434-441

The Future Role of Statistics in Quality Engineering and Management

A Bendell, J Disney and C McCollin, **Journal of the Royal Statistical Society, Series D, 48 Part 3**, 1999, pp 299-326

Benchmarking in Surface Engineering

A Bendell and P Goodstadt, **NATSURF Handbook**, January 1998

Changing the Culture to Business Excellence

A Bendell and P Goodstadt, **International Journal of Business Transformation and Re-Engineering**, January 1998

Quality Management in Local Government - the Braintree Experience

A Bendell et al, **International Strategies and Techniques for Future Local Government**, M Prohl (ed), Bertleman 1997

Benchmarking and Best Value

A Bendell, **Best Value - the First Steps**, CIPFA 1997

Quality as a Mindset

A Bendell and R Penson, **Handbook of Customer Service**, Pete Murley (ed), Gower 1997

Conducting Fair Play

A Bendell and L Boulter, **The Benchmark**, February 1996, pp 21-22

Evaluating Project Completion times where activity times are Erlang distributed

Bendell et al, **Journal of Operational Research Society, 46**, 1995, pp 865-882,

Discussion on Control Charts paper by Alwan and Roberts and Caulcutt

- J Disney, A Bendell, J Shaw and D W Wightman, **Applied Statistics**, **44**, 1995, pp 289-306
- The Quality Gurus - their approaches described and considered
A Bendell, R Penson and S Carr, **Managing Service Quality**, **5**, 1995, pp 44-48
- A Guide to Improvement
A Bendell and R Penson, **The Benchmark**, February 1995, pp 32-36
- Benchmarking Issues: Some practical solutions
A Bendell and L Boulter, **Business Change and Re-Engineering**, **2**, December 1994, pp 44-50
- The Tools and Techniques of Total Quality Management
A Bendell and T Merry, **The Quality Management Handbook**, M Hand and B Ploughman, Cima, 1992, pp 58-88
- Discussion of Accumulation Analysis paper by Hamada and Wu
Yanagisawa, Disney and Bendell, **Technometrics**, **32**, 1990, pp 153-157
- The Potential for the Application of Taguchi Methods of Quality Control in British Industry
J Disney and A Bendell, **Managing Quality**, B G Dale and J J Plunkett (eds) Phillip Allan, 1990, pp 193-206
- Taguchi Methodology in the UK and Europe
A Bendell, **Proc of 2nd European Conference on Taguchi Methodology**, IBC London, 1989
- Assessment of Risk and Escalation of Project Cost and Time
A Bendell, J M Carter and T Jaafar, **Proc Operational Research and Decision Support Systems Conference**, Linköping, Sweden, June 1989
- Statistical Quality Methods for European Industry
A Bendell, **Proc SEUGI 89, SAS Institute**, Cologne, May 1989 (invited paper)
- Taguchi Methodology
A Bendell and J Disney, **Proc New Manufacturing Imperatives Summit**, Paris, 1989
- Effects of explanatory factors on Software Reliability
C McCollin, A Bendell and D W Wightman, **Proc Reliability '89, Brighton, 1989**, pp 55B/1/1-11
- Taguchi Methods - Comments on UK company experiences
A Bendell, J Disney and A G Baker, **Proc Reliability '89, Brighton, Volume 2**, 1989, pp 4C/6/1-5
- Taguchi Methods in the United Kingdom
A Bendell, **Proc of 1st European Taguchi Conference**, London, 1988
- Introduction to Taguchi Methodology
A Bendell, **Proc of 1st European Taguchi Conference**, London, 1988
- Taguchi Methods for Design Stage Quality

A Bendell and J Disney, **Proc IFS Conference on Statistical Process Control**, Leicester, November 1987. Republished in **Statistical Process Control**; an executive briefing, J Mortimar (ed), IFS 1988, pp 59-62

An Electronic Component Reliability Data Base

J M Marshall, J A Hayes, D S Campbell and A Bendell, **Proc 10th Advances in Reliability Technology Symposium**, University of Bradford, April 1988

An Overview of Taguchi Methods

A Bendell, **IOS Conference on the Potential for the Application of Taguchi Methods of Japanese Quality Control within British Industry**, London, June 1987. Recorded as part of a published ISO/Trent Video of the same title (1988)

The Reliability Analysis of Weapon Systems

C Gray, N Harris, A Bendell and E V Walker, **Proc Reliability 87**, (1987). Invited for republication in **Reliability Engineering and System Safety 21, No. 4**

Proportional Hazards Modelling in the Analysis of Computer Systems Reliability

M R Drury, E V Walker, D W Wightman and A Bendell, **Proc 6th National Reliability Conference**, Birmingham 1987, pp 5B/1/1. Republished in **Reliability Engineering**.

