Cwarel Isaf Institute

Biography

Prof. Dr. Stafford Beer

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Inhalt

Stafford Beer

is an international consultant in the sciences of management (operational research and social systems) and effective organization (cybernetics). Developmental planning is central to his activities. He has worked so far in twenty-five countries, and for various international agencies such as the UN, UNESCO, UNIDO, UNDP and OECD. From 1986 to 1999 he was Chairman of Syncho, Ltd., based in the United Kingdom, and ws the founding Chairman of Team Syntegrity International from 1992 to 1999. He is currently Managing Partner of the Complementary Set and a Partner in Cwarel Isaf Institute.

He is qualified as MBA, DSc.

He is President of the World Organization of Systems and Cybernetics, an international federation of national societies, the Secretariat of which is in Paris, France. He was named Honorary Professor of Organizational Transformation at Liverpool John Moores University in 1990 and was made an Honorary Fellow in 1996. He currently holds Chairs as Visiting Professor of Cybernetics in the University of Sunderland since 1997, the Business School of the University of Northumbria since 1998 and the University of Stockholm since 1999.

Early Years

Born in London, England, on 25th September 1926, Stafford Beer was educated at Whitgift School and the University of London (University College), where he studied philosophy and psychology, 1943-4. Joining the Army in the second world war, he was a gunner in the Royal Artillery before receiving his infantry commission in the Royal Fusiliers. He became a company commander on transfer to the gth Gurkha Rifles, 1945, and was later Staff Captain Intelligence in the Punjab. Returning from India on the transfer of power, in 1947, he was appointed an Army Psychologist, again with the rank of Captain. He was Personnel Selection Officer for the Royal Engineers, and later commanded an education centre where he undertook operational research into psychopathology and illiteracy.

In Industry and Government

1949-56

Samuel Fox, alloy and stainless steel makers within United Steel: he created and ran the Operational Research Group (first civil vintage). He simultaneously held the management role of Production Controller. First known European application of linear programming (to wire drawing) circa 1950. Innovation of cybernetic models of the firm, of large scale homographic calculation, of massed batteries of statistical quality control charts, and of manual simulation techniques. Invention of the Stochastic Analogue Machine.

1956-61

Appointed Head of Operational Research and Cybernetics at the parent company, United Steel, he founded Cybor House in Sheffield. This became under his leadership the world's then largest civil OR Group (with multidisciplinary scientific staff of more than 70) operating throughout the member companies, and deploying mobile operational research offices from five specially equipped caravans. United Steel then included four major steelworks, and a number of subsidiary engineering companies.

Using probably the first computer (Ferranti's Pegasus) ever installed (1 956) uniquely for management science, the Cybor House group was responsible for the solution of many complex problems involving production, marketing, finance, personnel, energy, and for the unprecedented development of simulation techniques applicable to all steelworks production. Advances were made in the automation of control both for individual processes and for complete plant. There was also extensive activity in applying science to policy making.

Personal research in neurocybernetics and mathematical models of the nervous system led to the first formulation of the Viable System Model (VSM) now in use world-wide, and the subject of four books (qv). Several cybernetic research machines were invented to study adaptation processes, organic homeostasis, and human learning. These included experimental machines in

which light-sensitive microorganisms were 'trained' to solve equations.

1961-66

On behalf of Metra International (Paris) he launched SIGMA (Science in General Management) Ltd., the first operational research consultancy in the UK, which specialized in the application of scientific management techniques to the problems of high-level policy formulation, strategy, developmental planning, and the cybernetics of organization - including radical reorganization.

During his five year Managing Directorship, Sigma was built into a very large organization working not only for many leading companies in the UK and for six government departments, but also having major activities abroad (ranging from the newly developing countries to the United States). Innovative models were created dealing with energy (for the Gas Council), transportation (for British Rail and the Port of London Authority), shipbuilding (for the Geddes Committee), education (for Yugoslavia), tourism (for Israel), nationalized industry (in South America) and distribution (for many industrial firms). Cybernetic models for organization and corporate planning were a specially, and his personal responsibility.

