

## From Dynamica to the System Dynamics Review

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The story of Dynamica and its development into the System Dynamics Review is very closely intertwined with the evolution of the Bradford University System Dynamics Group.

The group was formed by Geoff Coyle in 1970 and, mirroring the foundations of the subject, reported to the University's Department of Control Engineering. The first 5 years saw the group build up to 3 members of staff and 9 graduate students studying for PhDs. Early successes were reflected in two important decisions in 1975. First, the group was consolidated into the newly formed Bradford Management Centre and second a decision was made to establish a journal dedicated to group research output. The rationale for the creation of Dynamica is best captured in the forward to the first edition by Chris Higgins the Director of the Management Centre who stated:

*“The System Dynamics Group has now grown into one of the most enterprising and innovative research groups in the University. Its reputation has been recognised by the award of a number of substantial research grants and it has now reached the stage of development where a substantial stream of publications is anticipated. It is apposite that a new journal Dynamica should be instigated by the Unit.”*

Editorial responsibility for the journal was given to Graham Winch and Graham and John Sharp ran the publication until 1980. During this period the journal did indeed fulfil its promise of being a prestigious outlet for dissemination of the research of the group across a wide range of studies.

There was evidence from the late 1970s that Dynamica had started to expand its horizons with contributions from Andy Ford, Ed Roberts, Nancy Roberts and Roger Hall. However, the post 1978 era of the group was centred on an objective of internationalism.

One example was the group's involvement in the numerous AFCET conferences in France and Belgium describing the European trends in dynamical thinking. Having joined the group in 1976, I remember sitting next to David Anderson in Mons listening to Ilya Prigogine describing his work on bifurcation in cancer cells. We exchanged a number of puzzled glances as we tried to determine how this related to system dynamics as we knew it. The differences of course subsequently turned into similarities and become wonderfully clear and relevant.

I became editor of Dynamica in 1980 and to reflect our international trend the style, format and appearance of the journal was recast. The intention was to present the journal as a communications medium to network system dynamics activities around the world and strong and lasting links were established with Poland, India, France, Germany, Greece, Australia and not least the USA. To assist this transformation an international

editorial board was formed initially comprising David Anderson, Will Fey, Paul Couvreur, Brian Dangerfield, Michael Karsky, Raimo Kelohaju, Pratap Mohapatra, John Morecroft, Jorgen Randers and Willbert Wills. The success of this development was reflected in the diverse range of authors appearing. In addition to the names mentioned above, George Richardson, Jack Homer, Henry Wile, Joel Rahn, Erik Mosekilde and Khalid Saeed all made significant contributions.

From 1979, members of the Bradford group became increasingly involved with the developments in the US towards an International SD society. The 1980 IEEE Conference held in Cambridge and the 1981 system dynamics conference in Rensselaerville were particularly significant in building bridges between the Bradford and MIT system dynamics groups. A group of 5 from Bradford attended the Albany initiative.

I have strong memories of the pioneering nature of these conference, the shoestring budgets for participants like myself and the inevitable travel problems.

Having gone to see the Niagara Falls on the way to Boston, I found myself trapped in Canada due to a strike by customs officials and, arriving late in Boston, of having to share a room with Brian Dangerfield. My wife still talks about the fact that I somehow brought Brian's dirty washing home with me. I also have fond memories of meeting George Richardson (who drove me and others from Boston to Albany), David Anderson, John Morecroft and Peter Senge.

At Rensselaerville I remember the soccer and the fascination George Richardson had with my mining paper on the dynamics of *colliery* operations. A word he thought overly quaint and more interesting than the dynamics. I also recall Donnella Meadows sitting knitting as I made my presentation and later her commenting that Goeff Coyle and I did some of the most practical work she had encountered.

The international bridge building inevitably led to the mutual realisation that the new society had a ready made journal in *Dynamica* and that *Dynamica* had a ready made development path to the next level of evolution. Hence the SDR was born and I became inaugural executive editor from 1985 to 1988. And I have an engraved pewter tray to prove it.

The Bradford group continued to make significant developments through the 1980s and early 1990s until I left to go to Stirling University in 1992. Amongst other claims to fame it created in 1985 the first dedicated System Dynamics Laboratory in the UK. This was sponsored by Apple Computers and used Fat Macs (with *enormous* 512K memory boards) running the first copies of *ithink* in the UK.