How to collect and use process plant reliability data

A Bendell, **Process Engineering**, 1987, pp 39-42

On alternative definitions of multivariate coherent systems

Mathematische Operationsforschung und Statistik (Optimisation), 1987, pp 119-136

Reliability data collection and analysis for automatic fire detection systems on a large industrial site

A Bendell, A G Cannon, G P Libbertson and L A Walls, **Proc Seminar on Data Collection and Analysis for Reliability Assessment**, IMechE, 1986

Collecting, Analysing and Applying Reliability Data in the Process Industries; an Overview

A Bendell, **Proc Seminar on Data Collection and Analysis for Reliability Assessment**, IMechE, 1986

New developments in Reliability Analysis

A Bendell in **Reliability Technology, Theory and Applications**, Part 2 North Holland, 1986, pp 351-357

Proportional hazards modelling in the analysis of transmission failure statistics

S J Argent, P T Manning, S G Ryan, A Bendell, J Marshall and D W Wightman, **Proc 5th Eurodata Conference**, Heidelberg, 1986, Springer Verlag, J H Wingender ed, pp 624-633

The Relationship between Software Metrics and Software Reliability

A Bendell, **IEEE Colloquium on Software Reliability: Models and Measurement**, March 1985, IEEE Digest 1985/21

The Use of EDA Techniques for Software Reliability Assessment and Prediction

A Bendell, **Proc NATO ASI on the Challenge of Advanced Computing Technology to Systems Design Methods**, July 1985. Published by Springer Verlag, 1986, Software Design Methods, J K Skwirzynski ed, pp 337-351

Minimising Misconceived Models

A Bendell, **Institute of Statisticians Conference**, Cambridge 1985. Republished in **The Statistician**, **35**, 1986, pp 303-309

The Robustness of Markov Reliability Models
J Edgar and A Bendell, **Quality and Reliability Engineering International**, **2**, 1986, pp 117-120

Proportional Hazards Modelling in Reliability Analysis - an Application to Brake Discs on High Speed Trains
A Bendell, M Walley, D W Wightman and L M Wood, **Quality and Reliability Engineering International**, **2**, 1986, pp 45-52

Practical Aspects of Fault-Tree Analysis and the use of Markov Reliability Models
A Bendell and J Ansell, **Proc 5th National Reliability Conference**, Birmingham, 1985, pp 5NRC/4B/1-8

The Structure and Exploration of Reliability Field Data; what to look for and how to analyse it - L A Walls and A Bendell, **Proc 5th National Reliability Conference**, Birmingham, 1985, pp 5NRC/5B/1-18. Invited for republication in **Reliability Engineering**, **15**, 1986, pp 115-143

The Practical Application of Proportional Hazards Modelling in Reliability
D W Wightman and A Bendell, **Proc 5th National Reliability Conference**, Birmingham, 1985, pp 5NRC/2B/1-16. Invited for republication in **Reliability Engineering**, **15**, 1986, pp 29-54

A Reliability Model with States of Partial Operation
A Bendell and S Humble, **Naval Research Logistic Quarterly**, **32**, 1984, pp 509-535

Modelling Distribution of Secondary Keys
W B Samson and A Bendell, invited paper in D Bell (ed) **Database Performance State of the Art Report**, Permagon-Infotech, 1984, pp 121-129

Exploring Reliability Data
A Bendell and L A Walls, invited paper, **Quality and Reliability Engineering International**, **1**, 1985, pp 37-51

Proportional Hazards Modelling in Reliability Assessment
A Bendell, **Reliability Engineering**, **II**, 1985, pp 175-183

Some Statistics of Statistics
M J Davidson and A Bendell, **Journal of Applied Statistics**, **II**, 1984, pp 188-224

The graphical solution of optimum fixed-age replacement problems based upon the alternative criterion of Derman and Sacks
J Ansell and A Bendell, **26th International Meeting of the Institute of Management Sciences, Copenhagen**, June 1984. Republished in **Microelectronics and Reliability**, 1986