As a director of Metra International, which had subsidiaries in six countries, he fostered the amalgamation of its British interests (Sigma, Martech, and Proplan) to form what afterwards became the Metra Consulting Group in the United Kingdom.

1966-1970

Stafford Beer became Development Director of the International Publishing Corporation (a previous client) at the personal request of the Managing Director, and the Chairman, Cecil King.

At that time IPC was the largest publishing company in the world, with five divisions: Newspapers (Daily Mirror, Sunday People, e.g.), Magazines (Woman, Woman's Own, Woman's Realm, e.g.), Technical (Wireless World, Electronics Weekly and over a hundred specialist magazines), Books (the Paul Hamlyn imprint outstandingly), Printing (again, the world's largest such enterprise).

He created the Development Division, assuming responsibility for Research and Development into paper, ink, presses and facsimile transmission, together with computers and market research. He inaugurated a fresh approach to automatic typesetting (which led to the first demonstration of automated page composition), and fostered basic research into alphabets, logic, and laser-driven holography. Meanwhile, he carried direct responsibility for central management services, including all computer installations around the corporation.

A sixth operating division was soon created. Called New Enterprises, it housed the emergent research products.and company acquisitions of the electronic age of publishing. Stafford Beer was a divisional director, Chairman of Computaprint Ltd., and a board member of the company he created to develop tele-publishing and tele-messaging - which he named International Data Highways. This established in particular the Stockbroker Computer Answering Network (SCAN) which provided perhaps the first viably commercial service offered(1966)to remote terminals. It fed over a hundred stock broking offices around the country.

Stafford Beer withdrew from executive responsibility at IPC and reverted to consultancy in 1970, following a boardroom disagreement about development policy. This concerned in particular the electronic future for newspapers and the treatment of the Unions. The New Scientist (1 5.1.70) wrote:

"It is said that he managed to deflect the course of International Publishing Corporation - the world's largest publishing empire - by some 90 degrees, but that even he could not shift it any further".

1970 - 1990

Throughout these twenty years, Stafford Beer maintained a portfolio of contracts with industry and governments on a selective international basis. In particular, he was retained by Ernst & Whinney (now Peat Marwick Thorne) in Canada from 1970 to 1987, on whose behalf he consulted in management science to many of the major corprations and three provincial governments across Canada. He was also a founding director of the British software house, Metapraxis Ltd., from 1984 to 1987.

An outstanding commission during those years came in July 1971, on the personal invitation of the late President

Salvador Allende of Chile, to develop a new cybernetic approach to the organization and regulation of the social economy. This project, of which Stafford Beer was Scientific Director, occupied most of his time until the coup of 1 1 September 1973, and resulted in linking together most of Chilean industry in a real-time computerized system, using microwave links, automatic statistical filtration of information, and operations rooms as ergonomically designed environments for decision. Seventy-five per cent of nationalized industry was brought into the system in two short years; economic information was not more than a day late, and central computers were used to decentralize authority. The full story is told in the last five chapters of the Second Edition (pub. John Wiley, 1981) of *Brain of the Firm.*

This work attracted international attention, particularly in Canada and India as well as in other LatinAmerican countries. Subsequently, therefore, Stafford Beer undertook cognate consultancy in the Privy Council Office and several other ministries in Ottawa, various ministries in New Delhi, and in the Presidential Offices of Mexico, Uruguay and Venezuela - answering to the president directly in the latter two cases.

1990 to date

This period was dominated by the research and.development that led to the invention and marketing of the technique named Team Syntegrity. This complements the Viable System Model with a means of harnessing the verve and creativity of the leading spirits in a management group, according to a model based on the structure of an icosahedron : a twenty-sided regular polyhedron. The scientific bases lie in behavioural group theory and mathematical graph theory, and protocols for develomental planning using the technique have been computerized and licensed under franchise in a steadily growing number of countries. The book *Beyond Dispute*, published by John Wiley in 1994, articulates the theory and practice of the approach. Both international consulting, for instance in Colombia, and teaching (see next section), continued, and are continuing.

