



Applied Complexity Theory as the New Framework for Management & Public Policy

ESRC Complexity Research Seminar 6

8 July 2010 @ LSE

10.00-17.00 (coffee and registration from 09.30)

Post 7/7 and 9/11: what lessons have been learnt on evacuating, following a major disaster? What can state of the art modelling, simulations and a complexity theory approach contribute to policy?

David Barnes

Assistant Director, Civil Contingencies Secretariat, Cabinet Office

David graduated from the University of Southampton with an MSc in Management Sciences in 2003 having previously completed a BSc in Chemistry at the same institution. The dissertation for his MSc project was on the use of 'Six Sigma' within a global financial services company and how it could be used alongside discrete event simulation to improve the customer service experience.

In 2004 David joined the Metropolitan Police Service's Internal Consultancy Group and worked on a range of projects including reviewing the model for homicide investigation and initiatives to cut reoffending. During this time David also coordinated the production of the annual Policing Plan for 2006/07. Later in 2007 David changed teams and his new role saw him providing programme management advice direct to senior project and programme managers. He also completed a short term attachment to scope a project for centralisation of crime recording processes in the MPS. In 2008 David joined the Strategy Development Team where he contributed to the development of a range of corporate strategies and project managed a fundamental review of the MPS strategy.

In January 2010 David joined the Civil Contingencies Secretariat on a two-year secondment from the Metropolitan Police. He works within the Resilient Telecoms Programme where he is completing a feasibility study into a civil national alert system as well as working to improve the telecommunications capabilities with Local Resilience Forum Telecommunication Sub-Groups.

In his spare time David is a Special Constable in Lambeth, London and has recently taken up sailing.

UK Resilience: Not as simple as it seems

Abstract

The Civil Contingencies Secretariat (CCS) is the Central Government unit that co-ordinates resilience policy across Government. It has the mission 'to improve the UK's resilience to absorb, respond to and recover from potential disruptive challenges of all types'. The current legislative framework around contingency planning and management was enacted in 2004 and places the need to adopt a risk based approach on a statutory basis. At a national level the National Risk Assessment enables this which culminates in the publicly available National Risk Register. The current approach is reviewed and concludes that contingency planning and management is highly complex due to the range of stakeholders, experts, scenarios and consequences that are involved.

John Pooley

Assistant Chief Ambulance Officer Head of Emergency Preparedness for LAS



John joined the London Ambulance Service NHS Trust in 1971 and served in the Ealing area as an operational paramedic.

Throughout his career he has served in all branches of the service. In the 70s he worked in the services control room. Throughout the 1980s he worked in the training division culminating in him being appointed Head of training for the Service.

He has served in operations and for a number of years ran an operational sector of the service.

John took up his current post last year as Assistant Chief Ambulance Officer Head of Emergency Preparedness for LAS.

John is married with 2 children and lives in Surrey.

On the Ground – A First Responder’s Experience

Abstract

This presentation looks at the issues facing a modern ambulance service. It explores the challenges to providing frontline emergency medical care to the public of London in the various situations that today’s ambulance services have to work.

The challenges explored are: Adverse weather and how this affects response, How London’s emergency services work together to manage large scale incidents, Command and Control structures, Training and Exercising, Providing care in hazardous areas, Urban search and rescue, CBRN Incidents and public order events.

Finally the presentation looks at the human element of large scale incidents and explores how the London Ambulance Service have put in processes to deal with the individual and not just the incident.

David Lindridge

National Policing Improvement Agency

David joined London Fire Brigade in 1994 as an operational firefighter serving at fire stations across South London.

In 2002 he was promoted in to a small team dedicated to the improvement of Incident Command in London. These changes standardised London's operational tactics and terminology for incident management with the 46 English Fire Brigades.

In 2005, following a year as Station Commander for Lambeth fire station, David moved to a project team remodelling Command Support provision across the Brigade. This required the design, development and deployment of vehicles, staff and IT systems to support the delivery of Fire Service Command Support. In the absence of a suitable COTS (commercial, off-the-shelf) product, David advised software developers in the production of a product that is now being used and marketed internationally for real-time decision making and audit.

Since the end of 2008, David has been seconded into the National Policing Improvement Agency (NPIA), where he represents the interests of the Fire and Rescue Service in a programme to improve Interoperability between the Services and Agencies involved with incident resolution. The programme delivered the first multi-agency doctrine which defines the principles of Interoperability and the processes to be considered in the creation of national Standard Operating

Procedures, supporting multi-agency working from normal, daily business to a national response.

Graham Chick

CEO of GemaTech

As co-founder and major shareholder of GemaTech Group since June 1997, Graham Chick has been actively involved in the Business Continuity arena for over 8 years having identified the need for effective recovery solutions for a company's telecommunications infrastructure.