Rank Order Distributions and Secondary Key Indexing
W B Samson and A Bendell, **Second International Conference on Data Bases**, 1983. Republished in the **Computer Journal**, **28**, 1985, pp 309-312

Nested Renewal Processes with Special Erlangian Densities
A Bendell and N H Scott, **Operations Research**, **32**, 1984, pp 1345-1347

A Note on the Proportional-Idling-Time Opposite-Failure-Modes Model

A Bendell, **Journal of the Operational Research Society**, **35**, 1984, pp 65-68

Age Replacement Under Alternative Cost Criteria

J Ansell, A Bendell and S Humble, **Management Science**, **30**, 1984, pp 358-367

The Effect of Stochastic Time Delays on the Reliability of Isolated Impulse Systems

A Bendell, **Naval Research Logistics Quarterly**, **30**, 1983, pp 537-551

An Alternative Criterion for Optimal Replacement

J Ansell and A Bendell, **Proceedings of the Fourth National Reliability Conference, Vol 2**, 1983, pp 5C/R/1-10

The Effect of Alternative Cost Criteria on Optimal Replacement

J Ansell and A Bendell, **Proceedings of the 7th Advances in Reliability Technology Symposium**, Bradford 1982, pp 1B/1/1-11

On the Small-Sample Estimation of the Log Odds Ratio in 2x2 Contingency Tables with one pair of Fixed Margins

J Ansell, A Bendell and S Humble, **Journal of Statistical Computation and Simulation**, **14**, 1982, pp 305-320

On the Optimality of k-out-of-n: G Systems

J Ansell and A Bendell, **IEEE Transactions on Reliability**, **R31**, 1982, pp 206-210

Generalisation of Dedekind's Problem of the Enumeration of Coherent Structures

J Ansell, A Bendell and S Humble, **Proceedings of the Royal Society of Edinburgh**, **A89**, 1981, pp 239-248

Optimal Replacement for Systems that Operate and Idle

A Bendell and S Humble, **Journal of the Operational Research Society**, **32**, pp 875-884

The Use of Rank Order Distributions for Predicting the Probabilities of Rare Events

A Bendell and W B Samson, **Proceedings of the Third National Reliability Conference, Birmingham, Vol 1**, 1981, pp 2B/1/1-11

The Vocabulary of Statistics

A Bendell and S Bendell, **Lore and Language**, **3**, 1980, pp 9-35

Nested Renewal Processes

J Ansell, A Bendell and S Humble, **Advances in Applied Probability**, **12**, 1980, pp 880-832

(iii) Professional Publications

The following is a sample:

Changing Tides

Ted Marra & Tony Bendell, **Quality Progress**, ASQ December 2015

Shatter Proof

Ted Marra & Tony Bendell, **Quality Progress**, ASQ November 2015

Robust is not enough; Developing anti-fragile quality management systems
A Bendell, **Quality World**, June 2014

EFQM 2013 – A NEW MODEL OF QUALITY, OR THE SAME OLD THING?
A Bendell, **QHSE Focus Magazine**, April 9, 2013

Master Lean Belt
A Bendell and L Boulter, **Public Sector Excellence**, February 2009

Something Lacks Quality in the State of Britain.
A Bendell, **Quality World**, August 2008

Organisational Challenges in Introducing Six Sigma
A Bendell, **Quality World**, April 2006

Benchmarking in the New Era of Quality Management
A Bendell and L Boulter, **Quality World, Vol 31**, 2005

Signing Off 'Buyer beware' - Not 'One Size Fits All'
A Bendell, **Six Sigma Today, Vol 1, No. 1**, August 2003

Six Sigma Analysed
A Bendell and T Marra, **Quality World, Vol 28, Issue 3**, March 2002, pp 16-18

SME's surveyed
A Bendell, L Boulter and M Stone, **Quality World, Vol 27, Issue 6**, June 2001, pp 32-34

Benchmarking - why things don't mean what they used to mean (lead article), **UK Excellence**, June/July 2001, pp 8-11

Customer Focused Six Sigma
A Bendell, T Marra and J Severance, **European Quality Vol 8, No. 5**, 2001

Using Your Brain
A Bendell and N Corke, Using Your Brain, **Quality World Vol 27, Issue 1** (Special Issue on Six Sigma), January 2001, pp 28-30