In Scientific and Academic Contexts

He is currently (1997-) Visiting Professor of Cybernetics at the University of Sunderland, (1998-) in the Business School of the University of Northumbria, (1999-) the University of Stockholm and Life Professor of Organisational Transformation at Liverpool John Moores University where he is also an Honorary Fellow.

Learned Societies up to 1975

Fellow of the Royal Statistical Society (industrial Relations Committee 1953-59 and Regional Chairman); Fellow of the Royal Economic Society; Member of the Operational Research Society (Council 1958-62, 1969-72, President 1970-71); Member of the Operations Research Society of America and the Societe Francaise de la Recherche Operationelle; Member of the Royal Institute of Philosophy, the Society for Psychical Research, the Institute of Management Sciences, the New York Academy of Sciences, the Society for General Systems Research (Governor and President 1971-72); Founder Member of the International Association for Cybernetics (1956) and Board Member for Great Britain at various times; Council Member of the Teilhard Centre for the Future of Man (1 975).

Societies – recent and current

President of the World Organization of Systems and Cybernetics- Past President of the Society for 1 General Systems Research (now the International Society for the Systems Sciences) - Past President of the Operational Research Society; quondam Trustee of the American Society for Cybernetics; Governor of the International Council for Computer Communication (1 973 - 1993) -, Honorary Fellow of the International Institute for Social Invention; Fellow of the World Academy of Art and Science; Fellow of the Royal Society for Arts and Science.

Advisory Boards

Member of the Operational Research Advisory Panels for the British Iron and Steel Research Association (1 956-61; Chairman of Computer Committee) and for the OECD in Paris; Member of the British Conference on Automation and Computation (1957-60) and of the United Kingdom Automation Council (Executive 1967-69); Member of the Northern Advisory Council of the BBC (1960-61) and of the BBC General Advisory Council (1961-69); Member of the Parliamentary and Scientific Committee (1 970-71), and several other government committees.

Universities

Stafford Beer's major academic base was at Manchester University in the Business School, where he was Visiting Professor of Cybernetics for twenty-four years(1969-1993). He was also recently(199097) Research Professor of Managerial Cybernetics at the European Business Management School in University College Swansea, and Visiting Professor of management science at the University of Durham in the Business School (1 990 - 1995). He is currently [1 997 -] Visiting Professor of Cybernetics at the University of Sunderland, and life Professor of Organizational Transformation at Liverpool John Moores University where he is also an Honorary Fellow.

He was the first Professor of General Systems at the inception of the Open University in Britain, 1970-71. At the University of Pennsylvania in the Wharton School, he was Adjunct Professor of Statistics and Operations Research from 1972 to 1981, and of Social Systems Sciences from 1981 to 1987. He has held visiting professorial appointments in many other universities, including a dozen in the United States. In 1982 he was Visiting Professor at Concordia University in Montreal and also at the University of British Columbia. He was Distinguished Cybernetician in Residence at the University of Toronto in the McLuhan Program in 1984.

In 1990, he was Visiting Professor at the Institute of Management at the St. Gallen Graduate School of Economics, Law, Business and Public Administration.

Honours

1958 Silver Medal of the Royal Swedish Academy for Engineering Sciences
for his advancement of operational research and cybernetics

1960 Invited Membership of the New York Academy of Sciences
for his pioneering work in science

1966 The Lanchester Prize of the Operations Research Society of America for the outstanding contribution to
the literature of management science in the world (Decision and Control, Wiley, 1966)

1970 Resolution of the United States House of Representatives
for wise and objective counsel regarding the future of information systems

1970 Freedom of the City of London

1970 The McCulloch Plaque of the American Society for Cybernetics
for outstanding achievements in the field of cybernetics and management science