Particular emphasis has been given to developing solutions which meet the requirements of the Civil Contingencies Act and Graham Chick has provided feedback into the recent Strategic Framework and Policy Statement on Improving the Resilience of Critical Infrastructure to Disruption from Natural Hazards.

GemaTech is a telecoms technology company specialising in the design and development of solutions for organisations to facilitate flexible ways of working. Each solution helps organisations reduce costs, improve efficiency and maintain business continuity through any disruptive situation, whilst also meeting compliance recommendations for telecoms resilience and voice recording.

Prof Dr Paul Lukowicz

**Embedded Systems Lab, University of Passau, Germany:
*Overview of SOCIONICAL and focus on the emergency stream of
work modelling and simulations***

Prof Dr Alois Ferscha

**Institut für Pervasive Computing, Johannes Kepler Universität,
Linz (Austria)**



Alois Ferscha was with the Department of Applied Computer Science at the University of Vienna at the levels of assistant and associate professor (1986-1999). In 2000 he joined the University of Linz as full professor where he heads the Excellence Initiative “Pervasive Computing”, the department of Pervasive Computing, the Research Studio Pervasive Computing Applications and RIPE (Research Institute of Pervasive Computing).

Currently he is focused on Pervasive and Ubiquitous Computing, Networked Embedded Systems, Embedded Software Systems, Wireless Communication, Multiuser Cooperation, Distributed Interaction and Distributed Interactive Simulation. He has lead international EU funded projects (EU FP7, FET: SAPERE, HC2, PANORAMA, SOCIONICAL, OPPORTUNITY; EU FP6, FET: BeyondTheHorizon, InterLink, CRUISE), but also national projects (DISPLAYS, SPECTACLES, PowerSaver, WirelessCampus, MobiLearn) research, and holds tight cooperation with industrial stakeholders (SIEMENS Project FACT, IBM Project VRIO). SPECTACLES (Autonomous Wearable Display Systems) in cooperation with Silhouette International, INSTAR (Information and Navigation Systems Through Augmented Reality) (2001-2003), Siemens München, AG, CT-SE-1, BISANTE, EU/IST, Broadband Integrated Satellite Network Traffic Evaluation (1999-2001), Peer-to-Peer Coordination (2001-), Siemens München, AG, CT-SE-2, Context Framework for Mobile User Applications (2001-), Siemens München, AG, CT-SE-2, WebWall, Communication via Public Community Displays, Connect Austria (2001-2002), VRIO, Virtual Reality I/O, with GUP JKU, IBM Upper Austria (2002-2003), MobiLearn, Computer Science Any-Time Any-Where, (2002-2004), Mobile Sports Community Services, (SMS Real Time Notification at Vienna City Marathon 1999, 2000, 2001, 2002; Berlin Marathon 2000, 2001, 2002), etc. Ferscha has published more than 150 technical papers on topics related to pervasive and distributed computing.

He has served on editorial boards of renowned international scientific journals (e.g. Pervasive and Mobile Computing (Elsevier), Transactions of the Society for Computer Simulation), on steering and programme committees of several conferences like PERVASIVE, UMBICOMP, ISWC, WWW, PADS, DIS-RT, SIGMETRICS, MASCOTS, MSWiM, MobiWac, TOOLS, Euro-Par, PNPM, ICS, etc. to name a few. His activities and recognition in the Pervasive Computing and Wearable Computing research communities is expressed by e.g. his chairing

PERVASIVE 2004 (Programme Chair), and ISWC'09 (General Chair). In the parallel and distributed simulation community he e.g. served as the General Chair of the IEEE/ACM/SCS 11th Workshop on Parallel and Distributed Simulation (PADS'97), as Program Committee chair for the PADS'98, Program Chair for the Seventh International Symposium on Modeling, Analysis and Simulation of Computer and Telecommunication Systems (MASCOTS'99), and recently the 12-th IEEE International Symposium on Distributed Simulation and Real Time Applications (DS-RT 2008).

Alois Ferscha is an active consultant to the IST FET group within the Commission of the European Communities, Information Society and Media Directorate-General, and to the Austrian bm-wf and bm-vit. He is Austria's representative in IFIP TC-10 (International Federation for Information Processing, TC10 - Computer Systems Technology).

As an invited researcher or guest professor he was visiting the Dipartimento di Informatica, Universita di Torino, Italy, at the Dipartimento di Informatica, Universita di Genoa, Italy, at the Computer Science Department, University of Maryland at College Park, College Park, Maryland, U.S.A., and at the Department of Computer and Information Sciences, University of Oregon, Eugene, Oregon, U.S.A.

Alois Ferscha is member of the OCG, GI, ACM, IEEE and holds the Heinz-Zemanek Award for distinguished contributions in computer science, the Cross Border Award 2009 and the "Innovationspreis 2009".