What is Six Sigma?
A Bendell, **Quality World**, Jan 2000, pp 14-17

Making Payroll Processes Efficient
A Bendell, **Payroll Managers Review**, October 1997

Get a Strategy
A Bendell and R Penson, **Customer Service Management**, June 1996

Customer Charters - A Good Idea or a Waste of Time?
A Bendell, **Customer Service Management**, September 1995

Keeping Control of Customer Service Using SPC
A Bendell and R Penson, **Customer Service Management**, June 1995

Behind the Front Line (and Towards the Acceleratable Organisation)
A Bendell, **Customer Service Management**, March 1995

Counting the Cost of Quality
A Bendell and R Penson, **Customer Service Management**, December 1994

The House of Quality - The Problem with Customer Perception
A Bendell, **Customer Service Management**, September 1994

Customer Service in the Public Sector
A Bendell and J Kelly, **Customer Service Management**, June 1994

Benchmarking - Show us yours and I'll show you mine!
A Bendell and J Kelly, **Customer Service Management**, March 1994

Old Salesmens' Tales and the Need to Know
A Bendell, **Customer Service Management**, June 1994

Taguchi Comes to Europe
A Bendell, **Quality Today**, March 1988, pp 44-46

Taguchi Comes to Europe
A Bendell, **Professional Engineering**, September 1988, pp 80-81

An Introduction to Taguchi Methods
A Bendell, **Proc PSI Annual Conference**, Southport, September 1988 (opening paper/invited)

Statistical Quality Control in Manufacture cannot compensate for Poor Quality in Design
A Bendell (editorial) **Professional Statistician, Vol 6, No. 2**, pp 1-2, 1986

Assessing the Future of Reliability
A Bendell, **Safety and Reliability**. Invited papers, I The Basis for Growth, 1985, II Towards the Year 2000 Vol 6 No. 2 (1986) pp 7-16

Race Statistics in the UK
A Bendell (joint editor) and D Drew, **Radical Statistics Newsletter, 11**, 1977

Contribution to Further Thoughts on the Admission of the People's Republic of China to the United Nations: A Markov Process
A Bendell, **Institute of Statisticians Newsletter, 5**, 1973

The Question of Bias in the New Decimal Bronze Coinage
A Bendell and G Roberts, **Institute of Statisticians Newsletter, 4**, 1972

(iv) Videos

Contribution to "Benchmarking to Win" video, Financial Times

Consultant and contributor to Sunday Times Videos on Quality Measurement and Monitoring and to ones on various related topics, including Public Sector Quality

Participation in Institute of Statisticians/Nottingham Polytechnic video on Taguchi Methods

Series Editor for 10-videos series on Reliability, IES/DTI

Principal author and presenter for video series on TQM/Tools of Quality/ISO 9000, DTI

(v) Major External Lectures

Typically circa 5 to 10 a year. A sample follows.

Invited Speaker, The Ghosts of Statistics Past, Statistics Present & Statistics Future, RSS Annual Conference, Sheffield September 2014

Keynote Speaker, Developing Anti-Fragile Organisations' launch seminar, Nottingham 26th March 2014

Invited Speaker on Developing Anti-Fragile Organisations, World Quality Day event at Houses of Parliament, 18th November 2013

Keynote Speaker/Chair, Sheikh Khalifa Excellence Award's Share Best Practice Conference: Local, Regional & International Role Models in Business Excellence, Abu Dhabi September 2013.

Invited Speaker and Chair on Developing Anti-fragile Organisations, Royal Statistical Society Annual Conference, University of Northumbria, September 2013.

Invited Speaker and Chair, " Getting it Right: Mitigating Risk by the Development of Anti-Fragility", Tony Bendell and Melissa Sedmak, URMPM World Congress, London September 2012.

Invited Speaker on Cloud Computing, Lean and Anti-Fragility, University of Derby Cloud Alliance, Inaugural Seminar, 13th July 2012.

Invited Speaker, Overview of Six Sigma & Lean, Royal Statistical Society Seminar, Newport 22 May 2012.

Invited Chair and Keynote Speaker, on "Enhancing Your Business Case for Quality: Examining Research-Based Evidence to Show a Top-Level Excellence Strategy Delivers An Improved Bottom Line", IIR Quality Summit, Dubai 22nd-26th May 2011.