1984 Life Membership Plaque of the Austrian Society for cybernetics

1984 Norbert Weiner Gold Medal of the World Organization of Systems and Cybernetics for his services to the science of cybernetics over more than thirty years, his contribution to its epistemology, and in particular
for his pioneering development of managerial cybernetics and its applications world-wide

1988 Doctor of Laws honoris causa, Concordia University, Montreal, Canada

1989 Honorary Fellow of St. David's University College, University of Wales

1990 Honorary Professor of Organizational Transformation in the School of Information Science and Technology at the Liverpool Polytechnic, now the Business School of Liverpool John Moores University

1996 Honorary Fellow of Liverpool John Moores University

1999 Lifetime Achievement Award of the United Kingdom Systems Society
For Outstanding Contribution to Systems Thinking

2000 Dr. oec hc (Doctor of Economic Sciences honoris causa) University of St. Gallen, Switzerland
For his pioneering work in Management Cybernetics which has stimulated thought on management in many ways and had a decisive influence on the St. Gallen systems approach to management.

Major Public Addresses

From many published addresses, the following 'name'lectures are recorded:

the Bray Memorial Lecture in 1956 for the Institute of Production Engineers; the Inaugural Lectures for the Systems Research Centre in Cleveland in 1960, and for the Danish Automation Year in Copenhagen in 1966; in 1964 the Stephenson Lecture for Newcastle University; the Eighth United Kingdom Automation Lecture in London, also Distinguished Lectures for the Institute of Management Science at New York in 1969;

in 1970, an address to the US House of Representatives, the Keynote Address to the Washington Conference on Ecological Systems, and the Frank Newsome Memorial Lecture for the Home Office UK; in 1972 the International Computers Ltd. Lecture for the University of Wales- in 1973 the Richard Goodman Memorial Lecture at Brighton Polytechnic, and the Massey Lectur@s *Designing Freedom* for the Canadian Broadcasting Corporation; in 1974 the Keynote address to the European Conference on Cybernetics in Vienna *Recursions of Power*, the Keynote Address to the National Conference of the Canadian OR Society, and the Zaheer Lecture for the government of India, in Delhi; in 1975 the lrvine Memorial Lecture for the University of St. Andrews, Scotland Laws of *Anarchy .1*

in 1980 *I Said You Are Gods*, the Third Annual Teilhard Lecture; in 1981 the Eighth von Bertalanffy Memorial Lecture *Death is Equirinal*; in 1982, the Lindsey Sutcliffe Lecture for Middlesex Polytechnic *The Will of the People*, and an address for Mankind 2000 in lsreal; in 1983 the Keynote Address for the American Society for Cybernetics in California-, in 1984 the Keynote Address for the European Cybernetics Congress; in 1986 the Inaugural Address for Toronto 2000, the Inaugural Speech for the Stafford Beer Foundation, the Keynote Address for the World Futures Conference in New York, and another for the Canadian Couchiching Conference on *The Future of Work*;

in 1987, Organizees Introduction to the Premier's Conference on the Future of Ontario, Keynote speeches on the Future of Wales for the Joint Meeting of the Welsh Development Agency and the Government of Ontario, to the Canadian Institute of Planners, and to the Triennial Congress of the World Organization for Systems and Cybernetics *Holism and the Frou-Frou Slander*; in 1988, Keynote Speeches for the American Association for Quality Assurance in Health, for the Canadian response to the Brundtiand Report, and the Convocation Address at Concordia University; in 1989, keynote addresses to the Conference on Peace Initiatives in Toronto, and the International Conference on Operations Research and the Social Sciences in Cambridge England; in 1990, the Keynote addresses for the Canadian Industrial Innovation Centre, and the International Symposium on Systems in Mexico, also the Lecture in Peace Studies at University College Toronto;

in 1990 *On Suicidal Rabbits*, Plenary Address to conference at the Wharton School, Pennsylvania; in 1993 the Presidential Address in New Delhi to the Triennial Congress of the World Organization for Systems and Cybernetics *The World in Torment*; in 1994 the Falcondale Lectures for Liverpool John Moores University (videotape); in 1995 two plenary addresses for the Conference on Circular Causality of the American Society for Cybernetics in Chicago; in 1996 an inaugural address for a new government initiative in Colombia, and an allocution to mark his Seventieth Anniversary *The Culpabliss Error*, delivered at Liverpool John Moores University, England, and at the University of Lulea, Sweden.