Invited Keynote Speaker, on Benchmarking for Excellence, MEQA Conference Abu Dhabi 22nd – 24th Feb 2011

Invited Chair and Keynote Speaker, Bendell A., Boulter L., Dahlgaard, J., "Recovering from the crisis: how to do it and how to sustain what you achieve", in the proceedings of the 13th QMOD Conference on Quality and Service Science, 30 August – 1 September 2010, Cottbus, Germany

Invited keynote speaker on Applying Lean Thinking to Carbon Reduction Strategies, Institute of Environmental Management and Assessment National Conference, Sept 2009

Invited Keynote Speaker, Czech Excellence Award Winners Conference, Prague, June 2009

Invited keynote speaker, Service Excellence Conference Florence, September 2008

Invited keynote speaker (and debate opposer) on Six Sigma, Royal Statistical Society Conference 2008, Nottingham, September 2008

Invited Chair of Conference and keynote speaker, IIR International Quality Forum Dubai, June/July 2008

Invited keynote speaker, EOQ Congress, Vienna, June 2008

Invited Lecturer, CQI Regional Lecture, Manchester, November 2007

Invited Lecture on the Business Case for Excellence, Gresham College, London, October 2007

Invited speaker on Six Sigma, Royal Statistical Society Conference, London, June 2007

Invited keynote speaker on Partnering in the Public Sector, British Quality Foundation, May 2007

Invited keynote speaker, QMOD Conference, Liverpool, August 2006

Invited keynote speaker and Chair, IIR International Quality Forum, Dubai, June 2006

Invited keynote speaker and Chair, Defence Manufacturing Europe Conference, Amsterdam, June 2006

Invited joint speaker with Dr L Boulter on Excellence in Europe, AFQM and Quality Austria Annual Awards Conference, Vienna, April 2006

Invited keynote speaker on Lifetime Customer Value, Customer Care Conference, Athens, April 2006

Invited keynote speaker (three talks) and workshop leader, Honorary President of Committee and Chair of Editorial Committee, Presidential Conference on Quality for Sustainable Development, Khartoum, March 2006

Invited speaker on the Business Case for Excellence in Europe, Cyprus Conference on Quality Management, September 2005

Invited presentation on Management education in Excellence, BQF Sponsor Event, Hatfield, September 2005

Invited keynote speaker on Quality Management issues of international developments in the supply chain at China Conference on Quality and Reliability, Beijing, August 2005

Invited presentation at British Quality Foundation AGM, London, July 2005

Invited workshop leader on Process Excellence and conference speaker on gender issues in Quality Management at QMOD Conference, University of Palermo, Sicily, Italy, June 2005

Invited Chair and speaker on developments in Quality Manager roles at IIR International Quality Congress, Dubai, June 2005

Invited keynote speaker on relationship between Six Sigma and Lean at Quality Management Convention, Hong Kong, June 2005

Invited keynote speaker on Developments in Six Sigma at First International Conference on Quality Management and Six Sigma, HKQMA, Hong Kong, January 2005

Invited speaker at Design Seminar, National University of Singapore, November 2004

Invited speaker on Development in Quality Management at Cyprus Conference on Quality Management, September 2004

Invited keynote speaker on Practical Process Excellence at QMOD Conference, Monterey, Mexico, June 2004

Invited speaker on Process Management and Optimisation at UNICOM Managing and Leading Process, Transformation Conference, London, June 2004

Invited keynote speaker and workshop leader at Presidential Conference to Launch National Quality Campaign, Khartoum, Sudan, July 2004

Invited speaker on Six Sigma at Royal Statistical Society Conference on Business Improvement Through Statistics, Coventry, April 2004

Invited presenter at BetterManagement.com webcast seminar on Customer Service Management, April 2004

Invited speaker on Customer Service Strategy at Customer Service Network Seminar, London, March 2004

Invited Chair and keynote speaker at IIR International Quality Congress, Dubai, February 2004

Invited speaker on Organisation Excellence at RIPA International Masterclass, December 2003

Keynote speaker at IEE Seminar on Six Sigma, London, November 2003

Invited speaker on Modern Quality Management Methods at Professional Network for joint meeting of Leicester IQA, IEE and IMechE, November 2003

Invited workshop leader on practical implementation of Six Sigma at IQPC European Six Sigma Summit, London, April 2003

Conference chair and keynote speaker at IIR International Quality Congress, Dubai, January 2003