Publications

Author of more than two hundred publications. including the books:

1959 - Cybernetics and Management; English Universities Press, London. John Wiley, New York. Reprinted 1960, 1965, New Edition (with new Chapter) 1967, reprinted 1970,1971,1973 etc. Translated into Spanish, Russian, German, Czech, Polish, Dutch, Italian, Portuguese, French, and Japanese.

1966 - Decision and Control: The meaning of Operational Research and Management Cybernetics. John Wiley, reprinted 1967, 70,71, 74, 78, 79, 88. (Awarded Lanchester Prize). Translated into Spanish. 1994 - paperback.

1968 - Management Science: The Business Use of Operational Research, Aidous Books UK and USA, hardcover and paperback. Translated into German, French, Swedish, Japanese, Finish, Dutch and Norwegian.

1972 - Brain of the Firm: Allan Lane the Penguin Press, London; Herder and Herder, USA. Translated into German, Italian, Swedish and French.

1974 - Designing Freedom: CBC Learning Systems, Toronto, 1974, and John Wiley, London and New York 1975. Translated into Spanish and Japanese.

1975 - Platform for Change: John Wiley, London and New York. Reprinted 1978, etc. 1994 - paperback

1977 - Transit: Poems, CWRW Press, Wales.

1979 - The Heart of Enterprize: John Wiley, London and New York. Reprinted with corrections 1988. - paperback

1981 - Brain of the Firm: 2nd Edition (much extended). John Wiley, London and New York. Reprinted 1986, 1988. Translated into Russian. 1994 - paperback

1983 - Transit: poems, Second Edition (much extended). With two audio cassettes Transit - Selected Readings and One Person Metagame ; Mitchell Communications, Canada

1985 - Diagnosing the System for Organizations: John Wiley, London and New York. Reprinted 1988. Translated into Italian and Japanese. 1994 - paperback

1986 - Pebbles to Computers: the Thread (with Hans Blohm) Oxford University Press,Toronto.

1994 - Beyond Dispute : The Invention of Team Syntegrity, John Wiley, Chichester and New York.

1994 - How Many Grapes Went Into The Wine : Stafford Beer on the Art and Science of Holistic Management : Eds Roger Harnden and Allenna Leonard

See also:

1989 - The Viable System Model: Interpretations and Applications of Stafford Beer's VSM Raul Espejo and Roger Harndon, Eds. John Wiley, Chichester, New York, Toronto.

There are chapters in more than twenty other books, audio and televisual products, and some two hundred papers and articles, notably the preface to Autopoesis and Cognition: by Humberto R. Maturana and Francisco J. Varela. Riedel Publishing, 1980.

Personal

Stafford Beer was twice married, and has eight children. His partner is Allenna Leonard.

Lifetime interests beyond the fields of philosophy, science and management include the classical languages Latin, Greek and Sanskrit, and the practice and teaching of Yoga (not hathayoga or trancendental meditation). His poetry has been published in book form, and a few exhibitions of his paintings have been held. In particular, his Requiem meditation, consisting of nine large interactive oil paintings, was installed in an apse of the Metropolitan Cathedral of Christ the King in Liverpool, and exhibited there in 1992 and 1993. In the fifties and sixties he broadcast frequently on radio and television, but rarely does so now uniess'live'.

In 1974, having renounced material possessions, Stafford Beer moved his base to a small stone cottage in the remote hills of Ceredigion in mid-Wales. He lived there alone in simple style for the next ten years - despite some inevitable foreign travel (his Who's Who recreation is given as'staying put'). Now he also has a base in Toronto where much of his work is located. He divides his time between the two places.

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