Invited speaker on Quality Management at RIPA International Total Quality Management Course, London, December 2002

Invited closing speaker on Six Sigma and Stakeholders at the Quality Management and Organisational Development (QMOD) Conference, Busan, Korea, October 2002 (Paper published in Proceedings pp 45-49 but not presented due to wife's illness)

Chair and opening speaker at the Capita EFQM in Local Government Conference, London, June 2002

Invited speaker on Benchmarking at the Institute of Maintenance and Building annual convention, Solihull, April 2002

Invited keynote speaker on process and performance management at the Cabinet Office Excellence Conference, Glasgow, March 2002

Invited speaker on Benchmarking at the British Quality Foundation Social Services Group Seminar, Birmingham, March 2002

Invited speaker on the new criteria for the Dubai Quality Award, Department of Economic Development, Dubai, February 2002

Invited Masterclass leader for Total Quality Management Masterclass for Abu Dhabi Chamber of Commerce and Industry, February 2002

Conference Chair and keynote speaker on Quality Management at IIR International Quality Congress, Dubai, January 2002

Invited speaker on Self-Assessment of Excellence at Abu Dhabi Quality Forum, January 2002

Invited international expert for training session for Assessors/Senior Assessors for Sheikh Khalifa Excellence Award, Abu Dhabi, January 2002

Quality and Excellence Conference, Sudan, November 2001

Capita Balanced Scorecard Conference, London, October 2001

Panel member and reviewer at National Police Training Conference, Coventry, September 2001

Chair and opening speaker at Capita Conference on Measuring Customer Perception in the Public Sector, London, September 2001

Invited presentation to East Midlands group of Institute of Maintenance and Building on Quality and Excellence, 2001

Presentation to the 2000 Small Business and Enterprise Development Conference, University of Manchester, on Quality Certification of SME's (with L Boulter and P Hannan)

Seminar presentation on Six Sigma at Design for Manufacturing Exhibition, NEC, 2000

Two presentations to British In Vitro Diagnostics Association seminar on Risk Analysis methods, 2000

Invited presentation to BQF Public Sector Network on process analysis approaches, 2000

Two invited papers to CIPFA Conferences on Best Value and Excellence, 2000

Two invited papers read to the Dubai Quality Group Best Practice Conference on International Excellence Award Processes, 2000

(vi) Other Conference and Professional Presentations etc.

Typically many presentations a year.

OTHER PROFESSIONAL ACTIVITIES

Formerly Associate Editor of the **IEEE Transactions on Reliability** and member of Editorial Board of **Quality World**, of the **Business Process Re-engineering and Management Journal**, and of **Reliability, Quality and Safety Engineering**. Referee for numerous professional and academic journals including **TQM Magazine**, **Quality World**, the **International Journal of Quality and Reliability Management**, **The Statistician**, **Large Scale Systems**, **Optimal Control**, etc.

Founding chairman of the Quality Methods Association (QMA) incorporating the UK Taguchi Club (until 1996). Founder, past Chairman and President of the East Midlands Quality Club.

Formerly British Expert on the International Electrotechnical Commission TC56 WG4 and member of BSI Committee QSI. Former Member of BSI Committees QMS/2/3. Now Chair of BSI Technical Committee MS6.

Formerly External Examiner for MBA Middlesex Business School, for MSc Quality Management Sheffield Hallam University, for MSc Strategic Quality University of Wales at Newport and for Master of Defence Procurement, RMCS. Formerly External Examiner, Manchester Polytechnic (now Manchester Metropolitan University) and Assessor for SCOTVEC (Statistical Methods). Formerly Chief Examiner in Quality and Reliability for the Engineering Council.

Adviser to Quality and Reliability Centre, University of Singapore and referee for Hong Kong University research grant applications.

Formerly member of board of Midlands Excellence and member of the judging panels for Best Manufacturing Practice Awards in Wessex and for the Rolls Royce MD's Quality Award. Formerly member of the advisory board of the Yorkshire Quality Alliance. Formerly member of steering group, British Quality Foundation Public Sector Network

Reviewer/Referee for University Chairs including Universities of Wales, Sheffield Hallam, Strathclyde, Liverpool John Moores, Derby and UMIST. Reviewer for University of Buckingham MSc in Lean, and MSc in Continuous Improvement.

Joint book series editor on Quality, Reliability and Risk for World Scientific Publishing.

Tony Bendell
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